



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

M.A. Degree
Branch III ECONOMICS
(CHOICE BASED CREDIT SYSTEM)

OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

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DEPARTMENT OF ECONOMICS

M.A DEGREE: BRANCH III – ECONOMICS

PROGRAMME DESCRIPTION

The programme provides a solid foundation in economic theory, statistics and econometrics so as to develop a thorough understanding of both theoretical and empirical approaches to economics. Student should explore the relationship between theory and practice, test theories to increase the depth and breadth of Knowledge. It provides a strong grounding in critical thinking and analytical skills that will facilitate students to carry out applied economics research. Students will be able to evaluate economic issues and formulate informed opinions on policy issues and recognise the validity of opposing viewpoint. Will gain adequate experience in the field be it as an intern or a researcher so that academics has a praxis perspective. To inculcate professional autonomy which is much sort after while recruiting graduates by the corporate and academic world. The programme will promote Co-Curricular activities like research, internships, certificate courses etc. It will focus on achieving high academic standards so as to strengthen student's competitiveness.

VISION OF THE DEPARTMENT

- Uphold high standards of academic excellence in teaching and research
- Interact with academic, research, government and nongovernment institutions in order to promote academic activities like research, internships, training etc.,
- To grow to gain wide spread recognition for Postgraduate and Ph.D. programmes

MISSION OF THE DEPARTMENT

- To provide a strong theoretical foundation in Economics
- To train and equip students with requisite skills to carry out applied economics research.

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PROGRAMME SPECIFIC OUTCOMES (PSOs)

On successful completion of the M.A. Economics programme, the students will be able to:

PSO1	apply core economic theories, demonstrate and critically evaluate the economic knowledge/issues which will enhance academic rigor
PSO2	demonstrate critical thinking skills in advanced economic research and writing, leading to employability, entrepreneurship and professional excellence
PSO3	display leadership qualities and sensitively respond to a range of socio-economic and environmental issues
PSO4	demonstrate responsible citizenship by effectively using economic skills and knowledge to implement inclusive policies.
PSO5	utilise their knowledge to critique contemporary economic issues and contribute to the existing knowledge base.

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DISTRIBUTION OF CREDITS AND HOURS

M.A. Economics 2023-2024

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	5	4	5	4	5	4	5	16	20
	4	5	4	5	4	5	4	5	16	20
	4	5	4	6	4	5	4	5	16	21
	4	6			4	6			8	12
Dissertation							7	9	7	9
PE-dept.	5	5	5	5			5	5	15	15
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PA	2	2							2	2
PN					2				2	0
Library		2		2		4		1	0	9
TOTAL	23	30	24	30	23	30	24	30	94	120

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M.A. DEGREE: BRANCH III - ECONOMICS

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
SEMESTER-I									
23EC/PC/MI14	Microeconomic Analysis I	4	4	1	0	3	50	50	100
23EC/PC/MO14	Monetary Economics	4	4	1	0	3	50	50	100
23EC/PC/DE14	Development Economics	4	4	1	0	3	50	50	100
23EC/PC/RM14	Research Methods and Analysis I	4	4	0	2	3	50	50	100
	Department Elective I								
	PA/PL								
SEMESTER-II									
23EC/PC/MI24	Microeconomic Analysis II	4	4	1	0	3	50	50	100
23EC/PC/RM24	Research Methods and Analysis II	4	4	0	2	3	50	50	100
23EC/PC/IE24	Indian Economic Issues and Policies	4	4	1	0	3	50	50	100
23EC/PK/SS22	Soft Skills	2	2	0	0	-	50	-	100
CD / ET	Value Education								
	Department Elective II								
	Common Elective I								
SEMESTER-III									
23EC/PC/MA34	Macroeconomic Analysis I	4	4	1	0	3	50	50	100
23EC/PC/PE34	Public Economics	4	4	1	0	3	50	50	100
23EC/PC/GE34	Gender Economics	4	4	1	0	3	50	50	100
23EC/PC/EM34	Econometric Methods	4	4	0	2	3	50	50	100
23EC/PN/SI32	Summer Internship	2	0	0	0	-	50	-	100
CD / ET	Value Education								
	Common Elective II								
SEMESTER-IV									
23EC/PC/MA44	Macroeconomic Analysis II	4	4	1	0	3	50	50	100
23EC/PC/IT44	International Trade	4	4	1	0	3	50	50	100
23EC/PC/EE44	Environmental Economics	4	4	1	0	3	50	50	100
23EC/PC/DS47	Dissertation	7	0	0	9	-	-	100	100
	Department Elective III								
Postgraduate Elective Courses Offered to Parent Department									
23EC/PE/ME15	Mathematics for Economics	5	5	0	0	3	50	50	100
23EC/PE/AM15	Advanced Managerial Economics	5	5	0	0	3	50	50	100
23EC/PE/ID15	Industrial Economics	5	5	0	0	3	50	50	100
23EC/PE/ET15	Economic Thought	5	5	0	0	3	50	50	100
23EC/PE/IN15	Institutional Economics	5	5	0	0	-	50	-	100
23EC/PE/BE15	Behaviourial Economics and Policies	5	5	0	0	-	50	-	100
23EC/PE/AE15	Advanced Econometrics	5	5	0	0	-	50	-	100

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M.A. DEGREE: BRANCH III - ECONOMICS

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
23EC/PE/EH15	Economics of Education and Health	5	5	0	0	-	50	-	100
23EC/PE/AS15	Agricultural Economics and Sustainable Development	5	5	0	0	-	50	-	100
Postgraduate Elective Courses Offered to Other Departments									
23EC/PE/CI23	Contemporary Economic Issues	3	3	0	0	3	50	50	100
23EC/PE/IE23	Introduction to Economics	3	3	0	0	3	50	50	100
23EC/PE/EB23	Economics for Business and Marketing	3	3	0	0	3	50	50	100
23EC/PE/DA23	Introduction to Data Analytics	3	0	0	3	3	50	50	100
The Department will offer one Social Awareness Course									
Social Awareness									
23EC/PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100
23EC/PA/CR12	Child Rights	2	2	0	0	-	50	-	100
23EC/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100
23EC/PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100
23EC/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100
23EC/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100
23EC/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100
23EC/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100
23EC/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100
Independent Elective Courses									
23EC/PI/FI24	Financial Institutions and Markets in India	4	0	0	0	-	-	100	100
23EC/PI/OB24	Organisational Behaviour	4	0	0	0	-	-	100	100

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M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

MICROECONOMIC ANALYSIS I

CODE:23EC/PC/MI14

CREDITS: 4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to understand, identify and analyse the issues related to resource allocation
- to furnish the essential tools and techniques which will be used in all areas of economic analysis
- to develop an advanced theoretical understanding of consumer behaviour and decision making
- to develop a theoretical understanding of the decision making process and the strategic behaviour of firms under various market structures
- to apply the principles of microeconomics to understand the current issues

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explain the microeconomic concepts and acquire knowledge and tools and relate to real world situations	K1
CO2	apply the knowledge of microeconomic theory and integrate it with other areas of economics	K2
CO3	articulate and demonstrate the tools required to solve specific economic issues or problems	K3
CO4	analyse the decision making process of households and firms in the light of theoretical models and understand their limitations	K4
CO5	develop critical and analytical skills in order to discuss the validity and relevance of the models in the light of global economic concerns	K5-K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction	K1 - K4	7	1-3
	1.1 Marginal Analysis			
	1.2 Tools of economic analysis –Optimization with equality constraints	K1 - K3		

UNIT	CONTENT	CL	HRS	CO
2	Demand		16	1-5
	2.1 Cardinal and Ordinal Approaches –Utility Maximization using calculus	K1 - K3		
	2.2 Revision of demand theory	K1 - K6		
	2.3 Revealed preference theory	K1 - K4		
	2.4 Application of the consumer behaviour	K3 - K6		
	2.5 Risk and uncertainty – expected utility hypothesis	K3 - K6		
	2.6 Consumer surplus and elasticity measurements	K1 - K3		
	2.7 Recent development in Demand Theory – Econometric models	K4 - K6		
	2.8 Application: Determination of demand curve using Indian Agriculture or Industrial Data	K4 - K6		
3	Production	K1, K4	16	1-5
	3.1 Production Functions – Properties of Linear homogeneous production function			
	3.2 Cobb –Douglas production function	K3 - K6		
	3.3 C.E.S Production Function	K3 - K6		
	3.4 Variable proportions and Returns to scale	K1 - K4		
	3.5 Elasticity of factor substitution and technical progress	K1 - K3		
	3.6 Producer's equilibrium and cost minimization	K1 - K3		
	3.7 Equilibrium of the multi-product firm	K4 - K6		
	3.8 Application: Fitting production function using Indian Industrial/Agricultural data base	K4 - K6		
4	Cost	K1 - K3	12	1-5
	4.1 Traditional theory of Cost			
	4.2 Modern theory of cost	K1 - K5		
	4.3 Cost Curves – The relation between production and cost	K1 - K3		
	4.4 Application Calculation of cost using Industrial data	K4 - K6		
5	Theory of Firm	K1 - K6	14	1- 5
	5.1 Price – output decisions under perfect competition			
	5.2 Monopoly	K1 -K6		
	5.3 Price Discrimination	K1 - K6		
	5.4 Control of monopoly	K1 - K6		
	5.5 Monopolistic competition and excess capacity	K1 - K6		
	5.6 Application: Study of the current market scenario using both primary and secondary data (Market survey and presentation)	K4 - K6		

BOOKS FOR STUDY

Koutosoyiannis. A. *Modern Microeconomics*. Second Edition New Delhi: Macmillan Education 2018.

Varian. Hal. R. *Intermediate Microeconomics - A Modern Approach*. New York: W.W. Norton, 2010.

BOOKS FOR REFERENCE

Bardhan, Pranab & Christopher. Udry. *Development Microeconomics*. New York: OUP, 1999.
Basu, Kaushik and Ravi. Kanbur. *Arguments for a Better World*. (Ed.). New York: OUP, 2009.
Baumol. W. J. *Economic Theory and Operations Analysis*. New Delhi: Prentice Hall, 1982.
Jehle, G. A. and Reny, P. J. *Advanced Micro Economic Theory*, Third Edition, Pearson Education limited, England 2011
Nicholson, W. and Snyder, C. *Intermediate Microeconomics & its applications*, Eleventh edition South-western Cengage learning. USA 2010
Nicholson, W. and Snyder, C. . *Microeconomic Theory Basic Principles & Extensions*, Tenth Edition. USA Thomson South-western 2008
Pindyck, Robert. S & Daniel. L. Rubinfeld. *Micro Economics*. New Delhi: Prentice Hall, 2007.

JOURNALS

The American Economic Review
Journal of Economic Literature

WEB RESOURCES

<https://www.imf.org/en/Publications/fandd/issues>
<https://www.aeaweb.org/resources/data/intl>
<https://epwrfits.in/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	A question will contain 2 parts a and b. a is K1 level for 5 marks and b is K2 level for 5 marks a) $1 \times 5 = 5$ and b) $1 \times 5 = 5$ (Total 10 marks & 150 words each) Answer 1 question out of 2
	K2	5	
B	K3	8	$1 \times 8 = 8$ (1 out of 2 questions to be answered in 400 words)
	K4	8	$1 \times 8 = 8$ (1 out of 2 questions to be answered in 400 words)
C	K5	12	$1 \times 12 = 12$ (1 out of 2 questions to be answered in 700 words)
	K6	12	$1 \times 12 = 12$ (1 out of 2 questions to be answered in 700 words)

Other Components:

Total Marks: 50

Seminars/Quiz/Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	A question will contain 2 parts a and b. a is K1 level for 5 marks and b is K2 level for 5 marks a) $2 \times 5 = 10$ and b) $2 \times 5 = 10$ (2 out of 3 questions to be answered in 150 words each)
	K2	10	
B	K3	16	$2 \times 8 = 16$ (2 out of 3 questions to be answered in 400 words each)
	K4	16	$2 \times 8 = 16$ (2 out of 3 questions to be answered in 400 words each)
C	K5	24	$2 \times 12 = 24$ (2 out of 4 questions to be answered in 700 words)
	K6	24	$2 \times 12 = 24$ (2 out of 4 questions to be answered in 700 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PC/MI14												
I	Course Title: : MICROECONOMIC ANALYSIS I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	3	2	2	2	2	3	3	3
CO 2	3	3	3	2	3	2	3	3	1	2	3	3	3
CO 3	3	3	3	3	3	3	2	2	3	3	2	3	2
CO 4	3	3	3	3	2	1	2	2	3	2	3	3	3
CO 5	3	3	3	2	2	3	3	3	2	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

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M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

MONETARY ECONOMICS

CODE: 23EC/PC/MO14

CREDITS: 4

L T P : 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to identify and understand the role of money and to give a comprehensive picture of the theoretical framework
- to establish the integration of theory and practice in the context of an economy- with special reference to india
- to give an insight into the integration between monetary theory and practice
- to create awareness of the integration between the monetary system and the external sector
- to examine the functioning of the financial sector and the important role played by the monetary authority in regulating the economic system

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify and describe the key concepts and theories in Monetary Economics	K1, K2
CO2	apply the theoretical models to a given economic scenario	K3
CO3	analyse the problems and prospects involved in the operation of the monetary and financial system	K4
CO4	critically evaluate the relevance of existing theoretical knowledge	K5
CO5	construct and create suitable models with respect to monetary theory and prescribe suitable policy measures	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Demand for Money	K1 – K4	10	1 – 5
	1.1 Classical –Role of Money and Transaction Approach			
	1.2 Keynesian- Keynes Liquidity Preference Theory	K1 – K5		
	1.3 Post Keynesian theories –Baumol, Tobin and Friedman	K1 - K5		
	1.4 The Expected Utility Hypothesis –Neumann – Morgenstern Model (NM model)	K1 - K5		

UNIT	CONTENT	CL	HRS	CO
2	Money Supply and Central Banking		12	1-5
	2.1 The Supply of Monetary Base by the Central Bank – Demand for Currency by Public	K1-K3		
	2.2 Mechanical Theories of Money Supply –Money Supply Identities (Deriving Monetary Base)	K1 – K5		
	2.3 The Behavioural theory of Money Supply	K1 – K5		
	2.4 The General Money Supply Function and its Empirical Estimates –interest elasticity of Money Supply	K1-K4		
3	Monetary and Portfolio Approach to BOP and Exchange rate Determination	K1 – K3	16	1-5
	3.1 A Nation's Monetary Base and Money Stock – Relationship between Monetary Base, Money Stock and Exchange Rate			
	3.2 Managed Exchange Rates: Foreign Exchange Rate Interventions –Types, Financing Interventions, Learning with or Against the wind, Foreign Exchange Interventions and Money Stock, Sterilization of Interventions	K1 – K5		
	3.3 Monetary Approach to BOP and Exchange Rate Determination- Cambridge Approach to Money Demand, Monetary Approach and Fixed and Flexible Exchange Rate Arrangement	K1 – K6		
	3.4 Applying the Monetary Approach -2 Country Model	K1-K5		
	3.5 Portfolio Approach to Exchange Rate Determination –Household Allocation of Wealth, Change in Domestic Money Stock, Change in Foreign Interest Rates	K 1-K6		
4	Financial Sector in India	K1- K5	13	1-5
	4.1 Gurley and Shaw Thesis- Interest Rates and Monetary Policy			
	4.2 Structure of Financial Sector in India- Banking and Non- Banking Institutions	K1- K5		
	4.3 Reforms in Financial Sector in India since 1990 - Banking and Non-Banking Reforms	K1 – K6		
	4.4 Impact of Financial Reforms	K1-K6		
5	Monetary Policy	K1-K6	14	1-5
	5.1 Monetary Transmission Mechanism			
	5.2 Overview of Monetary Policy-Objectives, Targets, Lags and Instruments	K1 – K5		
	5.3 Monetary Policy in India since 1990- Monetary Policy Framework	K1 – K6		
	5.4 Autonomy of the Central Bank- Measurement of Autonomy	K1-K6		

BOOKS FOR STUDY

Handa. Jagdish. *Monetary Economics*. New York: Routledge, 2000.
Mishkin. S. Frederic. *Economics of Money, Banking and Financial Market*: New York ; Harper Collins College Publisher, 2007.

BOOKS FOR REFERENCE

Bain, Keith and Peter. Howells. *Monetary Economics Policy and its Theoretical Basis*. New York: Palgrave Macmillian, 2003.
Daniel, P. Joseph and David. Van. Hoose. *International Monetary and Financial Economics*. US: South Western Thomson Learning Publisher, 2002.
Friedman, M. Benjamin and Frank. H. Hahm. *Handbook of Monetary Economics, Volume 1*. Amsterdam: Elsevier, 2000
Mohan, Rakesh. *Growth with Financial Stability- Central Banking in an Emerging Economy*: New Delhi: Oxford University Press, 2011
Pierce, G. David and David. M. Shaw. *Monetary Economics Theories, Evidence and Policy*. Boston: The Butterworth, 1977.
Rangarajan. C. *Monetary Policy, Financial Stability and other Essays*. New Delhi: Academic Foundation, 2009.
Samantaraya, Amaresh. *Conduct of Monetary Policy in India- Changing Dimensions in the Post-reform Period*. Chennai: T.R. Publications, 2015.
Reddy. Y.V. *A Review of Monetary and Financial Sector Reforms in India – A Central Banker's Perspective*. New Delhi: UBSPD, 2000.

JOURNALS

Reserve Bank of India Bulletin, Annual Report, Mumbai: 2000 onwards.
Reserve Bank of India – *Report of the Working Group: Money Supply Analytics and Methodology of Compilation*, 1998.

WEB RESOURCES

www.rbi.org.in
www.mospi.nic.in

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	A question will contain 2 parts a and b. a is K1 level for 5 marks and b is K2 level for 5 marks b) $1 \times 5 = 5$ and b) $1 \times 5 = 5$ (Total 10 marks & 150 words each) Answer 1 question out of 2
	K2	5	
B	K3	8	$1 \times 8 = 8$ (1 out of 2 questions to be answered in 400 words)
	K4	8	$1 \times 8 = 8$ (1 out of 2 questions to be answered in 400 words)
C	K5	12	$1 \times 12 = 12$ (1 out of 2 questions to be answered in 700 words)
	K6	12	$1 \times 12 = 12$ (1 out of 2 questions to be answered in 700 words)

Other Components:

Seminars/Quiz/Assignments

Total Marks: 50**End-Semester Examination:****Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	A question will contain 2 parts a and b. a is K1 level for 5 marks and b is K2 level for 5 marks a) $2 \times 5 = 10$ and b) $2 \times 5 = 10$ (2 out of 3 questions to be answered in 150 words each)
	K2	10	
B	K3	16	$2 \times 8 = 16$ (2 out of 3 questions to be answered in 400 words each)
	K4	16	$2 \times 8 = 16$ (2 out of 3 questions to be answered in 400 words each)
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	K6	24	$2 \times 12 = 24$ (2 out of 4 questions to be answered in 700 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PC/MO14												
I	Course Title: MONETARY ECONOMICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	3	2	1	1	3	3	2	2	3
CO 2	3	3	2	3	3	2	2	1	3	3	2	3	3
CO 3	3	3	3	2	3	3	1	1	3	3	2	3	3
CO 4	3	3	3	2	3	2	2	1	3	3	2	3	3
CO 5	3	3	3	3	3	2	2	1	3	3	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

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M.A DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 -2024)

DEVELOPMENT ECONOMICS

CODE: 23EC/PC/DE14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to gain an understanding of the evolution and growth of development models and how to apply them to a wide range of real world issues.
- to provide conceptual tools to improve a student's analytical ability.
- to familiarize students with cutting edge research topics in development economics
- to analyze the major economic problems of development in particular to indian economy.
- to discuss the major theoretical developments in this area of study.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	demonstrate the understanding of the difference between growth and development and use the key concepts and theories to economic issues.	K1, K2
CO2	analyse empirical evidence on the patterns of economic development	K3
CO3	apply the theoretical models to a given economic scenario.	K4
CO4	critically evaluate the relevance of exiting theoretical knowledge	K5
CO5	construct and create suitable models and policies for development issues.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Development and Growth	K1–K3	10	1–5
	1.1 Historical overview of Development			
	1.2 Development Vs. Growth	K1–K3		
	1.3 Poverty and Inequality – Nurske, Lorenz and Sen’s contribution	K1-K5		
	1.4 Theory of Disguised Unemployment – R. Nurkse	K1- K5		
2	Theories of Economic Development	K1-K5	14	1-5
	2.1 Classical Theory of Development – Adam Smith, Ricardo and Malthus.			
	2.2 Karl Marx and Development of capitalist economy – Theory of social change, surplus value and profit	K1 – K5		
	2.3 Scumpeter’s Theory of Development – innovation, role of credit, profit and social disintegration of capitalism	K1 – K5		
	2.4 Big push theory of development.	K1-K5		

UNIT	CONTENT	CL	HRS	CO
3	The Dual Economy Models	K1-K3	14	1-5
	3.1 Balance and Unbalanced growth			
	3.2 Unlimited supply of labour – Dual Sector Model – W. A. Lewis, Fei and Ranis Model. D W Jorgenson's Model of Dual Economy	K1 – K5		
	3.3 Dualistic Theory – Benjamin Higgins, Myrdal: Social Technological Geographic Financial Dualism	K1 – K5		
	3.4 Rural Urban Migration A two Sector Analysis – J. R. Harris and M. P. Todaro	K1 – K5		
4	Theories of Development and the Indian Experience	K1- K6	13	1-5
	4.1 Indian Social Structure and Development – Caste, Properties and Common Property Resources			
	4.2 Agriculture and land; access to land	K1- K5		
	4.3 Education- Access to Education	K1 – K6		
	4.4 Employment- Access to Employment	K1 – K6		
5	Development and Related Issues	K1 – K5	14	1 -5
	5.1 Population – Demographical Dividend			
	5.2 Poverty- Multi-Dimensional Poverty	K1 – K5		
	5.3 HRD indices and Development – Harbison and Miers	K1-K6		
	5.4 Role of State in Development	K1 – K6		

BOOKS FOR STUDY

Higgins. Benjamin. Economic Development: Principles and Policies. New York: W. W. Norton, 1993.

Michael. P.Todaro and S. C. Smith. Economic Development. New Delhi: Pearson,2013.

Mishra, S. K. and V. K. Puri. Economics of Development and Planning. New Delhi: Himalaya, 2004.

Perkins, D.H. & D.L. Lindauer. Economics of Development. New York: W.W.Norton, 2006.

Taneja, M. I. and R.M. Myer. Economics of Development and Planning. ND: Visha, 2005

BOOKS FOR REFERENCE

Chakravorthy. S. Development Planning the Indian Experience. Calcutta: Clarendon Press, 1989.

Debraj. Ray, Development Economics. New Delhi: OUP, 2010.

Eckhard. Siggel. Development Economics a Policy Analysis Approach, England: Ashgate, 2005.

Hollis, Chenerry & T.N. Srinivasan. (Ed.) Handbook of Development Economics Volume I & II, Amestradam: Elsevier, 1998.

Meier. G. Leading Issues in Economics Development, Bombay, Calcutta: OUP, 1995. Sen. A.K. Development of Freedom. New Delhi: Oxford University,1994.

Thirwall. A.P. Growth & Development. New York: Palgrave Macmillan,2003.

Yujiro. Hayami. Development Economics from the Poverty to the Wealth of Nations, New York: OUP, 1997.

JOURNALS

Indian Growth and Development Review

Indian Journal of Gender Studies

Journal of Human Growth and Development Quarterly

Journal of Economic Growth and Development Research

WEB RESOURCES

<http://www.bris.ac.uk/Depts/Economics/Growth/journals.htm>

REPORTS

Human Development Reports-UNDP publications 2000 onwards

Parikh. Kirit. India Development Report (Ed.), Indira Gandhi Institute of Research and Development, New Delhi: OUP, 2004.

World Development Reports – Washington, World Bank Publications 2000 onwards

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	A question will contain 2 parts a and b. a is K1 level for 5 marks and b is K2 level for 5 marks c) $1 \times 5 = 5$ and b) $1 \times 5 = 5$ (Total 10 marks & 150 words each) Answer 1 question out of 2
	K2	5	
B	K3	8	$1 \times 8 = 8$ (1 out of 2 questions to be answered in 400 words)
	K4	8	$1 \times 8 = 8$ (1 out of 2 questions to be answered in 400 words)
C	K5	12	$1 \times 12 = 12$ (1 out of 2 questions to be answered in 700 words)
	K6	12	$1 \times 12 = 12$ (1 out of 2 questions to be answered in 700 words)

Other Components:

Total Marks: 50

Seminars/Quiz/Assignments

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	A question will contain 2 parts a and b. a is K1 level for 5 marks and b is K2 level for 5 marks c) $2 \times 5 = 10$ and b) $2 \times 5 = 10$ (2 out of 3 questions to be answered in 150 words each)
	K2	10	
B	K3	16	$2 \times 8 = 16$ (2 out of 3 questions to be answered in 400 words each)
	K4	16	$2 \times 8 = 16$ (2 out of 3 questions to be answered in 400 words each)
C	K5	24	$2 \times 12 = 24$ (2 out of 4 questions to be answered in 700 words)
	K6	24	$2 \times 12 = 24$ (2 out of 4 questions to be answered in 700 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PC/DE14												
I	Course Title: DEVELOPMENT ECONOMICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	3	3	2	3	3	2	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

RESEARCH METHODS AND ANALYSIS I

CODE:23EC/PC/RM14

CREDITS: 4

L T P: 4 0 2

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- to provide students with a comprehensive understanding of the principles and concepts of research methodology
- to develop the necessary skills to formulate research questions, objectives, and hypotheses.
- to introduce students to quantitative and qualitative data analysis statistical methods and provide an insight into their uses in economics.
- to develop critical thinking and evaluative skills for assessing the quality and validity of research studies
- to Demonstrate the application of a range of statistical techniques using economic data

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify theoretical and practical aspects of research in Economics	K1
CO2	illustrate various research designs, data collection methods and data analysis techniques	K2
CO3	develop critical thinking and problem-solving skills to identify gaps, formulate research questions, and make informed decisions.	K3
CO4	analyze data using excel, apply statistical tools, and draw valid inferences.	K4, K5
CO5	formulate and execute research projects, demonstrating competence in research design, data collection, analysis, and interpretation	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Research 1.1 Overview of Science and Scientific Method	K1-K2	15	1 - 5
	1.2 Characteristics and Elements of Scientific Method: Empirical Approach, Observation, Questions, Hypothesis, Experiments, Analyses, Conclusions, Replication	K1-K3		

	1.3 Goals of Scientific Research: Description, Prediction, Understanding/Explanation	K1-K3		
	1.4 Social Science Research - Introduction, Meaning, Objectives, Significance and Limitations	K1-K4		
	1.5 Types of Research: Pure, Applied, Analytical, Exploratory, Descriptive, Surveys, Conceptual/Theoretical Models	K1-K5		
2	Planning and Designing a Research Study	K1-K2	15	1-5
	2.1 Introduction			
	2.2 Choosing a research topic	K1-K3		
	2.3 Literature Review - Meaning and purpose of a literature review, sources, documenting sources, conducting a literature search, recording the literature, writing a literature review	K1-K3		
	2.4 Research Problem - meaning formulating the research problem	K1-K4		
	2.5 Articulating Hypothesis, Specification of Hypothesis	K1-K4		
	2.6 An overview of choosing variables to study, research participants, assigning study/research participants to groups	K1-K2		
	2.7 Choosing Samples: probability sampling, Non- probability sampling	K1-K4		
3	2.8 Ethical consideration in Research - fundamental ethical principles: respect, beneficence, justice, informed consent, competence, knowingness, voluntariness Introduction to Publication Ethics and Misconduct – Fabrication, Falsification, Plagiarism (types), Redundant Publication or salami slicing, improper authorship (Gift and Ghost), Conflict of Interest and Citation Manipulation	K1-K4	15	1-5
	Data Collection, Assessment Methods and Measurement Strategies	K1-K4		
	3.1 Types of Data: Time Series, Cross-Sectional, Panel Data Methods of Data Collection Introduction to Collecting Primary Data through Observation: Participant Observation, Structural Observation, Internet-Mediated Observation, Observation using Videography			
	3.2 Collecting primary data using semi-structural, In-depth, Questionnaires, Interviews - Group Interview, Semi-Structured, In-depth, Focus group	K1-K3		

	3.3 Using Secondary Data - Sources of data (Published): Brief Overview of contents of publications such as Economic Survey, Handbook of Statistics on Indian Economy, World Development Report, Statistical Outline of India, RBI Bulletin, Census Reports, NSSO, Handbook on Indian Agriculture, Internet Website: Ministry of HRD, RBI, World Bank, ADB, IMF	K1-K3		
	3.4 Scales of Measurement: Nominal, Ordinal, Interval, Ratio, Minimizing Measurement Error, Assessing Reliability, Strategies for increasing reliability	K1-K3		
4	Research Design and Research Report 4.1 Introduction to Research Design	K1-K2	15	1- 5
	4.2 Experimental Research Designs: Principles, Randomized Design, Completely Randomized Design, Latin Square Design	K1-K4		
	4.3 Non- Experimental Designs/ Qualitative Designs: Case Studies, Observation, Survey Studies, Focus groups	K1-K4		
	4.4 Introduction to Report Writing	K1-K2		
	4.5 Types of Research Reports	K1-K5		
	4.6 Structuring Research Reports	K1-K3		
	4.7 Presentation of a research report	K1-K3		
5	Practicals (Software – Excel) 5.1 Data Preparation: Logging and Tracking Data, Data Screening, constructing a Database, The Data Codebook, Data Entry, Transforming Data, Recoding Variable	K1-K2	18	4-5
	5.2 Data Analysis: Descriptive Statistics - Frequency Distribution, Grouped Frequency Distribution, Summary Statistics	K1-K6		
	5.3 Inferential Statistics: Correlation and Regression - Simple, Partial, Multiple Non-Linear Relationship - Functional Forms: Double-Log, Simple-Log, Reciprocal, Regression using Dummy Variables, Comparing Two Means - 't' Test, Comparing Several Means - ANOVA	K1-K6		

BOOKS FOR STUDY

Geoffrey Marczyk, David DeMatteo, David Festinger. *Essentials of Research Design and Methodology*. John Wiley & Sons, Inc. 2005.

Mark Saunders, Philip Lewis, Adrian Thornhill. *Research Methods for Business Students*, 7th edition, Pearson.

John W. Creswell. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*, 3rd edition, Sage Publishers, Inc.

Gupta. S.P. *Statistical Methods*. New Delhi: Sultan Chand, 2013.

Kothari C.R. *Research Methodology*. New Delhi: Wiley Eastern, 2001.

BOOKS FOR REFERENCE

Cochran. W. G. *Sampling technique*. New York: John Wiley, 2002.

Earl. R. Babbie. *The Practice of Social Research*. Boston: Wadsworth Cengage Learning, 2013. Goode, W.J. & P. K. Hatt. *Methods in Social Research*. New York: McGraw Hill, 1973. Neuman, W.L. *Social Research Methods; Qualitative and Quantitative Approach*. New York: Pearson Education, 2011.

Wilkinson, T.S. & P.L. Bhandarkar. *Methodology and Techniques of Social Research*. New Delhi: Himalaya Publishing House, 2011.

JOURNALS

International Journal of Development Research

Journal of Quantitative Methods for Economics and Business Administration Journal of Quantitative Research Tools in Economics

PATTERN OF ASSESSMENT:

Continuous Assessment Test:

Total Marks: 50

Duration: 2 Hours

THEORY (30 MARKS)

Duration: 1 Hour

Section	Cognitive Level	Marks	Pattern
A	K1	3	A question will contain 2 parts- A and B. A is K1 level for 3 marks, and B is K2 level for 3 marks. a) $1 \times 3 = 3$ and b) $1 \times 3 = 3$ (50 words each) One question only
	K2	3	
B	K3	6	$2 \times 3 = 6$ (2 out of 3 questions to be answered in 200 words)
	K4	6	$2 \times 3 = 6$ (2 out of 3 questions to be answered in 200 words)
C Combined as one question	K5	6	$2 \times 6 = 12$ (2 out of 3 questions to be answered in 600 words K5 (300 Words) and K6 (300 words))
	K6	6	

PRACTICALS (20 MARKS)

Duration: 1 Hour

Section	Cognitive Level	Marks	Pattern
A	K5	5	Four Datasets will be provided: Questions will cover K5 and K6 level. Students must choose Two out of Four dataset sums. $2 \times 10 = 20$
	K6	5	

Other Components:

Total Marks: 50

Duration: 90 Minutes

Quiz/Group Discussion/Presentation/Case Studies

End-Semester Exam:
THEORY (60 MARKS)

Total Marks: 100

Duration: 3 Hours
Time: 1.5 hours

Section	Cognitive Level	Marks	Pattern
A	K1	6	A question will contain 2 parts A and B. A is K1 level for 6 marks, and B is K2 level for 6 marks. A) $2 \times 3 = 6$ and B) $2 \times 3 = 6$ (2 out of 3 questions to be answered in 50 words each)
	K2	6	
B	K3	12	$2 \times 6 = 12$ (2 out of 3 questions to be answered in 150 words each)
	K4	12	$2 \times 6 = 12$ (2 out of 3 questions to be answered in 150 words each)
C Combined as one question	K5	12	$2 \times 12 = 24$ (2 out of 3 questions to be answered 600 words each) K5 (300 words) and K6 (300 words)
	K6	12	

PRACTICAL (40 MARKS)

Time: 1.5 Hrs

Section	Cognitive Level	Marks	Pattern
A	K5	10	Four Datasets will be provided: Questions will cover K5 and K6 level. Students must choose Two out of Four dataset sums. $2 \times 20 = 40$
	K6	10	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PC/RM14												
	Course Title: RESEARCH METHODS AND ANALYSIS I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	3	2	1	3	3	2	1	3
CO 2	3	3	3	2	3	3	2	1	3	3	2	1	3
CO 3	3	3	3	2	3	3	2	1	3	3	2	1	3
CO 4	3	3	3	2	3	3	2	1	3	3	2	1	3
CO 5	3	3	3	2	3	3	2	1	3	3	2	1	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

SYLLABUS

(Effective from the academic year 2023 – 2024)

MICROECONOMIC ANALYSIS II

CODE:23EC/PC/MI24

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to furnish the essential tools and techniques for an in-depth and fuller analysis of micro economic theory and relate it to current issues
- to equip the students with the ability to identify and analyse the strategic behaviour of firms under various market structures
- to develop a theoretical understanding of the factor markets and their significance in factorial distribution
- to address the welfare and policy implications of resource allocation through the market mechanism
- to understand the limitations of the market mechanism and discuss the failures

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the micro economic concepts and use knowledge to deal with real world situations	K1
CO2	demonstrate price theory and models for a contextual understanding of the behaviour of firms	K2
CO3	identify and apply the tools required to solve specific economic issues and equip in better policy making	K3
CO4	examine and gain a better understanding of factor markets and their limitations	K4
CO5	assess and evaluate the validity and relevance of the models in the light of market failure	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Theory of the Firm – Oligopoly	K1- K6	15	1 - 5
	1.1 Non collusive oligopoly - Models of Cournot	K1- K6		
	1.2 Game theory - Prisoner's Dilemma, Dominant and Nash Strategy	K1- K6		
	1.3 Strategic Competition- First mover advantage Stackelberg - Bertrand	K1- K6		
	1.4 Price Leadership	K1-K6		
	1.5 Limit pricing	K1- K6		
2	1.6 Collusive Oligopoly – Cartels	K1- K6	12	1 - 5
	Managerial and Alternative Theories of the Firm	K1- K6		
	2.1 Average Cost pricing theory	K2 - K5		
	2.2 Baumol's sales maximization theory	K2 - K5		
	2.3 Williamsons utility maximizing theory	K4 -K6		
3	2.4 Application: Applying the different market models to the current Indian market situation through marker survey	K1- K4	13	1 - 5
	Theory of factor and Distribution	K2- K6		
	3.1 Price employment decision in perfect and imperfect factor and product market for one variable and two variable factors	K2 - K5		
	3.2 Product exhaustion theorem –Euler's theorem	K2- K4		
	3.3Wage fixation and trade union	K2 - K6		
	3.4Wage differentials	K2 - K6		
4	3.5 Application: Study of the Indian government's intervention in the betterment of labour in India through wage legislations and policies	K1-K4	13	1 - 5
	General Equilibrium and Welfare	K2-K6		
	4.1 Walras Model (2 x 2 x 2 model)	K2-K6		
	4.2 Criteria for welfare measurement - Pareto, Hicks-Kaldor	K2-K6		
	4.3 Social Welfare Function- Samuelson, Arrow	K3 – K6		
5	4.4 Application – evaluating the different criteria against the welfare policy consideration in the Indian context.	K1 - K6	12	1 - 5
	Markets with Asymmetric Information	K2 - K5		
	5.1 Market Failure - Quality Uncertainty and Markets for Lemons	K2 - K5		
	5.2 Market Signaling	K1- K6		
	5.3 Moral Hazard			
	5.4 The Principal Agent Problem			

BOOKS FOR STUDY

Koutosoyiannis. A. *Modern Microeconomics*. Second Edition London: Macmillan Education 2003.

Varian. Hal. R. *Intermediate Microeconomics - A Modern Approach*. New York: W.W. Norton, 2010.

BOOKS FOR REFERENCE

Bardhan, Pranab & Christopher. Udry. *Development Microeconomics*. New York: OUP, 1999.

Basu, Kaushik and Ravi. Kanbur. *Arguments for a Better World*. (Ed.). New York: OUP, 2009.

Baumol. W. J. *Economic Theory and Operations Analysis*. New Delhi: Prentice Hall, 1982.

Jehle, G. A. and Reny, P. J. *Advanced Microeconomic Theory*, Third Edition, Pearson Education limited, England 2011

Nicholson, W. and Snyder, C. *Intermediate Microeconomics & its applications*, Eleventh edition South-western Cengage learning, USA 2010

Nicholson, W. and Snyder, C. . *Microeconomic Theory Basic Principles & Extensions*, Tenth Edition. USA Thomson South-western 2008

Pindyck, Robert. S & Daniel. L. Rubinfeld. *Microeconomics*. New Delhi: Prentice Hall, 2007.

JOURNALS

Journal of Economic Theory

Journal of Economic Literature

WEB RESOURCES

<https://www.economicsonline.co.uk/>

<https://www.economist.com/economics-a-to-z>

<https://mru.org/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
	K4	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
C	K5	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)
	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
	K2	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
B	K3	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
	K4	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
C	K5	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)
	K6	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PC/MI24												
II	Course Title: MICROECONOMIC ANALYSIS II												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	3	3	3	1	3	3	3	2	3
CO 2	3	3	1	1	3	3	3	3	3	2	3	3	2
CO 3	3	3	3	3	3	2	2	3	3	2	3	3	2
CO 4	3	3	2	1	2	2	2	3	2	2	3	3	3
CO 5	3	3	3	2	1	1	3	3	2	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

SYLLABUS

(Effective from the academic year 2023 – 2024)

RESEARCH METHODS AND ANALYSIS II

CODE:23EC/PC/RM24

CREDITS:4

L T P:4 0 2

TOTAL TEACHING HOURS:78

OBJECTIVES OF THE COURSE

- to apply probability techniques in decision making in case of uncertainty
- to provide hands-on training in using software to conduct statistical analysis of economic data
- to introduce students to qualitative research paradigm
- to analyse data appropriately and to communicate the results of the analysis clearly □ To develop critical thinking skills and apply research techniques to real world problems.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO 1	grasp the philosophical foundations of various research methods.	K1
CO 2	identify the research question, hypothesis and the appropriate research design.	K2
CO 3	choose appropriate analytical tool to analyse data appropriately and to communicate the results of the analysis clearly and effectively	K3
CO 4	evaluate statistical findings and interpretations and identify biases in the data	K4
CO 5	acquire proficiency in use scientific methods in economics research and analysis and build effective models to address various socioeconomic issues	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Random Variables and Probability Distribution		15	1- 5
	1.1 Defining Random variables –Discrete, Continuous	K1 - K4		
	1.2 Probability Distribution of a Random Variable	K1 - K5		
	1.3 Expected values of a random variable	K1 - K5		
	1.4 Theoretical Distribution – Binomial, Poisson, Normal Distribution	K1 - K6		

UNIT	CONTENT	CL	HRS	CO
2	Linear Correlation and Regression Analysis 2.1 Correlation – Meaning, Types and methods to estimate relationship between 2 or more quantitative variables, testing the significance of the co-efficient	K1 - K6	20	1 - 5
	2.2 Regression – objectives, Methods of Least Square, estimation of simple, partial and multiple regression co-efficient, assessing the significance of coefficients using ‘t’ test, standard error and Confidence interval approach, overall goodness of fit of the model –R ² , significance of the model - ANOVA	K1 - K6		
	2.3 Non- Linear Regression models – Double log, Semi-Log, Reciprocal, Polynomial regression models	K1 - K6		
	2.4 Regression using dummy variables - Gender, Spatial, Seasonal Variation, Combination of Time Series and Cross Sectional data	K1 - K6		
3	Statistical Inference 3.1 Formulation of a Statistical Hypothesis	K1 - K4	18	1 - 5
	3.2 Testing of Hypothesis – Procedure	K1 - K4		
	3.3 Testing for significant differences in means – ‘t’ Test, ANOVA, Standard Error	K1 - K6		
	3.4 Testing for significant differences in variances- F test	K1 - K6		
	3.5 Non parametric tests – Sign test, Run test, ‘U’ test, ‘H’ test, χ^2 distribution	K1 - K6		
4	Time Series Analysis 4.1 Concepts and Components	K1 - K5	10	1 - 4
	4.2 Measurement of trend	K1 - K5		
5	Qualitative Research Methods 5.1 Introduction to Logic - Syllogism as a form of reasoning - Inductive and Deductive Methods of Reasoning.	K1 - K5	15	1 - 5
	5.2 Epistemology - Definition - Binary Cartesian Epistemology - A Critique	K1 - K5		
	5.3 Quantitative and Qualitative Methods - Objectivity Vs Subjectivity – Qualitative Research Methods - Ethnography, Phenomenology, Field Research, Grounded Theory, Vignettes.	K1 - K5		

BOOKS FOR STUDY

Gupta, S.C, and V.K Kapoor. *Fundamentals of Applied Statistics*. New Delhi: Sulthan Chand & Sons, 2019.

Gupta S.P, *Statistical methods*. New Delhi: Sultan Chand and Sons., 2021.

Nagar, A. L., and R. K. Das. *Basic statistics*. Delhi: Oxford Univ. Press, 1991.

Viswanathan, P. K. *Business statistics an applied orientation*. New Delhi: Pearson/Education, 2007.

BOOKS FOR REFERENCE

Audi, Robert. *Epistemology a contemporary introduction to the theory of knowledge*. Hoboken: Taylor and Francis, 2013.

Babbie, Earl R. *The practice of Social Research*. Boston, MA: Cengage, 2021.

Cooper, Donald R., and Pamela S. Schindler. *Business research methods /donald R. Cooper, Pamela S. Schindler*. New York: McGraw-Hill/Irwin, 2014.

Ethridge, Don Erwin. *Research methodology in Applied Economics: Organizing, planning, and conducting Economic Research*. Oxford: Blackwell, 2004.

Goode, William J., and Paul K. Hatt. *Methods in social research: International student edition*. McGraw-Hill, 2017.

Gopal, Mysore Hatti. *An introduction to research procedure in Social Sciences*. London: Asia Publ. House, 1970.

Hazarika, Padmalochan. *Essential Statistics for Economics and Commerce*. New Delhi: Akansha Publishing House, 2006.

Kothari, C. R., and Gaurav Garg. *Research methodology: Methods and techniques*. New Delhi: New Age International (P) Limited, Publishers, 2019.

Monga, G. S. *Mathematics and statistics for Economics*. Noida: Vikas Publishing House Pvt Ltd, 2002.

Oakshott, Les. *Essential Quantitative Methods for business, Management and Finance*. Basingstoke: Palgrave Macmillan, 2012.

Salvatore, Dominick, and Derrick Reagle. *Statistics and Econometrics*. New York: McGrawHill, 2011.

Spiegel, Murray R., and Larry J. Stephens. *Theory and problems of Statistics*. New York: McGraw-Hill, 2008.

Wilkinson, T. S., and P. L. Bhandarkar. *Methodology and techniques of Social Research*. Bombay: Himalaya Pub. House, 2016.

Young, Pauline Vislick, and Calvin Fisher Schmid. *Scientific Social Surveys and research: An introduction to the background, content, methods, principles and analysis of Social Studies*. Englewood Cliffs, NJ: Prentice-Hall, 1966.

JOURNALS

International Journal of Development Research

Journal of Quantitative Methods for economics and Business Administration
Journal of Quantitative Research Tools in Economics

WEB RESOURCES

<http://iosrjournals.org/iosr-jrme.html>

<http://iosrjournals.org/iosr-jef.html>

PATTERN OF ASSESSMENT**Continuous Assessment Test:****Total Marks: 50**

THEORY			
Section	Cognitive Level	Marks	Pattern
A	K1	10	Answer any one out of two questions. 10 X 1 = 10 (200 words) concept, definition and simple problems.
B	K2	10	Answer any one out of two questions. 10 X 1 = 10 (200 words / problems)
C	K3	10	Answer any one out of two questions. 10 X 1 = 10 (200 words / problems)
PRACTICAL			
Section	Cognitive Level	Marks	Pattern
A	K4	10	Answer any two out of three questions. 10 X 2 = 20
B	K5	5	Answer any one out of two questions. A question will contain 2 parts a and b, a is K5 level for 5 marks and b is K6 level for 5 marks. a) 10 x 1 = 10 and b) 10 x 1 = 10
	K6 (5)	5	

Other Components:**Total Marks: 50**

Seminars/Quiz/Problem Assignments/article review/minor research/article submission

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

THEORY			
Section	Cognitive Level	Marks	Pattern
A	K1	20	Answer any two out of three questions. 10 X 2 = 10 (300 words) concept, definition and simple problems.
B	K2	20	Answer any two out of three questions. 10 X 2 = 10 (300 words / problems)
C	K3	20	Answer any one out of two questions. 20 X 1 = 20 (600 words / problems)
PRACTICAL			
Section	Cognitive Level	Marks	Pattern
A	K4	20	Answer any two out of three questions. 10 x 2 = 20
B	K5	10	Answer any one out of two questions. A question will contain 2 parts a and b, a is K5 level for 10 marks and b is K6 level for 10 marks. a) 10 x 1 = 10 and b) 10 x 1 = 10
	K6	10	

Mapping of Course Outcomes (COs)

to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Course Title: 23EC/PC/ RM24												
II	Subject Code: RESEARCH METHODS AND ANALYSIS II												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	1	1	3	3	3	2	3
CO 2	3	3	3	3	3	3	2	1	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

INDIAN ECONOMIC ISSUES AND POLICIES

CODE: 23EC/PC/IE24

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE:

- to have an in-depth analysis of issues and policies of the indian economy
- to motivate the students to take an active interest in the current economic policies operating in india.
- to encourage the students to identify the basic issues and problems of the indian economy.
- to investigate economic problems using current indian economic data and apply this knowledge to problems relating to socially and economically sensitive issues.
- to demonstrate techniques to compare and examine the development and growth trends of the national as well as regional economies.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	to understand the key Economic issues in the Indian Economy	K1& K2
CO2	to interpret the role and issues of agricultural and industrial sector in Indian economy	K3
CO3	to analyse various policies and reforms in Indian economy	K4
CO4	to examine the policymaking framework for the development of the Indian economy	K5
CO5	critically evaluate the current economic issues with the available statistics and contribute novel insights and policy implications.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Demographic Profile of India 1.1 Characteristics of Indian Population - qualitative and quantitative aspects – Demographic Dividend, Population Projections (2001-2050).	K1-K4	12	1-5
	1.2 Population policy- National Population Policy (2000 and 2018)	K1-K4		
	1.3 Human Development Index an Overview - Global, India and States – Comparison	K1-K6		

UNIT	CONTENT	CL	HRS	CO
2	Agriculture and Development 2.1 Role and Importance of Agriculture in India	K1-K6	12	1-5
	2.2 Major Issues in Agriculture – Productivity, Land Tenure, Technology and Agrarian crisis	K1-K4		
	2.3 Agricultural Policies – Land Reforms, Green Revolution ,Price Policy and Credit Policy	K1-K5		
	2.2 Food Security-An overview -Issues and challenges	K1-K6		
3	Industry and Development 3.1 Industrialization- Recent Trends and growth in Industrial sector	K1- K5	13	1-5
	3.2 Industrial Policy (Pre and Post Liberalisation)- Overview	K1 –K3		
	3.3 Public Sector enterprises - Privatisation and Disinvestment	K1 –K4		
	3.4 Micro, Small, Medium Enterprises- Overview of MSMEs	K1-K5		
4.	Infrastructure Development in India 4.1 Infrastructure and Economic Development	K1 – K5	13	1-5
	4.2 Economic Infrastructure - Energy, Power, Transport, Communication, IT(Brief overview)	K1 – K3		
	4.3 Social Infrastructure - Development of Education and Health Infrastructure	K1 – K4		
	4.4 Financing Infrastructural Development - PPP Model	K1-K6		
5	Data Sources and Statistical Agencies in India *** 5.1 Statistical system in India an overview: Data collection and dissemination agencies: CSO. RBI, Census, NSSO, ASI, CMIE, Capital Labour Energy Materials- KLEMS (Global Data)	K1-K6	15	1-5
	5.2 National income and its components since 1951 (CSO) - Agricultural statistics at Glance (Ministry of Agriculture) , Industry (ASI and CMIE), Banking sector (RBI)	K1-K5		
	5.3 Latest Census Report, Socioeconomic statistics (NSSO, National University of Educational Planning and Administration – NUEPA), Trade and External Sector (RBI), World Development Report, Human Development Report, NFHS 2019, Recent Economic Survey Report and Budget.	K1-K6		

Note:* Not to be tested in End Semester Examination BOOKS FOR STUDY**

Datt, Ruddar and K.P.M. Sundaram. Indian Economy. New Delhi: Sultan Chand, 2018.

Kapila, Uma , Indian Economy: Performance and Policies, 2018-19. New Delhi: Academic Foundation, 19th Revised edition, 2018 .

Dhar.P.K, Indian Economy its Growing Dimensions,2023. New Delhi: Kalyani Publishers, 28th Revised edition.

BOOKS FOR REFERENCE

Ahluwalia I J & I M D Little (eds), India's Economic Reform and Development, New Delhi, Oxford University Press, 1999
Bawa R S & P S Rarkhy, Structural Changes in Indian Economy, Amritsar, Gurunanda Dev University Press, 1997
Datt R, Second Generation Economic Reforms in India, New Delhi, Deep & Deep Publications 2001
Chakravarty S, Development Planning: The Indian Experience, New Delhi, Oxford University Press, 1993.
Sen A, Dreze J, An Uncertain Glory: India and its contradictions, New Delhi, Penguin Random House India, 2020.
Gupta K R, Indian Economy: Issues and Concerns, New Delhi, Atlantic Publications, 2018.

JOURNALS

The Economist
Journal of Agricultural Economics
Journal of Economic Growth
Journal of Labor Economics
The Indian Economic Journal
Review of Developmental Economics
Indian Economic Review
Oxford review of Economic policy

WEB RESOURCES

<https://hdr.undp.org/data-center/human-development-index#/indicies/HDI>
<https://sdgs.un.org/goals>
<https://www.worldbank.org/en/country/india/overview> Major Initiatives | Government of India, Ministry of Education <https://www.pppinindia.gov.in/>
<https://desagri.gov.in/document-report/agricultural-statistics-at-a-glance-2021/> <https://www.indiabudget.gov.in/economicsurvey/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
	K4	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
C	K5	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)
	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
	K2	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
B	K3	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
	K4	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
C	K5	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)
	K6	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)

*** **Unit 5 Not to be tested****Mapping of Course Outcomes (COs)****to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PC/IE24												
II	Course Title: INDIAN ECONOMY ISSUES AND POLICIES												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	3	2	2	3	2	2	2	2
CO 2	3	3	3	1	2	2	3	2	3	2	1	2	2
CO 3	3	3	3	2	3	3	2	3	3	3	1	2	2
CO 4	3	3	3	2	3	3	3	3	3	3	3	2	3
CO 5	3	3	3	2	3	3	3	3	2	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

SOFT SKILLS

CODE: 23EC/PK/SS22

CREDITS: 2

L T P: 2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- To empower students and create opportunities for self-development
- To instill confidence in students to face challenges
- To manage emotions and resolve conflicts
- To organize activities and manage time
- To set goals and plan ahead

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- Communicate with confidence and poise
- Accept themselves and improve on their weaknesses
- Strengthen their relationships through confronting and solving problems
- Work more effectively and complete activities on time
- Plan their future with clarity and focus

Unit	1	
	Behavioural Traits	(6 Hours)
	1.1 Self- Awareness	
	1.2 Communication Skills –Verbal and Non-Verbal	
	1.3 Leadership Qualities	
	1.4 Etiquette and Good Manners	
	1.5 Experiential Learning –based on activities	
Unit	2	
	Team Work	(5 Hours)
	2.1. Interpersonal Skills	
	2.2. People Management	
	2.3. Creative Thinking	
	2.4. Critical Thinking	
	2.5. Experiential Learning – based on activities	
Unit	3	
	Time Management	(5 Hours)
	3.1. Importance of time management	
	3.2. Planning and Prioritizing	
	3.3. Organizing skills	
	3.4. Action Plan	
	3.5. Experiential Learning – based on activities	

Unit 4

Conflict Resolution

(5 Hours)

- 4.1. Reasons for conflict
- 4.2. Consequences of conflict
- 4.3. Managing emotions
- 4.4. Methods of resolving conflicts
- 4.5. Experiential Learning – based on activities

Unit 5

Career Mapping

(5 Hours)

- 5.1. Goal-setting and Decision-making
- 5.2. Career Planning
- 5.3. Resume Writing
- 5.4. Handling Interviews
- 5.5. Experiential Learning – based on activities

BOOKS FOR REFERENCE

Khera, Shiv. *You Can Win*. Macmillan India, 2002.

Mishra, Rajiv. K. *Personality Development: Transform Yourself*. Rupa, 2004.

Newstorm, John. W. and Scannell. Edward. E. *Games Trainers Play: Experiential Learning*. Tata McGraw Hill, 1980.

PATTERN OF EVALUATION

Internal Assessment:

Total Marks: 50

Quiz / Group Presentation /Assignment

No End Semester Examination.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

MACROECONOMIC ANALYSIS I

CODE: 23EC/PC/MA34

CREDITS: 4

LTP: 4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to provide a comprehensive picture of the evolution of macroeconomic theory.
- to understand the behavioural foundation of macroeconomics
- to discuss the micro foundation of macroeconomics
- to give an insight into the integration of the classical and keynesian theories.
- to analysis the open economy model and its policy implications.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	students will be able to understand the basic macro variable and their working.	K1,K2
CO2	students will be able to apply the knowledge on classical, keynesian and the classical and keynesian synthesis in policy making.	K3
CO3	the student will be able to test the validity of micro foundation to the macroeconomics.	K4
CO4	the student will be able to test the validity of the various theories empirically using relevant analytical tools and also develop research skills.	K5
CO5	enhance critical thinking skills along with quantitative reasoning	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Aggregate Demand and Supply	K1 – K5	12	1 – 5
	1.1 The Quantity equation of Aggregate demand			
	1.2 Downward sloping demand curve and shift in aggregate demand curve	K1 – K5		
	1.3 Aggregate Supply- long run vertical curve and short run horizontal curve.	K1 - K5		
	1.4 Upward sloping supply curve and shift in the supply curve	K1- K5		
	1.5 Stabilization policy—Shocks to aggregate demand and supply	K1-K5		

UNIT	CONTENT	CL	HRS	CO
2	Classical and Keynes		14	1 – 5
	2.1 Classical Model – an Overview	K1-K5		
	2.2 Keynes Model _ An Overview	K1-K5		
	2.3 Schools of thought in macroeconomics after Keynes.	K1-K5		
3	Behavioural Foundation of Macroeconomics	K1-K6	14	1-5
	3.1 Consumption Function- Keynes Psychological Law, Relative income, Permanent Income, Life Cycle Hypothesis and Inter Temporal Choice			
	3.2 Investment Function – Neo-Classical theory of investment, Accelerator theory of investment (Simple and Flexible), Residential Theory, Stock Market and Tobin's q ratio	K1 – K6		
	3.3 Paradox of Thrift	K1 – K6		
4	The Classical - Keynesian Synthesis	K1- K5	13	1-5
	4,1 Interaction of Real and Monetary Sector of the economy – IS-LM model			
	4.2 The IS-LM model with the government sector	K1- K5		
	4.3 The role and relative effectiveness of fiscal and monetary policy in IS-LM model	K1 – K6		
5	Open Economy Model	K1 – K5	12	1 -5
	5.1 IS-LM in the open economy			
	5.2 Mundell- Fleming Model	K1 – K5		
	5.3 The Small Open Economy under Fixed and Floating Exchange Rate	K1-K6		

BOOKS FOR STUDY

Dornbusch, Rudiger, Fischer, Stanley & Startz, Richard “ Macroeconomics” McGraw Hill, 9th Edition

Levacie, Rosalin and Alexander Rebman, An Introduction to Keynesian – Neoclassical Controversies UK: Macmillan 1991

Richard T.Froyen, Macroeconomics Theories and Policies, India, Pearson, 2014

BOOKS FOR REFERENCE

Blanchard, Olivier and Stanley, Fischer, “ Lectures on Macroeconomics”. The MIT Press, US, 1989.

Blanchard Oliver. *Macroeconomics*, India, Pearson Education, 2011.

Mankiw. Gregory N. Principles of Macroeconomics., New York: The Dryden Press, 2011.

Mehmet Ugur, ed., An Open Economy Macro-Economy Reading, New York, London: Routledge Publication, 2002.

Romer. David. Advanced Macroeconomics. New York: McGraw Hill, 2010.

Snowdon Brain and Vane Howard R, “Modern Macroeconomics: its Origin, Development and Current State” Edward Elgar Publishing Ltd, UK, 2014

JOURNALS

Cambridge Journal of Economics
Journal of Political Economy
The B.E. Journal of Macroeconomics

REPORTS

RBI Bulletin
World Economic Outlook Database
World Bank reports

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
	K4	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
C	K5	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)
	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words)
	K2	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words)
B	K3	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words)
	K4	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words)
C	K5	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)
	K6	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)

Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23EC/PC/MA34												
III	Course Title: MACROECONOMICS I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	2	2	2	3	3	3	3	3
CO 2	3	3	3	1	2	3	2	1	3	2	3	3	3
CO 3	3	3	3	2	3	3	2	2	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	2	3	3	2	3	3
CO 5	3	3	3	3	3	3	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

PUBLIC ECONOMICS `

CODE: 23EC/PC/PE34

CREDITS: 4

LTP: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to provide insights on the nature of public household and the problems relating to the provisioning of social goods
- to understand the rationale behind government allocation of public goods.
- to examine the nuances of public choice and the paradoxes of voting.
- to analyse the mechanism of pricing of public goods.
- to explore the various types of tax systems and examine their impact on equity and efficiency.

COURSE LEARNING OUTCOMES

On Successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO 1	describe the distinguishing features of public goods.	K1
CO 2	comprehend the role of government intervention in provision of public goods.	K2
CO 3	apply the theories of public choice in addressing economic issues evaluating alternative policy decisions.	K3
CO 4	analyse the political decision making and its impact on policy choices.	K4
CO 5	develop the ability to critique and redefine economic policies in the public spectrum.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Welfare Foundation – Pareto Optimality – Pareto Efficiency	K1 - K5	10	1- 4
	1.2 Multiple Theory of Public Households. Allocation, Distribution and Stabilization	K1 - K6		
2	Theory of Public Goods 2.1 The concept of Public, Private, Mixed, Merit, Club goods –Reasons for governmental allocation intervention – Market Failure	K1 - K5	14	1- 5

UNIT	CONTENT	CL	HRS	CO
	2.2 The Theory of Social Goods –the General Model for Social goods –P.A. Samuelson. Social Goods allocation through the Budget	K1 - K5		
	2.3 Externalities and its corrections	K1 - K6		
	2.4 Theory of Optimal Distribution	K1 - K6		
3	Theory of Public Choice 3.1 Knut Wicksell's approach to revealing social preferences – Absolute Unanimity, Relative Unanimity, Gordon Tullock – Decision Making Cost and Voter Externality Cost	K1 - K6	13	1 - 5
	3.2 Erik Lindahl and H.Bowen's Model	K1 - K6		
	3.3 Majority Voting and Public goods –the Theory of Voting –Condorcet Winner, Voting Paradox –Arrow's Impossibility Theorem – Interest groups –Political Coalitions and Log Rolling and lobbying	K1 - K6		
	3.4 Theory of Rent Seeking	K1 - K6		
4	Public Expenditure 4.1 Public Expenditure in India –Structure and Growth	K1 - K4	13	1 - 5
	4.2 Role of the Public Sector in India	K1 - K4		
	4.3 Pricing of the Public Sector – The Second Best Theorem, Peak Load Pricing Mechanism. User Prices for Public goods	K1 - K6		
	4.4 Cost Benefit Analysis	K1 - K6		
5	Principles of Taxation 5.1 Introduction to Taxation in the circular flow	K1 - K5	15	1 - 5
	5.2 Classification of Taxes –Taxes in India-Types, Features, Trends – Recent developments – GST, New Tax Regime	K1 - K5		
	5.3 Approaches to tax equity –Benefit Approach and Ability to Pay Approach. The Ramsey rule for efficient taxation. Excessive Taxation, Tax evasion and the Laffer curve	K1 - K6		
	5.4 Principles of Tax Incidence – Partial Equilibrium view of Product and Factor taxes. Musgrave's Concept of tax and expenditure incidence – measuring changes in distribution	K1 - K6		

BOOKS FOR STUDY

Herber. Bernard. P. *Modern Public Finance, The Study of Public Sector Economics* New Delhi: AITBS, 2004.

Musgrave. Richard. A. *The Theory of Public Finance.*, New York: McGraw Hill, 2016.

BOOKS FOR REFERENCE

Amiya, K. Bagchi & Garry. A. Dymski. (Eds.) *Capture and Exclude: Developing Economics and the Poor in the Global Finance.* New Delhi: Tulika Books, 2007.

Boadway. R. W. *Public Sector Economics*. Massachusetts: Cambridge Winthrop Publications, 1979.

Buchanan, J. M. & Flowers. R. M. *The Public Finances An Introductory Textbook*. Illinois: Irwin Homewood, 1987.

Hillman. A. L. *Public Finance and Public Policy*. UK: Cambridge, 2003.

Lekhi. R. K. *Public Finance*. Ludhiana: Kalyani, 2011.

Mueller. D. C., *Public Choice*. Cambridge: University Press, 1989.

Musgrave, R. A. and Musgrave P. B. *Public Finance in Theory and Practice*. New York: Asian Student Edition, 2016.

Rosen, S. Harvey & Ted Gayer, *Public Finance*, Tata McGraw Hill, New Delhi, 2017

Sankar. U. *Public Sector Pricing, Theory and Applications*. IEA Trust for Research and Development, 1992.

Sarma, J.V.M, *Public Finance*, OUP, New Delhi, 2018

Winfrey. J.C. *Public Finance- Public Choices and the Public Economy*. New York: Harper and Row, 1973.

JOURNALS

Canadian Journal of Economics
Journal of Public Economics
Journal of Urban Economics

WEB RESOURCES

<https://www.indiabudget.gov.in/>
<https://www.oecd.org/gov/budgeting/principles-budgetary-governance.html>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
	K4	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
C	K5	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)
	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
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	K4	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
C	K5	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)
	K6	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PC/PE34												
III	Course Title: PUBLIC ECONOMICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	1	2	1	3	2	2	3	2
CO 2	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

GENDER ECONOMICS

CODE: 23EC/PC/GE34

CREDITS:4

L T P 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to sensitize students on issues relating to gender
- to identify the marginalization of women in economic theory.
- to enable them to study and analyze economic theories with a gendered lens
- to acquire skills to conduct gender review of socio – economic and demographic development policies, programs and strategies.
- to critically analyse how current economic realities in developed and developing countries have different effects on men and women

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	demonstrate the understanding of gender economics and use the key concepts and theories to real world scenario.	K1, K2
CO2	construct real world case studies of gender sensitive economic policies or initiatives.	K3
CO3	analyze gender in the context of economics, family, work and policy	K4
CO4	critically evaluate the role of gender in economic development	K5
CO5	design and conduct original research projects in gender economics	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Gender: An Introduction	K1 – K6	10	1 – 5
	1.1 Patriarchy – Patriarchy and Gender			
	1.2 Gender as a category of analysis – Julie A Nelson's analysis of Gender	K1 – K6		
	1.3 The need for Economics from a Feminist Perspective – Gender in Economics	K1 – K6		

UNIT	CONTENT	CL	HRS	CO
2	Critique of Methods, Concepts and Philosophies	K1-K3	14	1-5
	2.1 Classical Economics – A critique of Cartesian Binary Epistemology within the subject of Economics			
	2.2 Neoclassical Economics – A Critique of Neoclassical Economics – Michele Pujol	K1 – K3		
	2.4 Marxist Economist – Marxist Feminism – Frederick Engels – Margaret Benston – Maria Rosa Della Costa – Barbara Bergmann	K1 – K3		
3	Gender, Work and Family	K1-K3	14	1-5
	3.1 Themes of the Family: A critique from a feminist point of view			
	3.2 Debates on household labour – Gary Becker – Division of Work within the Family, Discrimination Theory, Notburga Ott – Division of Work, Asa Rosen – discrimination Model	K1 – K6		
	3.3 Sexual Division of labour and labour market stereotypes – pink collar – glass cliff – glass escalator	K1 – K6		
4	Work, Poverty and Globalization	K1 – K6	13	1 -5
	4.1 Poverty and Gender – Women workers in the organized and unorganized sector -Feminization of poverty			
	4.2 Impact of Globalization on women	K1 – K6		
	4.3 Women: Invisible workers and Visible work – Statistical Purdah	K1-K6		
	4.4 Conceptualization of women's work: A critique of data system	K1 – K6		
5	Gender Policy	K1 – K6	14	CO1-5
	5.1 Objective and Methods of Gender policy – Global and National Gender Policy			
	5.2 Gender inequality indicators – indicators of gender differences in socio economic development – Gender Pay Gap, Gender Inequality Index, Gender Development Index, Gender empowerment Measure, Global Gender Gap Index	K1 – K6		
	5.3 Introduction to Gender Budgeting	K1- K6		

BOOKS FOR STUDY

Higgins. Benjamin. Economic Development: Principles and Policies. New York: W. W. Norton, 1993.

Michael. P.Todaro and S. C. Smith. Economic Development. New Delhi: Pearson,2013.

Mishra, S. K. and V. K. Puri. Economics of Development and Planning. New Delhi: Himalaya, 2004.

Perkins, D.H. & D.L. Lindauer. Economics of Development. New York: W.W.Norton, 2006.

Taneja, M. I. and R.M. Myer. Economics of Development and Planning. New Delhi: Visha, 2005

BOOKS FOR REFERENCE

- Chakravorthy. S. Development Planning the Indian Experience. Calcutta: Clarendon Press, 1989.
- Debraj. Ray, Development Economics. New Delhi: OUP, 2010.
- Eckhard. Siggel. Development Economics a Policy Analysis Approach, England: Ashgate, 2005.
- Hollis, Chenerry & T.N. Srinivasan. (Ed.) Handbook of Development Economics Volume I & II, Amestradam: Elsevier, 1998.
- Meier. G. Leading Issues in Economics Development, Bombay, Calcutta: OUP, 1995. Sen. A.K. Development of Freedom. New Delhi: Oxford University, 1994.
- Thirwall. A.P. Growth & Development. New York: Palgrave Macmillan, 2003.
- Yujiro. Hayami. Development Economics from the Poverty to the Wealth of Nations, New York: OUP, 1997.

JOURNALS

- Indian Growth and Development Review
- Indian Journal of Gender Studies
- Journal of Human Growth and Development Quarterly
- Journal of Economic Growth and Development Research

WEB RESOURCES

<http://www.bris.ac.uk/Depts/Economics/Growth/journals.htm>

REPORTS

- Human Development Reports-UNDP publications 2000 onwards
- Parikh. Kirit. India Development Report (Ed.), Indira Gandhi Institute of Research and Development, New Delhi: OUP, 2004.
- World Development Reports - World Bank Publications 2000 onwards

PATTERN OF ASSESSMENT

NO CONTINUOUS ASSESSMENT TEST

Other Components:

Total Marks: 50

Quiz / Group Discussion / Presentation / Case Studies / Seminar

NO END SEMSTER EXAMINATION

Students will be required to submit a 3000 word individual term paper, the paper has to be related to area of gender. The topic will be approved by the course teacher.

Total Marks – 100 (to be reduced to 50 Marks)

Term Paper - 50 Marks

Presentation – 25 Marks

Viva Voce – 25 Marks

Evaluation of the Term Paper Presentation and Viva Voce to be done by a panel of examiners – course teacher and an external examiner from the department.

Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23EC/PC/GE34												
III	Course Title: GENDER ECONOMICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	3	1	3	3	2	2	3
CO 2	3	3	3	2	2	2	3	1	3	3	2	2	3
CO 3	3	3	3	2	2	2	3	1	3	3	2	2	3
CO 4	3	3	3	2	2	2	3	1	3	3	2	2	3
CO 5	3	3	3	2	2	2	3	1	3	3	2	2	3
High Correlation: 3				Moderate Correlation: 2				Low Correlation: 1					

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

ECONOMETRIC METHODS

CODE: 23EC/PC/EM34

CREDITS:4

L T P:4 0 2

TOTAL TEACHING HOURS:78

OBJECTIVES OF THE COURSE

- to provide with a rigorous introduction to univariate and multivariate regression and its uses in economics
- to address the problems faced in estimation and inference in the context of linear regression models
- to teach students how to apply relevant econometric methods (lab sessions) to analyze data and interpret the results from such analysis
- to understand the economic implications and relevance of these tools required to formulate simple econometric Models

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	provides students with an in-depth understanding of the analytical and data processing tools	K1
CO2	demonstrate and formulate scientific solutions to the real-life economic problems	K2
CO3	discover and verify economic phenomenon by identifying cause and effect relation ship	K3
CO4	estimate to navigate economic problems using the most appropriate inferential statistics	K4
CO5	evaluate the consequences of multicollinearity, heteroscedasticity, autocorrelation in the multiple regression model to solve scientific problems	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction	K1	5	1-5
	1.1 Econometrics - Definition			
	1.2 Stages in Empirical Econometric Research- Classical methodology	K1-K2		

UNIT	CONTENT	CL	HRS	CO
2	Two Variable Linear Regression Analysis	K1-K3	18	1-5
	2.1 Linear Regression Model – Assumptions, Principle of Least Squares			
	2.2 Derivation of OLS Estimator and its Properties	K1-K4		
	2.3 Standard Error	K1-K4		
	2.4 Gauss Markov Theorem- Derivation	K1-K3		
	2.5 Estimation of a Two Variable Model	K1-K5		
	2.6 Coefficient of Determination	K1-K5		
	2.7 Hypothesis Testing	K1-K5		
3	Three Variable Linear Regression Model	K1-K3	20	1-5
	3.1 Introduction to the Model			
	3.2 Estimations of the Model by OLS Method	K1-K5		
	3.3 Hypothesis Testing: ANOVA	K1-K5		
	3.4 Coefficient of Determination	K1-K5		
	3.5 Functional Form of Regression Models: Double Log, Semi Log, Reciprocal Models, Polynomial regression models	K1-K6		
	3.6 Regression Using Dummy Variables- Testing for Structural Stability of Regression Model, Interaction Effects, Seasonal Analysis, Use of Dummy Variable in Analysing Time Series & Cross –Sectional Data	K1-K6		
4	General Linear Model (Matrix Approach)	K1-K6	15	1-5
	4.1 Matrix Approach to Linear Regression model: ‘k – variable’ Linear Regression model, Assumptions			
	4.2 Derivation of Gauss Markov theorem	K1-K6		
	4.3 OLS estimation, Testing significance of the model using ANOVA	K1-K6		
5	Violation of CLRM assumptions	K1-K6	20	1-5
	5.1 Multicollinearity- Nature, Consequences, tests for detection and Remedial measures			
	5.2 Heteroscedasticity- Nature, Consequences, tests for detection and Remedial measures	K1-K6		
	5.3 Autocorrelation- Nature, Consequences, tests for detection and Remedial measures	K1-K6		

BOOKS FOR STUDY

Damodar N, Gujarati. *Basic Econometrics*, 5th edition. New Delhi: McGraw Hill International edition, 2011.

Ramu Ramanathan. *Introductory Econometrics with Applications*, 5th edition. Harcourt College Publishers.

BOOKS FOR REFERENCE

Jeffrey M. Woolridge. *Introductory Econometrics*, 6th edition, Cengage Learning.Inc, 2016. James H. Stock and Mark W.Watson. *Introduction to Econometrics*, 3rd edition, Pearson India, 2017.

Christopher, Dougherty. *Introduction to Econometrics*, 4th edition, London: Oxford University Press, Indian edition 2011.

Damodar N, Gujarati. & Sangeetha. S. *Basic Econometrics*, 4th edition. New Delhi: McGraw Hill Publications, 2007.

Dominick, Salvatore. & Derrick. Reagle. *Statistics and Econometrics, Schaum's Outlines* 2nd edition. New York: McGraw Hill, 2011.

Koutsoyiannis, Theory of Econometrics, Palgrave

Nachane, Dilip M. "Econometrics: theoretical foundations and empirical perspectives" OUP Catalogue 2006.

Green, William H. "Econometric Analysis (7 th)." 2007.

Johnston, John, and John DiNardo. "Econometric methods" New York 19.7, McGraw Hill 1972: 22.

JOURNALS

The Econometrics Journal – Royal Economic society

Journal of Quantitative Economics

WEB RESOURCES

<http://egei.vse.cz/english/wp-content/uploads/2012/08/Basic-Econometrics.pdf>

<http://www.ssc.wisc.edu/~bhansen/econometrics/Econometrics.pdf>

<http://www.mathworks.com>

www.statisticssolutions.com/multicollinearity

www.statisticshowto.datasciencecentral.com

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
	K4	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
C	K5	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)
	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

Other Components:**Total Marks: 50**

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
	K2	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
B	K3	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
	K4	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
C	K5	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)
	K6	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)

Mapping of Course Outcomes (COs)

to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23EC/PC/EM34												
III	Course Title: ECONOMETRIC METHODS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	1	1	2	1	1	1	2	1	1	1	2
CO 2	2	2	1	1	2	2	2	2	2	2	1	1	2
CO 3	2	2	1	1	2	1	1	1	2	2	1	1	2
CO 4	2	2	1	1	2	1	1	1	2	2	1	1	2
CO 5	2	2	1	1	2	1	1	1	2	2	1	1	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

SUMMER INTERNSHIP

CODE:23EC/PN/SI32

CREDITS:2

OBJECTIVES OF THE COURSE

- to enable the students to connect theoretical foundations in economics to the related fields in the economy
- to provide the students with an opportunity to avail of hands on experience with regard to the industry and/or field of study
- to open up avenues for further research and employment

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- develop working knowledge related to various aspects of research
- demonstrate the ability to perform job functions related to research
- improve research skill
- enhance personal development

The department would help students to be placed under various research institutions associated with the discipline of economics for summer internship according to the area of Interest. Each student will have to maintain the following

1. Interns will get feedback from their research supervisor/employer about their performance. Interns can in turn be graded as Very Good/Good/Satisfactory
2. A record of work done should be duly endorsed by the institution – A log book
3. The interns will have to submit a written report at the end of the internship, and make a presentation with the help of a PPT. This would be evaluated internally for 50 marks considering the grades/feedback obtained.

There has to be an accompanying letter from the agency stating that the student has interned with them for a period of not less

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M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

MACROECONOMIC ANALYSIS II

CODE: 23EC/PC/MA44

CREDITS: 4

LTP: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to provide a comprehensive picture of the macroeconomics after keynes
- to trace the evolution of the macro theories from the keynesian to the new classical, new keynesian school
- to give an insight into the integration between macroeconomic theory and practice □ to enable students, understand the role of macro policy in the development of an economy.
- to address the issues of economic fluctuations

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	students will be able to acquire the knowledge on post keynesian, new-keynesian and new classical models	K1, K2
CO2	students will be able to apply the theories to macroeconomic issues like inflation, depression, slow growth etc	K3
CO3	students will be able analyses the economic fluctuation in the economy and evaluate the policy measures.	K4
CO4	the student will be able to test the validity of the various theories empirically using relevant analytical tools and also develop research skills	K5
CO5	the students will be able to critically analysis the various policies to macroeconomic issues.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 –Create		

UNIT	CONTENT	CL	HRS	CO
1	Neo-Keynesian Macro Model	K1 – K5	12	1 – 5
	1.1 Post-Keynesian Economics	K1 – K5		
	1.2 Reinterpretation of Keynes as Non-Walrasian Equilibrium Economics			
	1.3 Neo-Keynesian quantity constraint model	K1 - K5		
2	The Monetarist Counterrevolution	K1-K5	14	1-5
	2.1 The Reformulation of the quantity theory of money	K1-K5		
	2.2 Fiscal and Monetary policy: Monetarist Versus Keynesian			
	2.3 Unstable Velocity and the declining policy influence of Monetarism	K1-K5		

UNIT	CONTENT	CL	HRS	CO
3	Output, Inflation and Unemployment Alternative Views	K1-K5	14	1-5
	3.1 The Natural Rate Theory			
	3.2 Monetary policy, Output and Inflation - A Monetarist View	K1 – K5		
	3.3 A Keynesian View of the Output-Inflation Trade Off	K1 – K5		
	3.4 Evolution of the Natural Rate Concept	K1 – K5		
4	New Classical Economics	K1- K5	13	1-5
	4.1 The New Classical Position			
	4.2 The Keynesian Counter critique	K1- K5		
	4.3 Lucas – Intertemporal substitution model	K1 – K5		
5	Real Business Cycles and New Keynesian Economics	K1 – K5	12	1 -5
	5.1 Real Business Cycle Model			
	5.2 New Keynesian Economics- Menu Cost, Efficient Wage model , inside-outside model and Hysteresis	K1 – K5		
	5.3 Real Business cycle view on Great Depression	K1-K5		

BOOKS FOR STUDY

Blanchard Oliver. *Macroeconomics*, India, Pearson Education, 2011

Levacie, Rosalin and Alexander Rebman, *An Introduction to Keynesian – Neoclassical Controversies* UK: Macmillan 1991

Richard T.Froyen, *Macroeconomics Theories and Policies*, India, Pearson, 2014

BOOKS FOR REFERENCE

Barro, Robert J. & Sala-i-Martin, Xavier, *Economic Growth* McGraw Hill, New York, 1995

Blanchard, Olivier and Stanley, Fischer, “Lectures on Macroeconomics”. The MIT Press, US 1989

Dornbusch, Rudiger, Fischer, Stanley & Startz, Richard “Macroeconomics” McGraw Hill, 9 th Edition.

Mankiw. Gregory N. *Principles of Macroeconomics*., New York: The Dryden Press, 2011.

Romer. David. *Advanced Macroeconomics*. New York: McGraw Hill, 2010.

Snowdon Brain and Vane Howard R, “Modern Macroeconomics: its Origin, Development and Current State” Edward Elgar Publishing Ltd., UK 2005

JOURNALS

Cambridge Journal of Economics

Journal of Political Economy

The B.E. Journal of Macro Economics

REPORTS

World Economic Outlook Database

World Bank reports

RBI Bulletin

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
	K4	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
C	K5	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)
	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

Other Components:**Total Marks: 50**

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
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	K2	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
B	K3	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
	K4	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
C	K5	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)
	K6	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)

Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23EC/PC/MA44												
IV	Course Title: MACROECONOMICS II												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	1	3	3	3	3	3
CO 2	3	3	3	2	3	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	2	3	3	3	1	3	3	3	3	2
CO 5	3	3	3	2	3	3	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

INTERNATIONAL TRADE

CODE: 23EC/PC/IT44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to understand the theoretical underpinnings of international trade
- to analyze the relevance of the received theories in the context of economic development.
- to develop the ability to critically analyze the problem and prospects in international trade relationship
- to assess the working of the existing international arrangements and the reforms suggested for a better world economic order
- to discuss the problems and challenges faced by countries in promoting foreign trade.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the key concepts and theories in international trade	K1, K2
CO2	apply the theoretical models to a given economic scenario	K3
CO3	analyse the problems and prospects in international trade and international relations	K4
CO4	critically evaluate the relevance of exiting theoretical knowledge	K5
CO5	construct and create suitable models and policies in international trade	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Neo Classical Trade theories	K1 – K2	16	1 – 5
	1.1 Introduction to International trade			
	1.2 Offer Curves and Terms of Trade	K1 – K3		
	1.3 The Heckscher-Ohlin Theory-A Critique Factor Prices and Factor Reversals, Leontief Paradox	K1 - K5		
	1.4 Stolper Samuelson :Theorem-Magnification Effect, Demand Reversal Transportation Cost and Imperfect Competition	K1 - K5		
	1.5 Post heckscher-Ohlin Theories-Imitation Lag Hypothesis-Posner,, Product Cycle TheoryVernon.,Overlapping Demand –Linder, Krugman Model, Reciprocal Dumping Model, Gravity theory	K1-K5		

UNIT	CONTENT	CL	HRS	CO
2	Economic Growth and Trade 2.1 Production and Consumption Effects of Growth on Size of Trade-Johnson	K1-K5	10	1-5
	2.2 Growth Trade and Welfare in Large Country Case- Bhagwati's Analysis	K1 – K5		
	2.3 Rybczynski's theorem	K1 – K3		
	2.4 Secular Terms of Trade in developing Countries- Singer –Prebisch Arguments	K1-K5		
3	Political Economy of Trade Policy 3.1 Instruments of Trade Policy-Tariff and Non-Tariff	K1 - K2	15	1-5
	3.2 Tariff and Non-tariff Analysis-Partial equilibrium in small and large country	K1 – K5		
	3.3 International Factor Movements through Foreign Direct Investment, Labour Mobility, Costs and Benefits of International factor Movements	K1 – K6		
4	Balance of Payments and Foreign Exchange Market 4.1 Equilibrium and Disequilibrium, Price Adjustment and Disequilibrium- The J Curve, Marshal- Lerner Condition- Income Absorption	K1- K6	12	1-5
	4.2 Foreign Exchange Market-Types, Functions, Determination of Equilibrium Exchange rate, Forward Markets, Adjustment of Foreign Exchange Markets	K1 - K6		
	4.3 Foreign Exchange Policy	K1 – K6		
5	Negotiations and Trade Policy 5.1 A Brief Historical Overview of International Trade Agreements-IMF-World Bank-ITO-GATT-UNCTAD-NIEO-EU and BREXIT	Not to be Tested	12	CO1 - 5
	5.2 Globalisation, WTO-AoA, GATS-Sanitary and Phytosanitary Measures-Critical Analysis	K1 – K5		
	5.3 Controversies in Trade Policy-Brander- Spencer Analysis-Anti Globalisation	K1 – K6		

BOOKS FOR STUDY

Appleyard. D. R. *International Economics*. New York: McGraw Hill,1998.
Krugman P. R., Obstfeld M., and Melitz M., (2017), *International Economics: Theory and Policy*.10th Ed. London : Pearson,2017

BOOKS FOR REFERENCE

Bhagwati, Jagdish and T. N. Srinivasan. *Lectures on International Trade*, 2nd Ed. New Delhi: OUP, 2003.
Bhagwati. Jagdish. (Ed). *Trade, Balance of Payments and Growth*. Holland: Holland,1998
Carbaugh. R. J. *International Economics*. UK: South Western, 2008.
Feenstra, Robert.C, *International Trade: Theory and Evidence*. Princeton, USA: Princeton University Press, 2004.

Kindleberger. Charles. P. *International Economics*. New York: McGraw Hill, 2000.
 Ray, P.W and Kundu K.B. *International Economics: Pure Theory- Trade Policy*. New Delhi: Mahabharat, 2001.
 Sinha. R.K. (Ed). *New International Economic Order-Need, Implementation, Obstacles, Prospects*. New Delhi: Deep and Deep, 2010.
 Kindleberger. Charles. P. *International Economics*. New York: McGraw Hill, 2000.

JOURNALS

Journal of Economic History
 Journal of International Economics
 Journal of Monetary Economics

WEB RESOURCES

<http://www.in.undp.org/>
www.imf.org
www.worldbank.org
www.wto.org www.unctad.org
www.rbi.org.in
<http://mhrd.gov.in>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
	K4	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
C	K5	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)
	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
	K2	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
B	K3	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
	K4	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
C	K5	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)
	K6	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: INTERNATIONAL TRADE												
III	Course Title: 23EC/PC/IT44												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	2	2	2	3	3	2	3	3
CO 2	3	3	3	2	3	2	2	2	3	3	2	3	3
CO 3	3	3	3	2	3	2	2	2	3	3	2	3	3
CO 4	3	3	3	2	3	2	2	2	3	3	2	3	3
CO 5	3	3	3	2	3	2	2	2	3	3	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

ENVIRONMENTAL ECONOMICS

CODE: 23EC/PC/EE44

CREDITS:4

L T P:4 1 0`

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to exhibit and summarize key concepts in environmental economics that are pivotal for deep understanding of environmental economics.
- to study environmental economic theories and apply this knowledge to analyse policies.
- to examine environmental problems in the real world scenario and offer appropriate solutions.
- to critically evaluate the potential impact and effectiveness of environmental concepts and policies.
- to model environmentally sustainable trade and resource management strategies by integrating various environmental initiatives, approaches and challenges.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	to apply core concepts and theories relevant to environmental economics to environmental problems.	K1
CO2	demonstrate the understanding of environmental economics and use the key concepts and theories to solve environmental issues.	K2
CO3	to utilize environmental economic concepts and theories to offer strategic solutions to address complex real world challenges.	K3
CO4	to examine the potential use of resources extracted optimum extraction resources techniques and policy mix instruments	K4
CO5	to critique contemporary environmental economic issues, and design environmentally sustainable strategies	K5, K6
CL- Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Environmental Economics	K1 – K3	10	1-3
	1.1 The rationale of environmental economics	K1 – K4		
	1.2 The evolution and growth of environmental economics	K1 – K5		
2	1.3 Social Welfare Function – maximum social advantage – Inter-temporal efficiency		15	1-5
	Economic theory of pollution control: the optimal level of pollution	K1 – K3		
	2.1 Overview of the Pollution and its classification	K1 – K5		
	2.2 Pollution abatement and Issues in economics of pollution	K1 – K5		
3	2.3 Weitzman Theorem – price versus quantity	K1 – K5	12	1-4
	2.4 Application: Policy and Analysis of Environmental Legislations in India	K1 – K5		
	Energy and climate change	K1- K3		
	3.1 Economics of energy – an overview	K1 – K4		
	3.2 Energy conservation and environmental implication	K1 – K5		
4.	3.3 Economics of cleaner technology	K1 - K4	14	1-5
	3.4 Economic analysis of climate change	K1 – K6		
	3.5 Application: Impact of population, poverty and urbanization towards Environment and climate change			
	Environmental and Resources Economics.	K1 – K3		
5	4.1 Overview of Resources Economics- Resources Taxonomy	K1 – K4	14	1-5
	4.2 Economics Analysis of Non-Renewable Natural Resources - Risk and uncertainties	K1 – K4		
	4.3 Renewable Resources Economics- Growth functions and Growth rate; economic models of fisheries			
	Environment, Trade and Development			
	5.1 Trade and Environment	K1 - K3		
	5.2 Trade Agreements and the Environment	K1 – K4		
	5.3 Strategies for sustainable Trade	K1 – K4		
	5.4 Institutions and policies towards sustainable development	K1 – K5		
	5.5 Environmental Impact Assessment methods, Tools and Techniques	K1-K6		

BOOKS FOR STUDY:

Field, Barry C. (1994). Environmental Economics – An Introduction. McGraw.

Ahmed, Hussen M. (1999). Principles of Environmental Economics: Economics, Ecology and Public Sector. Routledge. Kolstad, Charles D. (2000). Environmental Economics. Oxford University Press.

BOOKS FOR REFERENCE:

Baumol, William T., & Oates, Wallace E. (1977). Economics, Environmental Policy and Quality of Life. Prentice Hall.

Hanley, Nick, Shogren, Jason F., & White, Ben (1997). Environmental Economics in Theory and Practice. Macmillan.

Pearce, D. W., & Turner, Kerry R. (1989). Economics of Natural Resources and Environment. Harvester.

Singh, Katar, & Shishodia, Anil (2007). Environmental Economics: An Indian Perspective. Oxford University Press.

Tietenberg, Tom (2004). Environmental and Natural Resource Economics. Pearson.

JOURNALS

Journal of Environmental Economics

Journal of Public Economic Theory

Journal of Environmental Economics and Policy

Economics of Energy and Environmental Policy

WEB RESOURCES

<https://mnre.gov.in/> <https://cpcb.nic.in/>

<https://www.iqair.com/in-en/world-air-quality-ranking>

<https://epi.yale.edu/>

PATTERN OF ASSESSMENT

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Duration: 90 minutes

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	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
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	K6	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PC/EE44												
III	Course Title: ENVIRONMENTAL ECONOMICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	1	2	3	3	2	3	2	2	2	2
CO 2	3	2	2	1	2	2	2	3	3	2	1	2	2
CO 3	3	3	2	1	2	3	3	2	3	2	3	3	2
CO 4	2	2	2	2	3	3	3	3	3	3	2	3	3
CO 5	2	2	3	2	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

DISSERTATION

CODE:23EC/PC/DS47

CREDITS:7

Guidelines

➤ **Page Limit:**

The Dissertation shall be within a space of about 50 – 75 pages typed in font size 12, font style: Times New Roman with 1 ½ line spacing on A4 Size paper

➤ **Title of the Dissertation :**

Each Dissertation should contain the following – ‘Dissertation submitted to Stella Maris College (Autonomous), Chennai in partial fulfillment of the requirement for the Degree of Master of Arts in Economics by name of the candidate, Department of Economics, Place, Month, Year

➤ **The Dissertation shall contain :**

- Contents Page
- The Dissertation Copy will include Certificate of the Supervisor, Declaration, and Acknowledgement.
- Chapters to necessarily include: Introduction, Review of relevant Literature, Analysis, Summary and Conclusion
- Introductory chapter comprising of introduction/statement of the research problem supported with secondary data, significance and scope of the study, objectives, hypothesis, and methodology: Data source, description of variables, definitions and concepts, estimation issues, tools for analysis, limitation, chapterization
- The student can use Quantitative or Qualitative/Descriptive or both methods.
- The final chapter shall contain “Summary and Conclusions”,
- At the end of the Dissertation ‘List of References’ must be given in alphabetical/chronological order.
- Appendix: Statistical output and other related contents to be included

➤ **Submission:**

Each student may prepare two copies of the thesis one for her and one copy to be submitted to the department duly signed by the candidate, Head of the Department and Supervisor 15 days before the commencement of the End semester examination.

➤ **Guidelines for Evaluation:**

Students must adhere to intermediate deadlines	05
Periodic presentation of the following: Settle on a topic in consultation with the supervisor	
Submit the proposal	
Thesis outline and first draft submission	
Read background literature, preparation of the same	
Submit research design (methodology and tools for analysis)	
Complete 75% of analysis and submission of the rough draft	25
Literature Review (15 – 20)	15
Creativity, analysis, logical presentation, and conclusion	30
Thesis (Total marks)	75
Viva Voce exam	25
Total	100 (K6)

There shall be more than one external examiner based on areas of specialization.

(For instance, quantitative research, Major areas of applied economics research etc.)

There will be double valuation for the dissertation by the guide and an external examiner, who will also conduct the viva- voce. The viva voce marks to be given only by the external examiner. The norms for valuation will be the same as applicable for theory papers.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

MATHEMATICS FOR ECONOMICS

CODE: 23EC/PE/ME15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to learn mathematical methods that has become indispensable for an in-depth understanding of the current economic literature.
- to study mathematical techniques and illustrate with proper economic models.
- to investigate economic problems using mathematical tools and apply this knowledge to problems relating to socially and economically sensitive issues.
- to develop quantitative base for critical economic theory building and analysis.
- to integrate global, environmental, economic and social issues quantitatively in policy building.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	enumerate advanced mathematical modelling for economic research.	K1
CO2	integrate economic theories with mathematical techniques to quantitatively infer economic policies.	K2
CO3	discover problem solving methods in algebra and optimisation to sensitively respond to Economic issues.	K3
CO4	analyse complex quantitative methods to build economic theories.	K4
CO5	evaluate optimization techniques and dynamic analysis to critique current economic issues and build inclusive policies.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Linear Algebra 1.1 Matrices, Inverse, Simultaneous Linear Equations, Cramer's Rule for Solving System of Linear Equations.	K1 – K5	5	1-5
	1.2 Rank of a Matrix, Eigen Values and Vectors – Cayley Hamilton's Theorem	K1 – K2		
	1.3 Leontief Input-Output Model, Hawkins –Simon Condition	K1 – K6		
	1.4 Open and Closed Model	K1 – K6		
2	Differential Calculus 2.1 Derivatives – Single Variable and Multi Variable – Partial and Total – Young's Theorem	K1 – K5	18	1-5
	2.2 Economic Applications, Marginal and Elasticity Concept	K1 – K6		
	2.3 Convex and Concave Functions - Applications – Utility Maximization, Cost Minimization, Profit – Output Maximization	K1 – K6		
	2.4 Constrained Optimization With Equality Constraints, Lagrangian Method	K2 – K6		
	2.5 Unconstrained Optimization in Single and MultiVariable Functions	K2 – K6		
3	Mathematical Programming – Linear Optimization 3.1 Introduction to Linear Programming and Graphical Solution of the Diet and Production Problems	K1- K6	7	1-5
	3.2 Formulation of the Dual Programme –Statement of Duality Theorems	K1 – K3		
	3.3 Applications from Economics	K1 – K4		
4.	Introduction to Integration 4.1 Introduction to Integrals	K1 – K3	10	1-5
	4.2 Methods of Integration – Parts, Substitution, and Partial fractions (Basic arithmetic sums only).	K1 – K3		
	4.3 Application - Measuring Consumer Surplus and Producer Surplus	K1 – K6		
5	Dynamic Analysis 5.1 Difference Equations – First and Second order	K1 – K5	15	1-5
	5.2 Difference Equations and Economic models - Cobweb Model, Samuelson's Multiplier Accelerator	K1-K6		
	5.3 Differential Equations – First and Second Order	K1-K5		
	5.4 Differential Equations and Economic models - Harrod-Domar and Solow Model	K1-K6		

BOOKS FOR STUDY

Bansal. Anjali. *Mathematical Methods for Economics*, New Delhi: Nath Enterprises, 1995.
Chiang, A.C. & Kevin. Wainweight. *Fundamental Methods of Mathematical Economics*. Indian Ed. New Delhi: McGraw-Hill, International, 2017
Mehta, B.C. and Madnani G.M. *Mathematics for Economists*, New Delhi: Sultan Chand, 1996.

BOOKS FOR REFERENCE

Allen. R.G.D. *Mathematical Economics*. Madras: English Language Book Society and Macmillan Press, 1973.
Manicavachagom, Pillay T.K, Natarajan T, K.S. Ganapathy. *Algebra*, Volume II, Madras: S. Viswanthan Printed and Publishers, 1997.
Michael Harrison and Patrick Waldron, *Mathematics for Economics and Finance*, Routledge Publishing, 2011
Narayanan, S. and Manicavachagam Pillay T.K. *Calculus*, Madras: S. Viswanthan Printers and Publishers, 1995.
Sancheti, D.C and V.K. Kapur, *Business Mathematics*, New Delhi: Sultan Chand, 1981.
Simon, C. and L. Blume, *Mathematics for Economists*, Viva Books Pvt., Ltd., New Delhi, 2017.
Sydsaetar, Knut and Peter Hammond, *Mathematics for Economic Analysis*, Singapore: Pearson Education, 2005.

JOURNALS

Journal of Mathematical Economics

WEB RESOURCES

<http://homepage.ntu.edu.tw/~econman/faculty/cfchou/MathEco1.pdf>
<http://www.railassociation.ir/Download/Article/Books/Basic%20Mathematics%20for%20Economists.pdf>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
	K4	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
C	K5	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)
	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

Other Components:**Total Marks: 50**

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
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C	K5	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)
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**Mapping of Course Outcomes (Cos)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PE/ME15												
	Course Title: MATHEMATICS FOR ECONOMICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	1	3	2	2	3	3	2	1	3
CO 2	2	3	3	1	2	3	3	3	3	3	3	1	2
CO 3	3	3	3	1	1	2	2	2	2	2	2	1	1
CO 4	3	3	2	1	2	2	2	2	2	2	3	1	2
CO 5	3	2	3	1	2	3	2	2	2	2	2	1	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

ADVANCED MANAGERIAL ECONOMICS

CODE: 23EC/PE/AM15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to apply economic theory and methods to business and administrative decision making
- to develop the ability to understand the business environment in order to analyse opportunities and take decisions under uncertainty
- to enable students to develop the skills necessary to analyze data, make forecasts, and use the insights gained from demand estimation and business forecasting techniques to support effective managerial decision-making processes in a dynamic business environment.
- to identify and apply various pricing methods and strategies
- to develop the ability to evaluate capital budgeting projects effectively

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and remember key concepts, theories, and terminologies related to managerial economics, including demand estimation, pricing strategies, game theory, capital budgeting, and risk analysis.	K1
CO2	demonstrate a deep understanding of the theoretical foundations and principles that underpin managerial economics, including the relationships between supply and demand, cost structures, and market behavior.	K2
CO3	apply a range of analytical techniques and tools, such as regression analysis for demand estimation, pricing methods, game theory models, capital budgeting calculations, and risk assessment methodologies, to real-world business scenarios.	K3
CO4	analyzing complex business situations and making informed decisions by critically evaluating data, strategies, and outcomes, particularly in competitive environments where game theory plays a role.	K4
CO5	evaluate strategic decision-making processes in organizations, assessing the impact of pricing strategies, capital investment decisions, and risk management on overall business performance	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Demand Estimation and Business Forecasting Technique	K1-K5	15	1 - 5
	1.1 Demand estimation using marketing research and statistical techniques			
	1.2 Simple Linear Regression Model –Interpretation and problems in applying the linear regression model	K1-K6		
	1.3 Business forecasting techniques –Deterministic time series, smoothing techniques, Barometric techniques, Survey and Opinion Polling technique	K1-K5		
	1.4 Introduction to Non Linear Regression model –Semi Logarithmic Transformation, Reciprocal and Double Log Transformation	K1-K3		
2	Pricing Techniques	K1-K4	13	1-5
	2.1 Objectives of Pricing			
	2.2 Pricing methods –Cost plus pricing, Variable mark up pricing, Intuitive Pricing, Experimental Pricing, Stable and Imitative pricing, Incremental Cost Pricing	K1-K5		
	2.3 Pricing Strategies –Product line pricing, Differential pricing, Transfer pricing	K1-K6		
3	Business Strategy Games –Game Theory	K1-K3	13	1-5
	3.1 Non co-operative games –simultaneous and sequential games			
	3.2 Equilibrium under sequential games –Business rivalry as a sequential game	K1-K4		
	3.3 Simultaneous games –Nash equilibrium strategy	K1-K4		
4	Capital Budgeting	K1-K3	10	1-5
	4.1 Value maximisation and Capital Budgeting			
	4.2 The capital budgeting process – Projecting cash flows, evaluating the capital project, capital rationing and the profitability ratio	K1-K4		
	4.3 The Cost of Capital –Cost of Debt Capital, Cost of Equity Capital, the Composite Cost of Capital	K1-K5		
5	Risk and Decision Making	K1-K4	14	1 -5
	5.1 The concept of certainty, risk and uncertainty			
	5.2 Risk and Decision making –Risk Return, Evaluation Statistics, Risk Preference, Risk Aversion and Insurance	K1-K4		
	5.3 Adjusting Business Decision for Risk	K1-K4		
	5.4 Decision Tree Analyses	K1-K6		

BOOKS FOR STUDY

McGuigan, James R., Meyer R. Charles, Frederick H, B. Harris. *Managerial Economics: Application, Strategy and Tactics*. Ohio: South Western Cincinnati, 2002.

Petersen, H. Craig and Lewis W. Chris. *Managerial Economics*. New Delhi: Prentice Hall of India, 1999.

BOOKS FOR REFERENCE

Dean. Joel. *Managerial Economics*. New Delhi: Prentice Hall, 1968.

Spencer. Multon H. *Managerial Economics, Text Problems and Short Cases*. Illinois: Richard D Irwin, Homewood, 1968

JOURNALS

Journal of Managerial Economics

International Journal of Economics and Management

WEB RESOURCES

http://www.cengage.com/economics/discipline_content/preview_guide/preview_guide/PreviewGuide_McGuiganMoyerHarris_12e.pdf

<http://www.itu.dk/~mounma/bouba/081009/0127408525.pdf>

http://www.londoninternational.ac.uk/sites/default/files/programme_resources/lse/lse_pdf/subject_guides/mn3028_ch1-4.pdf

PATTERN OF ASSESSMENT

Continuous Assessment:

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Duration: 90 minutes

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**Mapping of Course Outcomes (Cos)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PE/AM15												
	Course Title: ADVANCED MANAGERIAL ECONOMICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	1	3	2	3	2	3	3	3
CO 2	3	3	3	2	2	2	3	3	3	2	3	3	3
CO 3	3	3	2	2	2	2	3	3	3	2	3	3	3
CO 4	3	3	2	2	3	2	3	3	3	2	3	3	3
CO 5	3	3	3	2	3	2	3	3	3	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

INDUSTRIAL ECONOMICS

CODE: 23EC/PE/ID15

CREDITS: 4

LTP : 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To understand the ways in which economic forces operate within the industrial sector.
- To assess whether markets are competitive and how to measure the extent of competition in markets.
- To give an insight into the various forms of competitions and rivalry between firms in the industrial sector
- To Predict the behaviour of the firms in the modern economy
- To Apply the theoretical models to address key issues in mergers and acquisitions

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	to learn the scope and breadth of industrial economics and able to use the tools of economic analysis and the classical theory of markets in the analysis of organizations.	K1, K2
CO2	to apply the theoretical models to a given economic scenario	K3
CO3	to examine the important theories concerning organisation of industries and the behaviour of firms within those industries.	K4
CO4	to critically evaluate the relevance of existing theoretical knowledge	K5
CO5	to understand market structure-conduct-performance and appreciate the concept of sellers' concentration along with its measurement using adequate techniques.	K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Strategic Behaviour of Firms	K1-K4	15	1 – 5
	1.1 The simple structure – Conduct – Performance model (SCP)- Critique			
	1.2 Market Structure - Seller's concentration, entry conditions, Economics of scale, Market structure and Profitability, Innovation	K1-K3		
	1.3 Market Conduct- Product Pricing, Predatory Pricing, Investment planning and methods of evaluating investment planning.	K1-K3		
	1.4 Market Performance - Growth of a firm, Behaviour of firm, strategies- Theories on firm behaviour.	K1-K4		
	1.5 Market structure and innovation – Process and measurement.	K1-K6		
2	Indian Industrialisation	K1-K3	10	1 – 5
	2.1 Scope and Objectives of Industrial Economics.			
	2.2 Industrial Growth in India - Trends and Prospects	K1-K3		
	2.3 Industrial Location policy in India	K1-K5		
	2.4 Industrial Classification and Sources of data	K1-K4		
3	The Dominant Firm	K1-K3	12	1 – 5
	3.1 Behaviour of the Dominant Firm			
	3.2 Market Performance Under Entry- Limiting Behaviour; Entry and Strategy	K1-K5		
	3.3 Public Policy towards Dominant Firms	K1-K5		
	3.4 Law and Economics of Monopolization	K1-K6		
4	Vertical Integration, Conglomerate Diversification and Mergers	K1-K4	13	1 – 5
	4.1 Conglomerate Diversification: Concepts, measures, determinants and consequences of diversification, mergers, FDI			
	4.2 Vertical integration: Nature and Extent of Vertical integration, theories of vertical integration.	K1-K5		
5	Technical Progress & Performance	K1-K4	15	1 – 5
	5.1 Economics of Research			
	5.2 Market structure and incentive to invent	K1-K3		
	5.3 Concepts by Arrow & Schumpeter	K1-K3		
	5.4 Concepts of Profit Margin	K1-K4		
	5.5 Productivity and Technical Efficiency	K1-K4		

BOOK FOR STUDY

Roger. Clark, Industrial Economics. New York: Blackwell Publishers, 2013. Stephen. Martin. Advanced Industrial Economics. New York: Blackwell Publishers, 2011.

BOOKS FOR REFERENCE

P. J. Devine, R.M Jones, N.Lee, W.J Tyson, An Introduction to Industrial Economics. Chicago: Minera Series 26. George Allen and Unwin, 2001.
Mookherjee,D.(1997). Indian Industry: policies and Performance. Oxford University Press, Edited.

JOURNALS

International Journal of Industrial Organization Journal of Industrial Economics The Journal of Industrial Economics

WEB RESOURCES

<http://www.kevinhinde.com/EuropeanIndustry/EC455lecture1.pdf> <https://www.e-elgar.co.uk/PDFs/WebCats/IndustrialeconomicsUK.pdf>
<http://ecommons.library.cornell.edu/handle/1813/3878>
<https://www.india.gov.in/topics/industries> <https://unstats.un.org/unsd/classifications/Econ/istic>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
	K4	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
C	K5	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)
	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
	K2	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
B	K3	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
	K4	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
C	K5	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)
	K6	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)

**Mapping of Course Outcomes (Cos)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PE/ID15												
	Course Title: INDUSTRIAL ECONOMICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	1	2	3	3	3	3	2	1	3	3
CO 2	2	2	3	1	2	3	3	2	3	2	1	3	3
CO 3	2	2	2	1	2	1	2	2	2	3	2	3	3
CO 4	3	3	3	1	3	2	2	2	3	2	1	3	3
CO 5	3	3	3	1	3	3	3	3	3	3	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

ECONOMIC THOUGHT

CODE: 23EC/PE/ET15

CREDITS: 5

L T P:5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to discover the evolution of economic thinking as depicted in the time scale of economic ideas
- to investigate historical backgrounds and perspectives that has influenced economic thought in different periods and places.
- to inquire into the major tenets of the various schools of thought by reviewing the works of major economists.
- to analyse the relevance of the school from its historical context
- to explore the lasting contributions of economists and their applicability in current circumstances.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the historical context and evolution of economic ideas.	K1
CO2	compare and contrast different schools of economic thought.	K2
CO3	discover, articulate and relate to the major tenets of the schools of thought.	K3
CO4	analyze the theories and ideas put forth by influential economists.	K4
CO5	develop critical thinking and analytical skills by critically evaluating economic theories and their implications.	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Classical Economics		10	1-5
	1.1 A Summary of Pre Classical Economic thought – Mercantilism and Physiocracy	K1 – K4		
	1.1 Adam Smith	K1 – K6		
	1.2 Thomas Malthus	K1 – K5		
	1.3 David Ricardo	K1 – K4		
	1.4 Jeremy Bentham	K1 – K4		
	1.5 John Stuart Mill	K1 – K4		
2	Alternative schools of Thought		13	1-5
	2.1 Scientific Socialism – Karl Marx	K1 – K6		
	2.2 Institutionalism – T.B. Veblen	K1 – K5		
	2.3 German historical School – older and Younger School	K1 – K5		
	2.4 Under employment equilibrium – J.M. Keynes	K1 – K5		
	2.5 Ahimsa Economy – M.K. Gandhi	K1 – K5		
3	Marginalism and the Neo Classical School		20	1-5
	3.1 Marginalism	K1- K5		
	3.1.2 English School – W. Stanley Jevons			
	3.1.3 Austrian School – Carl Menger, Ludwig Von Mises & Friedrich Hayek			
	3.1.4 Laussane School – Leon Walras, V. Pareto			
	3.2 Neoclassical Economics	K1 – K5		
	3.2.1 Alfred Marshall			
	3.2.2 J.B. Clark			
	3.3 Welfare Economics – Arrow – Rawls- Amartya Sen	K1 – K4		
4.	Recent Developments in Economic Thinking	K1 – K5	12	1-5
	4.1 New Classical School			
	4.2 New Keynesian School	K1 – K5		
	4.3 Supply Side Economics	K1 – K5		
5	Nobel Laureates in Economics ** An analysis of Nobel Laureates in Economics since 2018 ** This unit is for internal assessment only	K1 – K6	10	1-5

BOOKS FOR STUDY

Gide, C and Rist, C., *A History of Economic Doctrines*, George G. Harrp and Co., Ltd., London, 1960. Roll Eric, *A History of Economic Thought*, Faber Paperback, London, 1992.

BOOKS FOR REFERENCE

Blaug Mark, *Economic History and The History of Economics*, Wheatsheaf Books Ltd., Sussex, 1986.

Dasgupta Ajit, *A History of Indian Economic Thought*, Routledge, London, 1993.

Deane Phyllis, *The Evolution of Economic Ideas*, Cambridge University Press, London, 1978.

Helibroner, Robert L., *The Worldly Philosophers*, Touchstone Book, Simon and Schuster, 1999 Paperback 7th Edition.

Schumpeter, J.A. *History of Economic Analysis*, Allen Unwin Co., Ltd., London, 1996, Paperback.

Seligman B., *Main Current trends in Modern Economics*, The Press of Glencoe, New York, 1963.

JOURNALS

Journal of the History of Economic Thought

The European Journal of the History of Economic Thought

WEB RESOURCES

<http://digamo.free.fr/backhaus122.pdf> (Accessed date 21-07-2023)

<http://modernecon.org/wp-content/uploads/2012/12/history-of-thought-Final-print-book-3.pdf> (Accessed date 21-07-2023)

http://mises.org/sites/default/files/Austrian%20Perspective%20on%20the%20History%20of%20Economic%20Thought_Vol_2_2.pdf (Accessed date 21-07-2023)

http://economics.uwo.ca/people/laidler_docs/theroleof.pdf (Accessed date 21-07-2023)

http://is.vsfs.cz/el/6410/zima2013/BA_ETD/um/4176060/-An-Outline-of-the-HistoryofEconomic-Thought-Screpanti-and-Zamagni-Oxford-2005-2nd-Ed.pdf (Accessed date 21-07-2023)

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
	K4	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
C	K5	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)
	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
	K2	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
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C	K5	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)
	K6	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PE/ET15												
II	Course Title: ECONOMIC THOUGHT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	3	3	3	3	2	3	3
CO 2	3	3	3	3	2	2	3	3	3	3	2	3	3
CO 3	3	3	3	3	2	2	3	3	3	3	2	3	3
CO 4	3	3	3	3	2	2	3	3	3	3	2	3	3
CO 5	3	3	3	3	2	2	3	3	3	3	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

INSTITUTIONAL ECONOMICS

CODE: 23EC/PE/IN15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to understand the old and new foundational concepts of institutional economics.
- to analyze the links between institutions, and economic growth and address agency issues.
- to evaluate the existence and behavior of institutions, suggest cost-minimization methods.
- to examine transaction costs involved, modes of governance, and optimization of contracts among institutions
- to deduct the economic impact of property rights, its impact on allocation and rent seeking behaviour.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	relate theories to the institution's role in economic development with proficiency.	K1
CO2	utilize economic concepts to analyze real-world corporate behaviour.	K2
CO3	identify institutional issues and propose effective mechanisms to minimize costs.	K3
CO4	examine intra-firm transactions and optimize contractual agreements among firms.	K4
CO5	perceive improvements in economic policies of institutions with a focus on institutional quality and fostering economic development.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Institutional Economics	K1-K3	12	1-2
	1.1 Old Institutional Economics: Adam Smith, TB Veblen, R Commons			
	1.2 Domain of New Institutional Economics- Douglas C North; Coase; Williamson	K1-K3		

UNIT	CONTENT	CL	Hrs	CO
	1.3 Institution and Economic Development- Interlinkages	K1-K4		
	1.4 Role of the state –anarchy and order; agency problem	K1-K4		
2	Theories and Economic Behaviour of Firms 2.1 Existence of Firms; Nature of markets and market imperfections 2.2 Role of uncertainty; bounded rationality; unbounded rationality; methodological individualism 2.3 Organizational Arrangements- Embedding organizational arrangements; meso-institutions; cooperative versus competitive arrangements; social organization 2.4 Application: Agency issues and mechanisms to minimize agency costs	K1-K4 K1-K5 K1-K6 K1-K6	14	1-4
3	Transaction Costs and Contract Theory 3.1 Concept of transaction costs; market and intra-firm transactions; information costs 3.2 Interdependency between transaction and transformation costs; Modes of governance to minimize costs 3.3 Contractual agreements; enforcement of contracts; incomplete contracts; opportunistic behaviour; types of assets and asset Specificity 3.4 Application: Attributes of transactions and the choice of a contract	K1-K4 K1-K5 K1-K6 K1-K6	12	1-4
4	Economic Theory of Property Rights 4.1 Property Rights and its nature; Development of Property rights- externalities, norms, and politics 4.2 Determinants and impact of property rights; monitoring and enforcement costs 4.3 Property rights- incentives, behavioural strategies; economic outcomes, allocation, and rent-seeking 4.4 Application: Property rights in different legal traditions	K1-K4 K1-K4 K1-K6 K1-K6	12	1-5
5	Theory of Institutional Change 5.1 Institutional change through learning, feedback, accidents of history, and path dependence; Incremental, abrupt, and discontinuous change 5.2 Political economy and Institutional Change; choosing institutions 5.3 Role of state in institutional change; Problem of compensation of the disadvantaged group 5.4 Application: Measuring institutional quality and its effect on economic development	K1-K3 K1-K5 K1-K6 K1-K6	15	1-5

BOOKS FOR STUDY:

Menard, C., & Shirley, M. (2008). Handbook of Institutional Economics. Springer.
 Rutherford, M. (1996). Institutions in Economics: The Old and the New Institutionalism. Cambridge University Press.
 Eggertsson, T. (1990). Economic Behavior and Institutions. Cambridge University Press.
 North, D. C. (1990). Institutions, Institutional Change and Economic Performance. Cambridge University Press.

BOOKS FOR REFERENCE:

Coase, R. H. (1998). The Firm, the Market, and the Law. University of Chicago Press.
 Ullman-Margalit, E. (1977). The Emergence of Norms (Chapters 1-4). Oxford, Clarendon Press.
 Sengupta, N. (2001). A New Institutional Theory of Production: An Application. Sage Publications.

WEB SOURCES

<https://ipindia.gov.in/> <https://www.ineteconomics.org/>
<https://www.cambridge.org/core/publications/elements/institutional-and-organizacionaleconomics#>

JOURNALS

Journal of Institutional Economics, Cambridge University Press
 Journal of Institutional Economics, SASE
 The Economic Journal, Oxford Academic

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
	K4	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
C	K5	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)
	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

Other Components:**Total Marks: 50**

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
	K2	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
B	K3	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
	K4	16	2 x 8 = 16 (2 out of 3 questions to be answered in 400 words each)
C	K5	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)
	K6	24	2 x 12 = 24 (2 out of 4 questions to be answered in 700 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PE/IN15												
	Course Title: INSTITUTIONAL ECONOMICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	2	1	2	1	3	3	1	2	1
CO 2	3	2	3	2	2	1	2	1	3	3	2	2	2
CO 3	2	3	3	3	2	2	2	1	3	3	2	3	3
CO 4	3	3	3	2	2	2	2	2	3	3	2	3	3
CO 5	3	3	2	2	3	2	2	1	3	2	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

BEHAVIOURAL ECONOMICS AND POLICIES

CODE: 23EC/PC/BE15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to comprehend the fundamental principles that underpins behavioural economics.
- to recognize and analyze the various biases and heuristics that influence decision making.
- to explore the concept of reference dependence and its implications for behavioral economics
- to investigate decision-making in uncertain environments
- to apply the principles and concepts of behavioral economics to real-world applications

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and describe key concepts, historical figures and pivotal moments that contributed to the development of behavioral economics.	K1
CO2	explain the concept of cognitive biases and heuristics, and their implications for decision-making.	K2
CO3	apply the principles of behavioural economics concepts to provide policy solutions and answers to real world problems.	K3
CO4	analyze and compare traditional neoclassical theories and behavioural economic concepts and theories, highlighting their differences and the limitations.	K4
CO5	evaluate the effectiveness of policy tools such as defaults, automatic enrollment plans, and loss framing in influencing individual behavior, considering their impact on public policy outcomes and societal wellbeing.	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Behavioural Economics – Past, Present, Future	K1-K4	10	1-5
	1.1 Economics and Psychology			
	1.2 The Historical context of Behavioural Economics	K1-K5		
	1.3 The Methods of Behavioural Economics	K1-K5		
	1.4 Basic Concepts – Probability Judgement, Preferences	K1-K3		
2	Beliefs, Heuristics and Biases	K1-K3	13	1-5
	2.1 Assumptions of the Standard model: Perfect rationality and Bayesian Probability estimation			
	2.2 Biases in probability estimation: Availability Heuristic, Representative heuristic, Base rate bias, Law of small numbers	K1-K6		
	2.3 Self Evaluation Biases : Overconfidence, Under confidence, Self - serving bias, Visceral fit, Projection bias and Hindsight bias	K1-K6		
	2.4 Magical Beliefs	K1-K5		
3	Reference Dependence and Loss Aversion	K1-K5	12	1-5
	3.1 Endowment Effect: Evidence from Experimental test			
	3.2 Mental Accounting	K1-K5		
	3.2.1 Framing of gains and losses 3.2.2 Mental Accounting Decision - Making 3.2.2 Budgeting 3.2.3 Choice Bracketing			
4.	Decision under Uncertainty and Intertemporal choices	K1-K 3	17	1-5
	4.1 Expected Utility theory and its limitations - Allais Paradox			
	4.2 Prospect theory : Editing and Evaluation of Prospects, The Utility Function, Decision Weighting	K1-K5		
	4.3 Prospect theory: Evidence from the field – Finance : The Disposition Effect, Labour Supply, Asymmetric Price Elasticities of Consumer goods, Savings and Consumption – Insensitivity to bad income news, Status quo bias.	K1-K5		
	4.4 Time inconsistent preference: Exponential verses Hyperbolic discounting, Beta Delta model of Hyperbolic discounting	K1-K4		
5	Applications	K1-K6	13	1-5
	5.1 Public Policy: New Policy tools – Defaults, Automatic enrolment plans, Information provision and Loss framing ; Effects of policy on behaviour			
	5.2 Finance : Myopic Loss aversion and the Equity premium puzzle	K1-K5		
	5.3 Labour Economics: Fairness and Retaliation – The economics of Reciprocity	K1-K4		
	5.4 Negotiation : The role of the Self serving bias	K1-K4		

BOOKS FOR STUDY

Colin F. Camerer, George Loewenstein and Matthew Rabin. *Advances in Behavioural Economics*. New Jersey, Princeton University Press, 2003.
Nick Wilkinson and Matthias Klaes. *An Introduction to Behavioural Economics*. 2nd Edition, London, Palgrave Macmillan, 2012

BOOKS FOR REFERENCE

B. Douglas Bernheim, Stefano Della Vigna, David Laibson. *Handbook of Behavioral Economics - Foundations and Applications*. Hardback ISBN: 9780444633743 eBook ISBN: 9780444633897, 1st Edition - September 27, 2010
George A. Akerlof and Robert J. Shiller. *Animal Spirits – How Human Psychology drives the economy and why it matters for Global Capitalism*. Princeton University Press, 2009
David R. Just, *Introduction to Behavioural Economics*, New Jersey, Wiley Publication, 2014
Frank Robert H. *Microeconomics and Behaviour*, New York, McGraw Hill Education, 2015
Thaler, Richard H. *The Making of Behavioural Economics - Misbehaving*, London WW Norton & Co, Penguin, , 2016
Kahneman Daniel and Tversky, *Choices, Values and Frames* eds., England Cambridge University press and Russell Sage Foundation, , 2000
Erik Angner, *A Course in Behavioral Economics*, New York, Palgrave MacMillan, 2012

ARTICLES

Stavros A. Drakopoulos and Ioannis Katselidis, “The Relationship between Psychology and Economics: Insights from the History of Economic Thought” *MPRA Paper No. 77485*, posted 13 March 2017 15:59 UTC
Stefano Della Vigna “Psychology and Economics: Evidence from the Field” *Journal of Economic Literature*,
Chetty, Nadarajan. Behavioral Economics and Public Policy: A Pragmatic Perspective. Ely Lecture, *American Economic Review Papers and Proceedings* (2015) 105, no. 5: 1-33.
Loewenstein (1987) “Anticipation and the Valuation of Delayed Consumption”. *Economic Journal*, 97 (387):666-684
Kahneman and Tversky (1979) “Prospect theory: An Analysis of Decision Under Risk”, *Econometrica*, 47 (2): 263-291
Thaler, Richard. 1999. "Mental Accounting Matters." *Journal of Behavioral Decision Making* 12: 183-206

JOURNALS

The Journal of Behavioral and Experimental Economics
Journal of Behavioral Economics for Policy
Journal of Behavioral Economics

WEB RESOURCES

<https://www.behavioraleconomics.com>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
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Other Components:

Total Marks: 50

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
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**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PE/BE15												
	Course Title: BEHAVIOURAL ECONOMICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	2	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	2	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	2	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	2	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

ADVANCED ECONOMETRICS

CODE: 23EC/PE/AE15

CREDITS:4

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to understand the econometric methodology for empirical quantitative analysis of data
- to provide a solid ground for empirical research
- to train and equip students with requisite skills to carry out advanced and applied economics research
- to enable students to adopt relevant econometric methods to analyze data and interpret the results.
- to interpret the econometric analysis reported in advanced empirical economic research.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the consequences of Multicollinearity, Heteroscedasticity and Autocorrelation in the multiple regression model.	K1
CO2	acquire ability to apply linear probability models in econometric research problems for theory building	K2
CO3	solve econometric models to bring out solutions to various real-world problems related to economics	K3
CO4	evaluate simultaneous equation model in various economic phenomena.	K4
CO5	create various time series data models employing suitable estimation methodology	K5
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Regression Diagnostics	K1-K5	15	1-5
	1.1 Model Selection and Diagnostic Testing			
	1.2 Tests of Specification errors: Detecting the presence of unnecessary variables, omitted variables and incorrect functional form (Ramsey RESET and Lagrange Multiplier Test for Adding Variables)	K1-K5		
	1.3 Errors of measurement: Consequences and remedial measures	K1-K5		
	Model Selection Criteria: R2 and Adjusted R2 criteria			
2	Simultaneous Equation Models	K1-K4	10	1-5
	2.1 Introduction to Simultaneous Equation Models			
	2.2 Simultaneous Equation Bias –Simple Keynesian Income Determination	K1-K5		
	2.3 Identification Problem –Under Identification –Exact Identification, Over Identification	K1-K4		
	2.4 Rules for Identification – Order Condition, Rule Condition	K1-K5		
3	Unit Model with Qualitative Dependent Variables	K1-K4	10	1-5
	3.1 Linear Probability Model (LPM), Problems related to LPM			
	3.2 Logit model - Estimation	K1-K5		
	3.3 Probit Model -Estimation	K1-K6		
4	Dynamic Econometric Models	K1-K4	15	1-5
	4.1 Role of Lags in Economics and the Reason for Lags			
	4.2 Distributed Lag models –Koyck Model –Partial Adjustment Model –Adaptive Expectations Model	K1-K5		
	4.3 Estimation of Autoregressive models	K1-K6		
	4.4 Causality in Economics – The Granger test	K1-K6		
5	Time Series Analysis	K1-K4	15	1-5
	5.1 Introduction to Time Series Data and Analysis			
	5.2 Stationarity –Unit Root Test	K1-K5		
	5.3 Co-integration Tests	K1-K5		
	5.4 Methods of Modelling Time Series Data –AR, MR and ARIMA	K1-K6		

BOOKS FOR STUDY

Damodar Gujarati, *Essentials of Econometrics*, Sage Publication, 2021
Damodar. N.Gujarati, *Basic Econometrics*. New Delhi: McGraw Hill International, 2011.
Ramu. Ramanathan, *Introductory Econometrics with Applications*, New York: Harcourt College, 2000.
Asteriou, D and Hall, Stephen G, *Applied Econometrics*, 3rd Edition, Palgrave Macmillan, 2015.

BOOKS FOR REFERENCE

Christopher, Dougherty, *Introduction to Econometrics*, 4th edition, London: Oxford University Press, 2011.
Damodar. N. Gujarati & Dangeetha. S, *Basic Econometrics*, 4th edition, New York: McGraw Hill, 2007.
Dominick, Salvatore & Derrick Reagle, *Statistics and Econometrics, Schaum's Outlines* 2nd edition, Schaum's Series, 2011.
Koutsoyiannis, A. *Theory of Econometrics*, 2nd edition, London: Macmillan Press, 1977.
Madala, G.S., *Limited Dependant and Qualitative Variables in Econometrics*, Cambridge University Press, Cambridge, 1986.
Kennedy, Peter. A, *Guide to Econometrics*, 5th Edition, The MIT Press, 2003.
Studenmund, A.H., *Using Econometrics: A Practical Guide*, Addison Wesley Publishing Company. Boston,
Mood, Alexander M, Graybill, Franklin A. and Duane C. Boes, *Introduction to the Theory of Statistics*, McGraw-Hill, 1974.
Pindyck & Rubinfeld, *Econometrics Models & Economic Forecast*, 4th edition, McGraw- Hill/Irwin

JOURNALS

The Econometrics Journal
Journal of Econometrics
Journal of Applied
Econometrics
Journal of Econometric methods

WEB RESOURCES

[http://www.ssc.wisc.edu/~bhansen/econometrics/Econometrics.p](http://www.ssc.wisc.edu/~bhansen/econometrics/Econometrics.pdf)
[df http://froelich.vwl.uni-](http://froelich.vwl.uni-mannheim.de/fileadmin/user_upload/froelich/teaching/Advanced_econometrics_Intro_CLRM.pdf)
[mannheim.de/fileadmin/user_upload/froelich/teaching/Advanced_econometrics_Intro_CLR](http://www.nes.ru/dataupload/files/programs/econ/preprints/2009/Problemnik.pdf)
[M.pdf](http://sharecourse.upln.cn/courses/c_201_02/usercontent/guoji/hongch01.pdf)
[http://www.nes.ru/dataupload/files/programs/econ/preprints/2009/Problemnik.pdf](http://sharecourse.upln.cn/courses/c_201_02/usercontent/guoji/hongch01.pdf)
http://sharecourse.upln.cn/courses/c_201_02/usercontent/guoji/hongch01.pdf

PATTERN OF ASSESSMENT**Continuous Assessment Test:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level (Marks)	Marks	No. of Questions
A	K1	5	A question will contain 2 parts a and b. a is K1 level for 5 marks and b is K2 level for 5 marks a. $1 \times 5 = 5$ and b) $1 \times 5 = 5$ (Total 10 marks & 150 words each) Answer 1 question out of 2
	K2	5	
B	K3	10	$1 \times 10 = 10$ (1 out of 2 questions to be answered in 400 words)
	K4	10	$1 \times 10 = 10$ (1 out of 3 questions to be answered in 400 words)
C	K5	10	A question will contain 2 parts a and b. a is K5 level for 10 marks and b is K6 level for 10 marks $1 \times 10 = 10$ and b) $1 \times 10 = 10$ (Total 20 marks & 700 words) Answer 1 question out of 2
	K6	10	

Other Components: Total Marks: 50

Quiz/Open book tests/Assignment/Seminar – Presentation/Viva Voce

End Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level (Marks)	Marks	No. of Questions
A	K1	10	A question will contain 2 parts a and b. a is K1 level for 5 marks and b is K2 level for 5 marks a. $2 \times 5 = 10$ and b) $2 \times 5 = 10$ (2 out of 3 questions to be answered in 150 words each)
	K2	10	
B	K3	20	$2 \times 10 = 20$ (2 out of 3 questions to be answered in 400 words each)
	K4	20	$2 \times 10 = 20$ (2 out of 3 questions to be answered in 400 words each)
C	K5	20	$1 \times 20 = 20$ (1 out of 2 questions to be answered in 700 words)
	K6	20	$1 \times 20 = 20$ (1 out of 2 questions to be answered in 700 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PE/AE15												
	Course Title: ECONOMETRIC METHODS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	1	1	1	1	1	1	1	1	2	1	1	2
CO 2	2	1	1	1	1	1	1	1	1	2	1	1	2
CO 3	2	2	1	1	1	2	2	2	1	2	1	1	2
CO 4	2	1	1	1	1	1	1	1	1	2	1	1	2
CO 5	2	1	1	1	2	1	1	1	1	2	1	1	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

ECONOMICS OF EDUCATION AND HEALTH

CODE:23EC/PE/EH15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to highlight the individual choices in the demand for health and education.
- to identify the factors which promote human capital formation.
- to analyse critically the policy issues of education and health.
- to analyse indicators of education and health
- to develop skills in monitoring progress for Education and Health

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall key concepts and definitions related to the Economics of Education and Health.	K1
CO2	demonstrating comprehension of the impact of Education and Health on Economic Development and the role of indicators in assessing their provision.	K2
CO3	apply economic theories to analyze investment decisions in education, and evaluate the role of government in funding education.	K3
CO4	analyze challenges in the health and education sectors, including issues related to equity, efficiency, and inclusion, and critically evaluate the effectiveness of health and education policies in India and other countries.	K4
CO5	synthesize knowledge from various dimensions of education and health economics, formulate recommendations for improving the quality of human capital, and propose innovative strategies for addressing healthcare needs.	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction	K1-K4	10	1 - 5
	1.1 Importance, scope of Education and health in Human Development			
	1.2 Indicators of Education and health	K1-K4		
	1.3 Education, health and its impact on Economic Development- Denison	K1-K5		
	1.4 Public Choice Perspective -Human Development Paradigm and Capability approach. Mahbub – ulHaq and Sen	K1-K5		
2	Education	K1-K4	10	1-5
	2.1 Education as an investment – Schultz			
	2.2 Rate of return on education- Mincer , Blaug, - Private and Social return	K1-K4		
	2.3 Financing Education –User Fee, Voucher, Loans	K1-K5		
	2.4 Education Policy in India- SSA, RTE, RMSA, RUSA	K1-K5		
	2.5 Country specific studies with respect to education	K1-K5		
3	Health	K1-K4	10	1-5
	3.1 Determinants of Health			
	3.2 Health Care Services –Role of Private and Public Sector	K1-K4		
	3.3 Health care financing and Health insurance	K1-K4		
	3.4 Health policy in India – Recent National Health Policy, NRHM, NUHM, Ayushman Bharat Scheme, NFHS	K1-K5		
4	Core Concepts in Impact Evaluation for Evidence Based Development	K1 - K3	10	1 - 5
	4.1 Definition and Purpose of Impact Evaluation – Evaluation Questions			
	4.2 Theory of Change – measuring change - how to understand pathways underlying a causal relationship	K1 - K5		
	4.3 Core concepts of Impact Evaluation – Identifying control and comparison group, Biases and challenges for causal inference, time dimension of impact, unit of assignment, treatment and analysis, Different impact measures, internal and external validity	K1 - K3		
	4.4 Types of Policy Evaluation	K1 - K6		
5	Submission of Term Paper	K1- K6	25	1 -5

BOOKS FOR STUDY

Peter Zweifel, Friedrich, *Health Economics* Springer – verlag, Oxford University, 1997

Chattopadhyay. Saumen. *Education in Economics –Disciplinary Evolution and Policy Discourse*, New Delhi: Oxford University Press, 2012.

Development of indicators for monitoring progress towards Health for all the year 2000, WHO 1981

BOOKS FOR REFERENCE

Anthony J. Culyer, Joseph P, Hand book of Health Economics, Volume: 1A, Holland, Elsevier, 2001

McPake, Barbara & Charles. Normand. *Health Economics –An International Perspective*. London: Routledge. 2006.

Basu. Kaushik.(Ed). *The Oxford Companion to Economics in India*. New Delhi: Oxford University Press, 2007.

Borjas. J. George. *Labour Economics*. New York: McGraw Hill – Irwin,2005.

Fukuda, Parr and Shivakumar. A.K. (Ed), *Readings in Human Development*. New Delhi: Oxford University Press, 2005.

Gerald, Meier and James. E. Rauch. *Leading Issues in Economic Development*, New Delhi: Oxford University Press, 2005.

Glewwe, Paul, *Education Policy in Developing Countries* (ed.) University of Chicago: Chicago Press, 2013.

Hanushek, Eric & Finis. Welch. *Handbook of the Economics of Education*, Vol. & 2. Melbourne: Elsevier,2006

JOURNALS

Education for All

Human Resource Development Review

WHO Report

Economic Survey

Social Development Report

NFHS Report

WEB RESOURCES

www.undp.org/HDRReports

<https://www.who.int/whr/en>

www.globalhealth5050.org

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
	K4	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
C	K5	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)
	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

NO END SEMESTER EXAMINATIONS

Student will be required to submit a 3000 word individual term paper. The topic should be related to the economics of education and health and will have to be approved by the course teacher. Empirical research including impact evaluation studies on policies and programmes of the government related to education and health can also be undertaken.

Total Marks - 100 (to be reduced to 50 Marks)

Guidelines for Evaluation:

Style, format and neatness in presentation	10
Methodology: Database/Data Source, Variable description, Sampling techniques, Tools of analysis	10
Review of Relevant Literature/background of the study	10
Presentation of the Research problem, Objectives, Hypothesis, Significance of the study	10
Creativity, analysis, reasoning, and conclusion	20
Project (Total marks)	60
Viva Voce	30
Research-in-Progress (Planning, Presentation & Execution)	10
Total	100 (K6)

Evaluation of the Term Paper Presentation and viva voce to be done by a panel of examiners consisting of the external examiner, and the course teacher.

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PE/EH15												
	Course Title: ECONOMICS OF EDUCATION AND HEALTH												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	2	2	3	3	2	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	2	2	3	3	3
CO 3	3	3	3	3	2	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	2	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

AGRICULTURAL ECONOMICS AND SUSTAINABLE DEVELOPMENT

CODE:23EC/PE/AS15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to familiarize students with the sustainable development goals in relation to agriculture.
- to impart knowledge and analytical skills to students in the field of agricultural economics
- to equip students with skills for identifying issues pertaining to Indian agriculture.
- to contextual progress in accomplishing sustainable development goals with respect Indian agricultural scenario.
- to critically analyze and suggest measures for problems in agricultural.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the sustainable development goals to Indian agricultural sector.	K1
CO2	demonstrate knowledge of concepts of agricultural economics	K2
CO3	apply concepts learnt to real life scenario	K3
CO4	analyze contemporary issues like food security, sustainable agricultural practices and nutrition in a complex changing scenario	K4
CO5	critical evaluate and appraise the policies relevant to Indian agriculture.	K5- K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Sustainable Development Goals	K1 - K4	16	1 - 3
	1.1 Introduction to SDGs – Role of Agriculture in Sustainable Development goals			
	1.2 Understand Goal 2 – Zero Hunger – Case Studies of successful hunger reduction initiatives	K1 - K3		
	1.3 Understanding Goal 6 – Clean water and Sanitation – Sustainable agricultural water use and management practices for water conservation	K1- K4		

	1.4 Understand Goal 15 – Life on Land – Conservation and sustainable land management practices – crop rotation and diversification – improve soil health and enhance long term productivity – organic farming – precision agriculture	K1 – K4		
2	Sustainable Agriculture and Economic Development 2.1 Understanding Goal 1 – No poverty – poverty reduction through agricultural development – case studies of rural economic empowerment 2.2 Understanding Goal 8 – Decent Work and Economic Growth - agricultural as a source of livelihood 2.3 Understanding Goal 12 – Responsible Consumption and Production - Sustainable agricultural practices , reducing food waste and promoting sustainable production	K1 - K3 K1 - K6 K1 - K4	15	1-5
3	Social Dimension of Sustainable Agriculture 3.1 Understanding Goal 5 - Gender equality – Gender roles in agriculture and promoting gender equality in the agricultural sector. 3.2 Understanding goal 10 – reduced inequality – addressing economic and social disparities in agriculture- case studies of inclusive agricultural initiatives 3.3 Climate Change and Agriculture – Climate Resilient Agriculture – Strategies – Climate Smart Farming – Economic implications of climate – smart agricultural practices to mitigate climate change	K1, K4 K3 - K6 K1 - K3	15	1 - 5
4	Impact Evaluation in agriculture and sustainable development 4.1 Definition and Purpose of Impact Evaluation – Evaluation Questions 4.2 Theory of Change – measuring change - how to understand pathways underlying a causal relationship 4.3 Core concepts of Impact Evaluation – Identifying control and comparison group, Biases and challenges for causal inference, time dimension of impact, unit of assignment, treatment and analysis, Different impact measures, internal and external validity 4.4 Types of Policy Evaluation	K1 - K3 K1 - K5 K1 - K3 K4 - K6	12	1 - 5
5	Submission of Term Paper	K1 - K6	7	1 - 5

BOOKS FOR STUDY

Sachs, Jeffery D . The Age of Sustainable Development, Columbia University Press 2015
Lichtfouse E et al. Sustainable Agriculture. EDP Sciences France 2009

BOOKS FOR REFERENCE

Singh, Ajit and Hamid Tabatabai – Economic crisis and Third world Agriculture, Cambridge University Press, 1993.
Surjit Singh, S S Acharya, Vidya Sagar – Sustainable Agricultural Poverty and Food Securities, 2002 Rawat Publication , Jaipur Vol- I & II

JOURNALS

Working papers of IGIDR
Indian Institute of Foreign Trade (WTO studies)
World Bank
TARINA (<https://tarina.tci.cornell.edu/>)
IFPRI

WEBSITE REFERENCE

<https://link.springer.com/book/10.1007/978-90-481-2666-8>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
	K4	8	1 x 8 = 8 (1 out of 2 questions to be answered in 400 words)
C	K5	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)
	K6	12	1 x 12 = 12 (1 out of 2 questions to be answered in 700 words)

NO END SEMESTER EXAMINATIONS

Student will be required to submit a 3000 words individual term paper, the paper has to be related to any area of Agricultural Economics and Sustainable Development Goals. The topic will be approved by the course teacher. Empirical research including impact evaluation studies on policies and programmes of the government that also be undertaken. The following are a sample list of government programmes that students can undertake to study.

Pradhan Mantri garib Kalyan Anna Yojana, Public Distribution System, Organic Farming (Parmparagat Krishi Vikas Yojana), Farm Subsidies, National Agricultural Markets (eNAM),

National Mission for Sustainable Agriculture, Soil and Land Use, Mission Organic Value Chain, Pradhan Mantri Krishi Sinchayee Yojana (Irrigation), Pradhan Mantri Fasal Bima Yojana (Insurance), Soil Health Card Scheme, Rainfed area development programme, National Watershed Development project for rainfed area, Permaculture, Hydroponic and Aquaponics, Climate Resilience, Urban Agriculture.

Total Marks - 100 (to be reduced to 50 Marks)

Term Paper – 50 Marks

Presentation – 25 Marks

Viva Voce – 25 Marks

Evaluation of the Term Paper Presentation and Viva Voce to be done by a panel of examiners – course teacher and an external examiner from the department

**Mapping of Course Outcomes (Cos)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EC/PE/AS15												
	Course Title: AGRICULTURAL ECONOMICS AND SUSTAINABLE DEVELOPMENT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	3	3	1	3	3	2	2	3
CO 2	3	3	3	2	2	3	3	1	3	3	2	2	3
CO 3	3	3	3	2	2	3	3	1	3	3	2	2	3
CO 4	3	3	3	2	2	3	3	1	3	3	2	2	3
CO 5	3	3	3	2	2	3	3	1	3	3	2	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Postgraduate Elective Course offered by the Department of Economics to
M.A / M.Sc. Degree Programme**

SYLLABUS

(Effective from the academic year 2023–2024)

CONTEMPORARY ECONOMIC ISSUES

CODE: 23EC/PE/CI23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to introduce the varied economic ideologies.
- to enable an understanding of the issues in Indian economy.
- to equip with skills to reason out the causes behind the issues.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the key concepts and economic ideologies	K1
CO2	comprehend the working of the concepts taught	K2
CO3	apply the concepts to varied real-life situations	K3
CO4	analyse the issues which exist in the Indian context	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	HRS	CO
1	Introduction: The Ideology within Economics	K1-K3	8	1-4
	1.1 A brief overview of the concept of economic systems – Capitalism, Socialism, Mixed – Gandhian Model			
	1.2 The trend in economic ideologies over the years: free market laissez faire – capitalism to planned development – role of the government – to liberalisation and globalisation	K1-K3		
	1.3 Problems of development with special reference to India	K1-K4		
2	Poverty and Economic Inequality	K1-K4	8	1-4
	2.1 Meaning of poverty – measures and magnitude – basic measures of poverty			
	2.2 Development as freedom – Amartya Sen's Capability Approach	K1-K2		
	2.3 Unemployment – types and the current scenario	K1-K4		

UNIT	CONTENT	CL	HRS	CO
3	Political Economy and Role of the Government	K1-K4	9	1-4
	3.1 Market failure and Need for Government – Public versus private goods and externalities			
	3.2 Basic fiscal concepts – budget – revenue and capital budget – balanced, surplus, deficit; revenue deficit, capital deficit, primary deficit, fiscal deficit	K1-K2		
	3.3 Fiscal budgetary developments – Preparation, Enactment, Execution and Parliamentary control over finance	K1-K2		
	3.4 An analysis of the Indian Union Government Budget	K1-K4		
4	International Trends and Issues	K1-K2	6	1-2
	4.1 Free trade versus protection – tariffs and non-tariff barriers			
	4.2 Globalisation and Anti-Globalisation	K1-K2		
	4.3 A brief overview of GATT and WTO – TRIPS, TRIMS, AOA, Sanitary and Phytosanitary Measures	K1-K2		
5	Business Cycles and Inflation	K1-K4	8	1-4
	4.1 Business cycles – types, phases, causes and effects			
	4.2 Inflation – types, causes and effects	K1-K4		
	4.3 Methods to control Inflation	K1-K4		

BOOKS FOR STUDY

Carbaugh. R.J. *International Economics*. UK, Cenage Learning, 2008.
Datt and Sundaram. *Indian Economy*, New Delhi, S. Chand, 2007.
Jhingan. M.L. *Macroeconomic Theory*. 13th Edition, Vrinda Publications Ltd, New Delhi, 2013.
Todaro, Micheal P. *Economic Development*. U.S.A. and London, Longman, 1995.
Tyagi. B.P. *Public Finance*, 5th edition, Jai Prakash Nath Publications, New Delhi, 2015.

BOOKS FOR REFERENCE

Agarwal. et. al. (Ed.). *Capabilities, Freedom & Equality*. New Delhi, Oxford University Press, 2006
Browning. E.K. *Public Finance and the Price System*. New Delhi, Pearson, 1994.
Cherunilam, Francis. *International Economics*. New Delhi, Tata McGraw Hill, 2012
Cullenberg and Patnaik (Ed.) *Globalisation, Culture and the Limits of the Market – Essays in Economics and Philosophy*. New Delhi, Sage, 2004
Gupta and Kiely (Ed.). *Globalisation and after*. New Delhi, Sage, 2006
Dhingra. I.C. *The Indian Economy, Environment and Policy*. New Delhi, S. Chand, 2007
Sen. Amartya. *Development as Freedom*. New Delhi. Oxford University Press, 2000
Kapila, Uma (Ed.). *Indian Economy since Independence*. New Delhi, Academic Foundation, 2006-07.

WEB SOURCES

<http://www.in.undp.org/>
www.imf.org
www.worldbank.org
www.wto.org www.unctad.org
www.rbi.org.in
<http://mhrd.gov.in>

JOURNALS

The Economic and Political Weekly

The Economist

Journal of Social and Development Studies

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	20	2 x 10 = 20 (2 out of 3 questions to be answered in 400 words)
C	K4	20	1 x 20 = 20 (1 out of 2 questions to be answered in 800 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
	K2	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
B	K3	40	4 x 10 = 40 (4 out of 6 questions to be answered in 400 words each)
C	K4	40	2 x 20 = 40 (2 out of 3 questions to be answered in 800 words each)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Postgraduate Elective Course offered by the Department of Economics to
M.A / M.Sc. Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

INTRODUCTION TO ECONOMICS

CODE: 23EC/PE/IE23

CREDITS:3

L T P:3 0 0

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- to introduce the students to different fields of economics
- to provide an overview of basic concepts in micro and macroeconomics
- to explore the benefits of foreign trade and its impact on balance of payments.
- to examine global economic challenges such as poverty, inequality, unemployment, inflation and growth
- to enrich knowledge on current economic issues and problems

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify the tools require to solve economic issues	K1
CO2	enable students across various disciple understand the tools require to solve economic issues	K2
CO3	experiment and familiarize various recent trends in the economy	K3
CO4	analyze a range of policy issues	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	Microeconomics	K1-K2	7	1-5
	1.1 Definition Economics - Demand, Supply and Equilibrium in Market	K1-K3		
	1.2 Cost and Revenue – AR, MR, TR, and short run costs	K1-K3		
	1.3 Pricing Methods – Cost oriented pricing and market oriented pricing	K1-K3		

UNIT	CONTENT	CL	HRS	CO
2	National Income 2.1 National Income – GDP, GNP, NDP, NNP , NI, PI, DI and PCI	K1-K3	8	1-5
	2.2 Measurement – Income method, Expenditure method and Product method	K1-K3		
	2.3 Difficulties in Calculating – conceptual and statistical difficulties			
3	Fiscal 3.1 Taxation- Different types of taxes – direct and indirect tax	K1-K3	7	1-5
	3.2 GST and overview	K1-K4		
4	International Trade 4.1 Foreign trade - Concepts and Structure - BOP, BOT- BOP Balance Sheet- Overview	K1-K4	8	1-5
	4.2 Disequilibrium - Measures to correct BOP	K1-K4		
5	Economic issues and an overview 5.1 Poverty and Inequalities – Types, causes and remedies	K1-K4	9	1-5
	5.2 Unemployment – Types, causes and remedies	K1-K4		
	5.3 Inflation – Types, causes and remedies	K1-K4		
	5.4 Economic Growth versus Economic Development – brief overview	K1-K4		

BOOKS FOR STUDY

Dewett, K K & M H Navalur, Modern Economic Theory, New Delhi, S. Chand, 2006
Datt, Gaurav , Ashwani Mahajan; Indian Economy, New Delhi, S Chand & Co. Ltd., 2018

BOOKS FOR REFERENCE

Mankiw, Gregory N, Macroeconomics, Worth Publishers, New York, 2016
Ahuja H L, Introduction to Economics, New Delhi, S Chand, 2012
Samuelson Paul, William D Nordhaus; Economics, New York McGraw Hill, 2009

WEB RESOURCES

www.rborg

www.cs0.org

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	20	2 x 10 = 20 (2 out of 3 questions to be answered in 400 words)
C	K4	20	1 x 20 = 20 (1 out of 2 questions to be answered in 800 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
	K2	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
B	K3	40	4 x 10 = 40 (4 out of 6 questions to be answered in 400 words each)
C	K4	40	2 x 20 = 40 (2 out of 3 questions to be answered in 800 words each)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Postgraduate Elective Course offered by the Department of Economics to
M.A / M.Sc. Degree Programme**

SYLLABUS

(Effective from the academic year 2023–2024)

ECONOMICS FOR BUSINESS AND MARKETING

CODE: 23EC/PE/EB23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to understand the structure of business organizations
- to provide the students with a theoretical foundation of marketing
- to apply theory to real-world scenarios

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define and explain the fundamental concepts of business organization and marketing	K1-K2
CO2	apply the knowledge, concepts, and tools necessary to understand the challenges and issues of marketing in a growing international and global context.	K3
CO3	analyze and evaluate the various marketing channels and the importance of supply chain management	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	HRS	CO
1	Structure and Growth of an Organization	K1-K3	8	1-5
	1.1 Objectives of a Business Organization - Profit, Growth, Sales, Utility Maximization			
	1.2 Definition and Element of Organizational Structure	K1-K3		
	1.3 Common Organizational Designs - Traditional and Modern	K1-K 4		
	1.4 Changing Dimensions of Organizations - Impact of Culture	K1-K4		

UNIT	CONTENT	CL	HRS	CO
2	Product and Service: Growth and Development 2.1 Product and Services - Concept, Types, and Features - Product Line and Product Mix Decisions	K1-K4	8	1-3
	2.2 New Product Development Strategy and Product Life Cycle Strategy	K1-K4		
3	Pricing 3.1 Pricing - Objectives and Types	K1- K4	7	1- 3
	3.2 Methods and Strategies	K1- K4		
4	Marketing Channels and Supply Chain Management 4.1 Channel Behaviour and Organization	K1-K4	8	1-3
	4.2 Supply Chain Management	K1 –K4		
5	Advertising, Sales Promotion and Public Relations 5.1 Advertising - Objectives, Advertising Budget, Developing and Evaluating Advertising Strategy	K1 -K4	8	1- 3
	5.2 Sales Promotion - Objectives, Major Sales Promotion Tools; Public Relations	K1 –K4		

BOOKS FOR STUDY

Kotler. Philip, Principles of Marketing. New Delhi: Prentice Hall of India. 2010.

Stephen. Robbins P, Essentials of Organizational Behaviour. New Jersey: Prentice Hall. 1986

BOOKS FOR REFERENCE

Davis, Keith, and Newstrom W. John, Human Behaviour at Work, Organizational Behaviour. New Delhi: Tata McGraw Hill. 2006

Stanton, William J; Fundamentals of Marketing, US, McGraw Hill, 1987

Kotler, and Armstrong, Principles of Marketing. New Delhi: Prentice Hall of India. 2004.

Prasad. L.M., Human Resource Management. New Delhi: Sultan Chand. 2005. Tripathi.

P.C., Human Resource Development. New Delhi: Sultan Chand. 2010.

WEB SOURCES

https://opac.atmaluhur.ac.id/uploaded_files/temporary/DigitalCollection/ODljY2E4ODIyODViZjFkODgzNDUxYWZlNWZhZmY2MGE5MDc0ZDVmYWw=.pdf

<https://open.lib.umn.edu/organizationalbehavior/>

JOURNALS

Quantitative Marketing and Economics

Journal of Economics and Business

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
	K2	5	1 x 5 = 5 (1 out of 2 questions to be answered in 150 words)
B	K3	20	2 x 10 = 20 (2 out of 3 questions to be answered in 400 words)
C	K4	20	1 x 20 = 20 (1 out of 2 questions to be answered in 800 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Quiz/Group Discussion/Article Review

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
	K2	10	2 x 5 = 10 (2 out of 3 questions to be answered in 150 words each)
B	K3	40	4 x 10 = 40 (4 out of 6 questions to be answered in 400 words each)
C	K4	40	2 x 20 = 40 (2 out of 3 questions to be answered in 800 words each)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Postgraduate Elective Course offered by the Department of Economics to
M.A / M.Sc. Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

INTRODUCTION TO DATA ANALYTICS

CODE: 23EC/PE/DA23

CREDITS:3

L T P:0 0 3

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- to emphasis on problem-based learning and focus on how to use the software to conduct statistical analysis of data
- to introduce some of the statistical and econometric techniques that are widely used in empirical studies
- to teach students how to apply relevant econometric methods to analyze data and interpret the results from such analysis
- to understand the implications and relevance of these tools required to formulate simple model
- to discover new facts and verify important economic phenomenon to identify cause and effect

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explain, describe, interpret, explore and analyse data	K1
CO2	apply statistical and econometric techniques that are widely used in empirical studies in economics	K2
CO3	perform relevant econometric methods to analyze data and interpret the results from such analysis	K3
CO4	demonstrate relevant statistical tools required to formulate simple economic models and undertake simple scientific research	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to data analytics 1.1 Importance of data analytics in scientific research	K1-K2	2	1-5

2	Descriptive statistics	K1-K3	7	1-5
	2.1 Grouping data: Frequency distributions			
	2.2 Summary statistics – Mean, median, mode, standard deviation, variance, Skewness	K1-K3		
	2.3 Diagrammatic presentation of data.	K1-K3		
3	Linear Relationship	K1-K4	8	1-5
	3.1 Correlation and Regression analysis			
	3.2 Estimating correlation and regression coefficients			
	3.3 Testing the significance of correlation and regression coefficients: Test of significance and confidence interval approach	K1-K4		
4	Linear relationship	K1-K4	7	1-5
	4.1 Estimating non-linear regression models: Doublelog, Semi-log			
	4.2 Simple regression models using dummy variables	K1-K4		
5	Inferential Statistics:	K1-K4	15	1-5
	5.1 Introduction to hypothesis-testing			
	5.2 Large sample tests	K1-K4		
	5.3 Small sample tests	K1-K4		

BOOKS FOR STUDY

Kumar , Research Methodology, 3rd edition ,Sage publication, 2011

Kothari C R, Research Methodology, Methods and Techniques, New Age International,2004

Nargundkar Rajendra, Marketing_Research-Text and Cases, 3rd edition, Tata McGraw-Hill Publishing Company Limited, New Delhi, 2017
SPSS Manual

BOOKS FOR REFERENCE

Mukherjee, Chandan Howard White and Marc Wuyts ,Econometrics and Data Analysis for Developing Countries, Routledge,1998

Selltiz, Jahoda, Morton, Deutsch and Stuart Cook, Research Methods in Social Relations, Holt, Rinehart and Windston, NewYork, 1962

Siegel, Sidney,Non Parametric Statistics for the Behavioral Sciences, McGraw Hill Book Co, Sydney ,1956

Young, Pauline V, Scientific Social Survey Research, Prentice Hall, Englewood Ranjit, 1960

WEBSITES

<http://www.discoveringstatistics.com/docs/reliability.pdf>

<http://www.statsoft.com/Textbook/ANOVA-MANOVA>

<http://www.iasri.res.in/iasriwebsite/DESIGNOFEXPAPPLICATION/ElectronicBook/Module%201/6SPSS-overview.pdf>

<https://www.educba.com/cluster-analysis-vs-factor-analysis/>

<https://www.statisticssolutions.com/using-chi-square-statistic-in-research/>

https://www.ibm.com/docs/en/SSLVMB_28.0.0/pdf/IBM_SPSS_Statistics_Brief_Guide.pdf

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Only practical

Section	Cognitive Level	Marks	Pattern
A	K1	5	1x 5 = 5 (All Compulsory)
	K2	5	1x5 = 5 (All Compulsory)
B	K3	10	2 x 10= 20 (Answer any 1 out of 2 questions)
	K4	10	2 x 10= 20 (Answer any 1 out of 2 questions)

Other Components:

Total Marks: 50

No End – Semester Examination:

Data Analysis report

Total marks: 100 (to be reduced to 50 marks)

Submission of a Data analysis project report with the paper related research study. Topic to be approved by the course teacher.

Guidelines for Evaluation:	Marks
Style, format, and neatness in presentation	10
Methodology: Database/Data Source, Variable description, Sampling techniques, Tools of analysis	10
Review of Relevant Literature/background of the study	10
Presentation of the Research problem, Objectives, Hypothesis,	10
Significance of the study	10
Creativity, analysis, reasoning, and conclusion	10
Project (Total marks)	60
Viva Voce	30
Research-in-Progress (Planning, Presentation & Execution)	10
Total	100 (K6)

Evaluation of the Data Analysis report and viva voce to be done by a panel of examiners consisting of the external examiner from the Department of Economics, Stella Maris College (Autonomous), and the course teacher.

Evaluation of the Term Paper to be done by the course teacher and an external examiner from the Department of Economics

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

FINANCIAL INSTITUTIONS AND MARKETS IN INDIA

CODE:23EC/PI/FI24

CREDITS:4

OBJECTIVES OF THE COURSE

- to familiarize the students with the knowledge of the indian financial system.
- to acquaint the students on the indian financial institutions and markets and the role played by the same on the financial system

COURSE LEARNING OUTCOMES

On Successful completion of the course, students will be able to

- understand the functioning of the indian financial system
- describe the role of various financial and non-financial institutions in india
- recognise the role of various regulatory bodies in regulating the financial institutions in india.
- analyse the features of different money market and capital market instruments in india.
- basic knowledge about the foreign exchange market.

Unit 1

Introduction

- 1.1 The Indian Financial system: An Overview
- 1.2 Structure and Growth of Financial System
- 1.3 Functions of the financial system
- 1.4 Indian financial system pre and post liberalization

Unit 2

Financial Institutions

- 2.1 Commercial Banks: Growth and role played –Nationalization –Management of assets and liabilities –Lending policies –Recent reforms in banking sector
- 2.2 Development Banks: Overview –Growth and functions –Source of funds – Performance of IDBI, ICICI, IFCI, SFC, SIDBI, SIDCs
- 2.3 Non Banking Financial Institutions: Overview –growth and functions –reforms in NBFI's – performance of Insurance companies investment banks –Mutual Funds and Pension Funds
- 2.4 Regulatory mechanism and statutory authorities in financial markets: RBI and SEBI –Role played by them

Unit 3

Financial Markets

- 3.1 Indian Financial Markets: Structure role and growth
- 3.2 Money market: Definition –Role and Function –Source of funds –Instruments of the money market, call money, treasury bills, term money, certificate of deposit, commercial papers
- 3.3 Capital market: Definition –Role and functions –source of funds – primary market- secondary market

Unit 4

Foreign Exchange Market

- 4.1 Exchange rates – Fixed and flexible –determination of exchange rates
- 4.2 Foreign exchange markets – Cash and spot markets –exchange rate quotas – LERMS
- 4.3 Nature of Forex markets –Forex inflow and outflow –factors affecting forex market
- 4.4 RBI and Exchange management

Unit 5

Financial Derivatives

- 5.1 Financial Derivatives –Need for derivatives –types of derivatives
- 5.2 Options Market –Definition –difference between future and option contracts
- 5.3 Interest rate derivative markets
- 5.4 Foreign exchange derivative markets

BOOKS FOR STUDY

Meir Kohn, *Financial Institutions and Market*, New Delhi: Tata McGraw Hill 2013 Chandra, P. *Financial management: Theory and practice*. New Delhi: Tata McGraw-Hill Education. 2017.

BOOKS FOR REFERENCE

Das, S. C. *The financial system in India: Markets, instruments, institutions, services and regulations*. New Delhi: PHI Learning, 2015.
Bhole L.M *Indian Financial Institution and Markets*, New Delhi: Tata McGraw Hill 2002
Khan M.Y. *Indian Financial System*, 4th edition, New Delhi: Tata McGraw Hill 2004
Mishkin Frederic and Stanley G Eakins *Financial Markets and Institution*, 4th edition New York: Addison Wesley 2003
Pathak Bharathi.V, *The Indian Financial System Markets Institutions and Services*, 2nd edition, New Delhi: Pearson Education India 2007

PATTERN OF ASSESSMENT

End-Semester Examination: **Total Marks: 100** **Duration: 3 hours**

Section A– 5 x 8 = 40 marks (5 out of 7 questions to be answered in 300 words each)

Section B– 3 x 20=60 marks (3 out of 5 questions to be answered in 1200 words each)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH III – ECONOMICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

ORGANIZATIONAL BEHAVIOR

CODE: 23EC/PI/OB24

CREDITS : 4

OBJECTIVES OF THE COURSE

- to provide an overview of the field.
- to gain understanding of the basic principles of organizational behavior □ to acquire knowledge of current issues of organizational behavior.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- to discuss the various approaches to the development of the field of organizational behaviour
- to analyze and compare different models used to explain individual behaviour related to motivation and rewards
- to identify the processes used in developing communication and resolving conflicts
- to explain group dynamics and demonstrate skills required for working in groups (team building)
- to identify the various leadership styles and the role of leaders in a decision making process.

Unit 1

Introduction

- 1.1 Organizational Behavior – Definition, Goals, Forces
- 1.2 Fundamental Concepts- Nature of People, Nature of Organization
- 1.3 Models of Organizational behavior- Autocratic, Custodial, Supportive, Collegial, Systems.
- 1.4 Challenges and Opportunities to OB - Responding to Globalization - Managing Workforce Diversity

Unit 2

Motivation

- 2.1 Definition, Motivational Drives, Theories X and Y
- 2.2 Need Based Theory – Maslow 2.3 Behavioral Theory – OB Modification.

Unit 3

The Group

- 3.1. Group Behavior – Formal and Informal
- 3.2. Communication - Formal and Informal
- 3.3. Team and Team Building

Unit 4

Leadership

- 4.1 Definition and Nature
- 4.2 Theories- Trait, Behavioral, Contingency

Unit 5

The Organizational System and Dynamics

- 5.1 Foundations of Organizational Structure-Work Specialization, Departmentalization Chain of Command, Span of Control, Centralization and Decentralization.
- 5.2 Organizational Culture-Creating and Sustaining Culture.
- 5.3 Organizational Change- Forces, Resistance, Managing Change

TEXTBOOKS

- Davis Keith, Newstrom W. John, *Human Behavior at Work, Organizational Behaviour* Tata McGraw Hill Edition, New Delhi.2006
- Robbins P. Stephen., *Essentials of Organizational Behavior*, Prentice Hall, New Jersey.1986

BOOKS FOR REFERENCE

- Hersey, Paul Blanchard, Kenneth, M., *Management of Organization Behavior*, Prentice Hall of India, New Delhi.1988
- Luthans, Fred, *Organizational Behavior*, McGraw Hill International Edition, Singapore 1989
- Prasad L.M., *Organisational Behavior*, Sultan Chand and Sons, New Delhi.2005
- Greenberg Jerald, Baron Robert A, *Behavior in Organizations*, Pearson Education, New Delhi.2004
- Fincham Robin, Rhodes Peter, *Principles of Organizational Behavior*, Oxford University Press, New Delhi.2006

PATTERN OF ASSESSMENT

End-Semester Examination:

Total Marks:100

Duration: 3 hours

Section A – 5 x 8 = 40 marks (5 out of 7 questions to be answered in 300 words each)

Section B – 3 x 20 = 60 marks (3 out of 5 questions to be answered in 1200 words each)



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

M.A. Degree
Branch VII ENGLISH
(CHOICE BASED CREDIT SYSTEM)

OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF ENGLISH

PROGRAMME DESCRIPTION

The Master's Programme in English aims to expose students to a range of literatures written in or translated into English. The Programme strikes a balance between traditional courses such as British, American, and Indian literatures and theoretical and concept-based courses such as Critical Theory, Gender Studies, and Postcolonial Studies. These courses acquaint students with various conceptual frameworks and equip them with tools for analysis and interpretation of texts. Other concept-based courses such as Literature and Subalternity sensitise students to marginalised narratives and voices. The programme also offers the students the opportunity to explore the interrelations of text, theory, and culture across the field of literary studies, and to develop their knowledge and understanding of critical and research methods through research undertaken for presentations, assignments and term papers. Courses such as Literature and Mysticism, and Literature and Ecology enable students to celebrate polyphonic voices, and to engage ethically with the world around them. The Elective courses offered by the Department aim to equip students with skills leading to employability in areas such as English Language Teaching, Creative Writing, and Technical Writing.

VISION OF THE DEPARTMENT

To encourage students to evolve into sensitive, independent individuals and agents of social change through the study of literatures from across different regions.

MISSION OF THE DEPARTMENT

- To impart language and communication skills through participatory learning in order to aid employability.
- To encourage problem solving and critical thinking in students.
- To explore newer areas of research across regions in English Studies.
- To equip students with knowledge and critical thinking skills which will aid them in questioning dominant narratives in English Studies so that they become agents of social change and help.
- To continually update our programme to be contemporaneous and inclusive.
- To respond sensitively to marginalized discourses in literature and culture.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

On successful completion of the MA English programme, the students will be able to

PSO 1	demonstrate the ability to appreciate, analyse and critique texts and contexts using appropriate concepts/ theories.
PSO 2	use the critical thinking, writing and research skills they have acquired for employability/ entrepreneurial purposes.
PSO 3	engage critically and empathetically with various socio-cultural/ economic/ political/ ethnic/ linguistic/ pedagogical and ecological contexts.
PSO 4	use the knowledge and skills acquired to navigate local, national and global concerns .
PSO 5	use skills and knowledge acquired to contribute constructively to the existing knowledge base leading to societal progress and nation-building.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
DISTRIBUTION OF CREDITS AND HOURS
M.A. English 2023-2024

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	5	4	5	4	5	4	5	16	20
	4	5	4	5	4	5	4	5	16	20
	4	5	4	5	4	6	4	6	16	22
	4	5			4	6			8	11
Dissertation							7	9	7	9
PE-dept.	5	5	5	5			5	5	15	15
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PA	2	2							2	2
PN					2				2	0
Library		3		3		3				9
TOTAL	23	30	24	30	23	30	24	30	94	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks										
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M	
SEMESTER-I										
23EL/PC/LB14	Literature of the British Isles – I	4	4	1	0	3	50	50	100	
23EL/PC/AL14	American Literature: Modernism and After	4	4	1	0	3	50	50	100	
23EL/PC/LS14	Literature and Subalternity	4	4	1	0	3	50	50	100	
23EL/PC/GS14	Gender Studies	4	4	1	0	3	50	50	100	
	PA/PL									
	Department Elective I									
SEMESTER-II										
23EL/PC/LB24	Literature of the British Isles – II	4	4	1	0	3	50	50	100	
23EL/PC/LM24	Literature and Mysticism	4	4	1	0	3	50	50	100	
23EL/PC/CT24	Contemporary Critical Theory – I	4	4	1	0	3	50	50	100	
23EL/PK/SS22	Soft Skills	2	2	0	0	-	50	-	100	
CD / ET	Value Education									
	Department Elective II									
	Common Elective I									
SEMESTER-III										
23EL/PC/PC34	Postcolonial Studies	4	4	1	0	3	50	50	100	
23EL/PC/LE34	Literature and Ecology	4	4	1	0	3	50	50	100	
23EL/PC/IL34	Indian Literatures – I	4	4	2	0	3	50	50	100	
23EL/PC/CT34	Contemporary Critical Theory – II	4	4	2	0	3	50	50	100	
23EL/PN/SI32	Summer Internship	2	0	0	0	-	50	-	100	
CD / ET	Value Education									
	Common Elective II									
SEMESTER-IV										
23EL/PC/LG44	Linguistics	4	4	1	0	3	50	50	100	
23EL/PC/SH44	Shakespeare	4	4	1	0	3	50	50	100	
23EL/PC/IL44	Indian Literatures – II	4	4	2	0	3	50	50	100	
23EL/PC/DS47	Dissertation	7	0	9	0	-	50	50	100	
	Department Elective III									
Postgraduate Elective Courses Offered to Parent Department										
23EL/PE/DF15	Detective Fiction	5	5	0	0	-	50	50	100	
23EL/PE/TW15	Technical Writing	5	5	0	0	-	50	50	100	
23EL/PE/ET15	English Language Teaching	5	5	0	0	-	50	50	100	
23EL/PE/CL15	Children's Literature	5	5	0	0	-	50	50	100	
23EL/PE/CW15	Creative Writing	5	5	0	0	-	50	50	100	
23EL/PE/NF15	New Fiction and the Contemporary World	5	5	0	0	-	50	50	100	
23EL/PE/RF15	Reading Films	5	5	0	0	-	50	50	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks										
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M	
Postgraduate Elective Courses Offered to Other Departments										
23EL/PE/EC23	English for Communication	3	3	0	0	3	50	50	100	
23EL/PE/LS23	Literature and Spirituality	3	3	0	0	3	50	50	100	
23EL/PE/MF23	Literature, Myth and Folklore	3	3	0	0	3	50	50	100	
23EL/PE/FF23	Fantasy Fiction	3	3	0	0	3	50	50	100	
The Department will offer one Social Awareness Course										
Social Awareness										
23EL/PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100	
23EL/PA/CR12	Child Rights	2	2	0	0	-	50	-	100	
23EL/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100	
23EL/PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100	
23EL/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100	
23EL/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100	
23EL/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100	
23EL/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100	
23EL/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100	
Independent Elective Courses										
23EL/PI/PF24	Popular Fiction	4	0	0	0	-	-	100	100	
23EL/PI/LN24	Literature and Science	4	0	0	0	-	-	100	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023-2024)

LITERATURE OF THE BRITISH ISLES – I

CODE: 23EL/PC/LB14

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to develop an analytical and critical approach to British literary texts from the sixteenth to the nineteenth centuries
- to engage critically with literature produced in the British Isles during this period.
- to interrogate the idea of nationhood, gender, sexuality, race and ethnicity through literary texts
- to foster a sensitive understanding of representative writers in relation to the social, cultural and political milieu
- to train students to critically analyse prescribed texts using relevant concepts

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify literary, social, political, cultural trends in Literature from the British Isles from the sixteenth to the nineteenth centuries.	K1
CO2	outline literary conventions in the context of the changing milieu of the Isles from the sixteenth to the nineteenth centuries.	K2
CO3	develop an analytical and critical approach to the British literary tradition	K3
CO4	examine the representative writers in their social, cultural and political milieu.	K4
CO5	choose relevant concepts and formulate critical responses.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Edmund Spenser: <i>Amoretti</i> : Sonnet I 1.2 John Donne: A Valediction: Forbidding Mourning 1.3 John Webster: <i>The Duchess of Malfi</i> 1.4 John Milton: <i>Paradise Lost</i> : Book I	K1-6	20	1-5
2	2.1 Alexander Pope: Essay on Criticism (lines 1-200) 2.2 Aphra Behn : <i>The Rover</i>	K1-6	14	1-5
3	3.1 William Wordsworth: Three Years She Grew 3.2 Samuel T Coleridge: Kubla Khan 3.3 John Keats: To Autumn 3.4 Percy Bysshe Shelley : Ode to the West Wind	K1-6	14	1-5

UNIT	CONTENT	CL	Hrs	CO
4	4.1 Robert Browning: Fra Lippo Lippi 4.2 Mathew Arnold: The Study of Poetry 4.3 Emily Bronte: <i>Wuthering Heights</i> 4.5 Oscar Wilde: The Canterville Ghost	K1-6	12	1-5
5	<u>Practical Application Tasks</u> Practical analysis of literary texts/passages applying concepts discussed in the syllabus	K5,K6	5	5

BOOKS FOR REFERENCE

Galvan, Jill Nicole. *Replotting Marriage in Nineteenth-Century Britain*. Ohio State University Press, 2018.

Gardner, Helen. *Metaphysical Poets*. Booksway, 2016.

Greenblatt, Stephen. "Marlowe and the Will to Absolute Play" (Chapter 5), *Renaissance Self-fashioning: From More to Shakespeare*. Chicago UP, 2005.

Havens, Hillary. Ed. *Didactic Novels and British Women's Writing, 1790-1820*. Routledge, 2016.

Hill, Christopher. Introduction, "Milton's Christian Doctrine" (Part V). *Milton and the English Revolution*. Verso, 2020.

Huston, Alan and Steve Pincus. *A Nation Transformation: England after the Restoration*. Cambridge University Press. 2001.

Loomba, Ania. "Women's Division of Experience." *Revenge Tragedies New Casebook Series*. Ed. Stevie Simkin, Palgrave, 2001.

Lukacs, Susanna. *Decadence and Repression in Henry James and Oscar Wilde*. Cambridge Scholars Publishing, 2022.

Poplawski, Paul. *English Literature in Contexts*. Cambridge University Press, 2018.

Steinbach, Susie L. *Understanding the Victorians: Politics, Culture and Society in Nineteenth-Century Britain*. Routledge, 2012.

Todd, Janet. *Aphra Behn Studies*. Cambridge University Press, 2008.

Wilkinson, Hazel. *Edmund Spenser and the Eighteenth-Century Book*. Cambridge University Press. 2017.

JOURNALS

English Literary
Renaissance
Studies in Renaissance
Victorian
Literature and Culture

WEB RESOURCES

www.poets.org
www.poetryfoundation.org
www.johnmilton.org

RECOMMENDED ONLINE COURSES

<https://archive.nptel.ac.in/courses/109/106/109106149/>
https://onlinecourses.nptel.ac.in/noc21_hs28/preview

PATTERN OF ASSESSMENT**No Unit should be left out.****Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
	K4	10	1x10=10 (1 out of 2 questions, 250 words)
D	K5	10	1x10=10 (1 out of 2 questions, 250 words)
	K6	10	1x10=10 (1 out of 2 questions, 250 words)

Other Components:**Total Marks: 50**

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class
 Work – Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10=10 (1 out of 2 questions, 250 words)
B	K2	10	1x10=10 (1 out of 2 questions, 250 words)
C	K3	20	1x20=20 (1 out of 2 questions, 500 words)
	K4	20	1x20=20 (1 out of 2 questions, 500 words)
D	K5	20	1x20=20 (1 out of 2 questions, 500 words)
	K6	20	1x20=20 (1 out of 2 questions, 500 words)

**Mapping of Course Outcomes (COs)
 to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/LB14												
	Course Title: LITERATURE OF THE BRITISH ISLES – I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	2	2	3	3	3	2	3	3	3
CO 2	3	3	2	3	2	2	3	3	3	2	3	3	3
CO 3	3	3	3	3	2	2	3	3	3	2	3	3	3
CO 4	3	3	2	3	2	2	3	3	3	2	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH VII – ENGLISH

SYLLABUS

(Effective from the academic year 2023-2024)

AMERICAN LITERATURE: MODERNISM AND AFTER

CODE: 23EL/PC/AL14

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to study American Literature as an outcome of and response to its traditions, cultures and politics
- to identify key ideas, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of the period
- to engage with the cultural and political significations of literatures from minority communities
- to gain perspectives on the development of characteristic forms or styles of expression during the period
- to interrogate the idea of nationhood, gender, sexuality, race and ethnicity through literary texts

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	trace the transition from Romanticism to Modernism in American literature	K1
CO2	outline the different political and cultural movements and illustrate their representation in literature	K2
CO3	identify characteristic features of Modernism and Postmodernism in literary texts	K3
CO4	examine the issues raised in experimental and fringe movements that were characteristic of the period and explore their relationship to the American canon	K4
CO5	compare the political and aesthetic underpinnings of the literatures of minority communities such as the African Americans, the Native Americans and the Diaspora and deconstruct the notion of the American nation	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	<u>Poetry</u> 1.1 Wallace Stevens: The Idea of Order at Key West 1.2 Allen Ginsberg: Howl 1.3 Robert Lowell: Skunk Hour 1.4 Lorna Dee Cervantes: Freeway 280 1.5. Rita Dove: Persephone Abducted 1.6 Langston Hughes: The Weary Blues 1.7 Simon J. Ortiz: A Story of How A Wall Stands	K1-K6	15	1-5
2	<u>Prose</u> 2.1 Anwar F. Accawi: The Telephone 2.2 John McPhee: Silk Parachute	K1-K6	10	1-5
3	<u>Fiction</u> 3.1 William Faulkner: <i>The Sound and the Fury</i> 3.2 Toni Morrison: <i>Beloved</i>	K1-K6	15	1-5
4	<u>Drama</u> 4.1 Tennessee Williams: <i>A Streetcar Named Desire</i> 4.2 Tony Kushner: <i>Angels in America</i> (Part-I)	K1-K6	15	1-5
5	<u>Practical Application Tasks</u> Practical analysis of literary texts/passages applying concepts discussed in the syllabus	K5,K6	10	5

BOOKS FOR REFERENCE

Al Maleh, Layla. *Arab Voices in Diaspora: Critical Perspectives on Anglophone Arab Literature*. Rodopi, 2009.

Geyh, Paula ed. *The Cambridge Companion to Postmodern American Fiction*. CUP, 2017.

Grice, Helena, Candida Hepworth, Maria Lauret and Martin Padget. *Beginning Ethnic American Literatures*. Palgrave, 2001.

Krasner, David ed. *A Companion to Twentieth Century American Drama*. Wiley-Blackwell, 2004.

Lee, Robert A. ed. *Native American Writing*. Routledge, 2011.

Madson, Deborah L. ed. *The Routledge Companion to Native American Literature*. Routledge, 2016.

Millard, Kenneth. *Contemporary American Fiction*. OUP, 2000.

Miller, Joshua L. *The Cambridge Companion to the American Modernist Novel*. CUP, 2017.

Mitchell, Angelyn and Danielle K. Taylor ed. *The Cambridge Companion to African American Women's Literature*. CUP, 2009.

Nyman, Jopi. *Home, Identity, and Mobility in Contemporary Diasporic Fiction*. Rodopi, 2009.

JOURNALS

ARIEL: A Review of International English Literature (online)

Modern Fiction Studies

<https://oa.mg/journals/open-access-american-literature-journals>

WEB RESOURCES

www.poets.org

www.poetryfoundation.org

<https://www.youtube.com/watch?v=zcadqaZ5qAo>

<https://www.youtube.com/watch?v=TyVAU5iGe0k&list=PLE33BCD966FF96F23>

<https://www.youtube.com/watch?v=b7zFeg3KINo>

RECOMMENDED ONLINE LECTURES / COURSES

<https://oyc.yale.edu/english/engl-310>

<https://www.openculture.com/modern-poetry-a-free-course-from-yale>

https://onlinecourses.nptel.ac.in/noc21_hs75/preview

<https://oyc.yale.edu/african-american-studies/afam-162>

<https://www.coursera.org/learn/modpo>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
	K4	10	1x10=10 (1 out of 2 questions, 250 words)
D	K5	10	1x10=10 (1 out of 2 questions, 250 words)
	K6	10	1x10=10 (1 out of 2 questions, 250 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class Work – Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10=10 (1 out of 2 questions, 250 words)
B	K2	10	1x10=10 (1 out of 2 questions, 250 words)
C	K3	20	1x20=20 (1 out of 2 questions, 500 words)
	K4	20	1x20=20 (1 out of 2 questions, 500 words)
D	K5	20	1x20=20 (1 out of 2 questions, 500 words)
	K6	20	1x20=20 (1 out of 2 questions, 500 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/AL14												
	Course Title: AMERICAN LITERATURE: MODERNISM AND AFTER												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	2	2	3	3	3	3	3	3	3
CO 3	3	3	2	3	2	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	2	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3
High Correlation: 3				Moderate Correlation: 2				Low Correlation: 1					

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023–2024)

LITERATURE AND SUBALTERNITY

CODE: 23EL/PC/LS14

CREDITS:4

L T S:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to enable an understanding of the concept of subalternity
- to sensitise students to the silenced and marginalised voices in a text
- to enable students to position subaltern identities in texts
- to enable students to critically evaluate and analyse literary texts with reference to the intersection of the varied factors of oppression
- to enable students to extend their understanding of issues gained from the text to the world around them

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	identify subaltern and marginal positions	K1
CO2	relate concepts associated with subalternity to literary and cultural texts	K2
CO3	examine literary and cultural texts using concepts related to subaltern positions	K3
CO4	analyse literary and cultural texts with reference to the intersection of the varied factors of oppression	K4
CO5	interpret how literary and cultural texts strategically engage with issues of subalternity and negotiate intersections between such texts and factors of oppression	K5-6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Augusto Boal: Aristotle's Coercive System of Tragedy (from <i>Theatre of the Oppressed</i> , 31-34) 1.2 Gayatri Spivak: Can the Subaltern Speak? (from <i>The Postcolonial Studies Reader</i>) 1.3 Ranajit Guha: On Some Aspects of the Historiography of Colonial India 1.4 James Charlton: The Dimensions of Disability Oppression: An Overview (from <i>Nothing About Us, Without Us</i>)	K1-K4	20	1-5

UNIT	CONTENT	CL	Hrs	CO
2	2.1 Yashvant Vaghela: Identity 2.2 Nellie Wong: My Eyes Follow Them 2.3 Donna Kate Rushin: The Bridge Poem 2.4 Audre Lorde: Power	K1-K6	10	1-5
3	3.1 Mahesh Dattani: <i>On a Muggy Night in Mumbai</i> 3.2 Dolores Prida: <i>Beautiful Senioritas</i>	K1-K6	17	1-5
4	4.1 Bama: <i>Sangati</i> 4.2 Mahasweta Devi: Rudali (Short Story) 4.3 Temsula Ao: Curfew Man (from <i>These Hills Called Home</i>)	K1-K6	10	1-5
5	<u>Practical Application Tasks</u> Practical analysis of literary texts/passages applying concepts discussed in the syllabus	K5,K6	8	5

BOOKS FOR REFERENCE

Anazaldua, Gloria. *This Bridge Called My Back: Writing by Radical Women of Color*. Kitchen Table: Women of Colour, 1983.

Christian, Barbara. *Black Feminist Criticism: Perspectives on Black Women Writers*, Pergamon Press, 1985.

Collins, Patricia Hill and Sirma Bilge. *Intersectionality: Key Concepts*. Polity Press, 2016.

Fanon, Frantz. *Black Skin, White Masks*, Grove, 1967.

Goodley, Dan. *Disability Studies: An Interdisciplinary Introduction*. Sage, 2011.

Gramsci, Antonio. *History of the Subaltern Classes, Prison Notebooks Vol. II*, (Ed.&Tr.)

Joseph A. Buttigieg, Columbia UP, 1996, pp 24-25.

Milner, Andrew and Jeff Browitt. *Race and Ethnicity in Black and Latino Cultural Studies: Contemporary Critical Theory*. III Ed. Rawat, 2003.

Mitchell, David T and Sharon L. Snyder. *Narrative Prosthesis: Disability and the Dependencies of Discourse*. University of Michigan Press, 2011.

Omvedt, Gail. "Chapter 11: Sita's Curse and Shambuk's Silence", *Dalit Visions*. Orient Longman, 2006.

Spivak, Gayatri Chakrabarti. "Subaltern Studies: Deconstructing Historiography." Ed. Ranajit Guha, *Writings on South Asian History and Society Vol IV*. OUP, 1985, 330- 363.

Teltumde, Anand. *Dalits: Past, Present and Future*. Routledge, 2020.

Wilchins, Riki. *Gender Norms and Intersectionality: Connecting Race, Class and Gender*. Rowman & Littlefield International, 2019.

JOURNALS

Disability Studies Quarterly

WEB RESOURCES

Spivak, Gayatri. "The Trajectory of the Subaltern in my Work".
<https://www.youtube.com/watch?v=2ZHH4ALRFHw>.

Chakravarthy, Dipesh. "In Retrospect: Subaltern Studies and Futures Past".
<https://www.youtube.com/watch?v=YEW-jVr4fJU>.

RECOMMENDED ONLINE COURSES

https://onlinecourses.nptel.ac.in/noc21_hs47/preview

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
	K4	10	1x10=10 (1 out of 2 questions, 250 words)
D	K5	10	1x10=10 (1 out of 2 questions, 250 words)
	K6	10	1x10=10 (1 out of 2 questions, 250 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

Other Components:

Total Marks: 50

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class Work – Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10=10 (1 out of 2 questions, 250 words)
B	K2	10	1x10=10 (1 out of 2 questions, 250 words)
C	K3	20	1x20=20 (1 out of 2 questions, 500 words)
	K4	20	1x20=20 (1 out of 2 questions, 500 words)
D	K5	20	1x20=20 (1 out of 2 questions, 500 words)
	K6	20	1x20=20 (1 out of 2 questions, 500 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/LS14												
	Course Title: LITERATURE AND SUBALTERNITY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	3	3	2	3	3	3
CO 2	3	3	3	3	3	3	3	3	3	2	3	3	3
CO 3	2	3	3	3	3	3	3	3	3	2	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	2	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023–2024)

GENDER STUDIES

CODE: 23EL/PC/GS14

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to enable students to recognise difference as an essential concept in gender studies
- to enable students to evaluate gender as a social construct with reference to its representation in texts
- to help students develop an understanding of gender and its intersections with sexuality, race, ethnicity and other critical variables
- to help students appreciate the ways in which writers from gender-minority communities revision their identity positions in specific contexts and reconstruct the marginal positions
- to enable students to use concepts and theories to critically engage with literary texts for an understanding of the construction and perpetuation of gendered identities in society

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	recall the history of women's movements.	K1
CO2	trace the development of Gender and Queer Studies.	K2
CO3	apply concepts and critical frameworks required for a gendered reading of canonical texts as well as contemporary literature.	K3
CO4	analyse the intersectionality of race, class and gender and extend it to real-life scenarios.	K4
CO5	critique constructions of gender in texts and formulate sensitive responses to representations in media and real life contexts.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Adrienne Rich : When We Dead Awaken: Writing as Revision 1.2 Judith Butler: Interiority to Gender Performatives (from <i>Gender Trouble</i>) 1.3 Madhu Kishwar : Why I do not Call Myself a Feminist	K1-K4	17	1-4

UNIT	CONTENT	CL	Hrs	CO
2	2.1 David S Gutterman: Postmodernism and the Interrogation of Masculinity (From <i>Theorizing Masculinities</i> ed. Michael Kaufman, Harry Brod) 2.2 bell hooks: <i>Black Women: Shaping Feminist Theory</i>	K1-K6	10	1-5
3	3.1 Mahasweta Devi: Draupadi (Short Story) 3.2 Maya Angelou: Still I Rise, Our Grandmothers	K1-K6	10	1-5
4	4.1 Chitra Bannerjee Divakaruni: <i>The Palace of Illusions</i> 4.2 Laura Esquivel: <i>Malinche</i> 4.3 Manobi Bandyopadhyay: <i>A Gift of Goddess Lakshmi</i> (trans. Jhimli Mukerjee Pandey & Manobi Bandhopadhyay)	K1-K6	15	1-5
5	<u>Practical Application Tasks</u> Practical analysis of literary texts/passages applying concepts related to Gender	K5,K6	13	5

BOOKS FOR REFERENCE

De Beauvoir, Simone. *The Second Sex*. Vintage, 2014.
Gilbert, Sandra & Susan Gubar. *Madwoman in the Attic: The Woman Writer and the Nineteenth-Century Literary Imagination*. Yale Nota Bene, 2000.
James, Joy and T Denean Sharpley-Whiting. Eds. *The Black Feminist Reader*. Blackwell, 2000.
Rahman, Momin and Stevi Jackson. *Gender and Sexuality: Sociological Approaches*. Polity Press. 2010.
Rooney, Ellen. Ed. *The Cambridge Companion to Feminist Literary Theory*. Cambridge UP, 2008.
Schneir, Miriam. Ed. *The Vintage Book of Feminism: The Essential Writings of the Contemporary Women's Movement*. Vintage Digital, 2012.
Showalter, Elaine. *A Literature of Their Own: British Women Novelists From Bronte to Lessing*. Little Brown, 2009.
Tharu, Susie & K Lalitha. *Women Writing in India*. Oxford UP, 1991.
Zaidi, Annie. *Un Bound: 2000 Years of Indian Women's Writing*. Aleph Books, 2015.

JOURNALS

Indian Journal of Gender Studies (Sage)
A Journal of Feminist Cultural Studies Feminist Review
A Journal of Women Studies

WEB SOURCES

<http://www.feministreview.org>
<http://fty.sagepub.com>
<http://dukeupress.edu/cameraobscura>

ONLINE COURSES

<https://nptel.ac.in/courses/109103122>
<https://nptel.ac.in/courses/109107191>
<https://www.coursera.org/learn/feminism-social-justice>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
	K4	10	1x10=10 (1 out of 2 questions, 250 words)
D	K5	10	1x10=10 (1 out of 2 questions, 250 words)
	K6	10	1x10=10 (1 out of 2 questions, 250 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

Other Components:

Total Marks: 50

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class Work – Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10=10 (1 out of 2 questions, 250 words)
B	K2	10	1x10=10 (1 out of 2 questions, 250 words)
C	K3	20	1x20=20 (1 out of 2 questions, 500 words)
	K4	20	1x20=20 (1 out of 2 questions, 500 words)
D	K5	20	1x20=20 (1 out of 2 questions, 500 words)
	K6	20	1x20=20 (1 out of 2 questions, 500 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/GS14												
	Course Title: GENDER STUDIES												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	2	2	3	3	2	2	2	3	3
CO 2	3	2	3	3	2	2	3	3	2	2	2	3	3
CO 3	3	3	3	3	2	2	3	3	3	2	2	3	3
CO 4	3	3	3	3	2	2	3	3	3	2	2	3	3
CO 5	3	3	3	3	2	2	3	3	3	2	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023-2024)

LITERATURE OF THE BRITISH ISLES – II

CODE:23EL/PC/LB24

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to develop an analytical and critical approach to literature from the British Isles produced in the twentieth century
- to introduce students to the various movements of the twentieth century
- to introduce students to the complexities of literary creation in the context of the changing social, cultural, political milieu of twentieth century
- to train students to analyse discourses on ethnicity, nationhood and identity embedded in literary texts from the british isles
- to equip students with critical tools required to engage with issues of national identity as expressed in literary texts

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	relate literary creative conventions to the changing milieu of the British Isles in the twentieth century	K1
CO2	interpret writings from major literary schools/movements of the twentieth century	K2
CO3	identify the major movements of the century	K3
CO4	analyse discourses on ethnicity, nationhood and identity embedded in literary texts from the British Isles	K4
CO5	appraise literary forms and formulate responses to texts within the socio-cultural and political contexts	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	<u>Poetry I</u> 1.1 Gerard Manley Hopkins: Pied Beauty 1.2 T.S. Eliot: <i>The Waste Land</i> 1.3 W.B. Yeats: Sailing to Byzantium 1.4 Philip Larkin: Whitsun Weddings 1.5 Dylan Thomas: Do Not Go Gentle into that Good Night	K1-K6	13	1-5
2	<u>Poetry II</u> 2.1 Ted Hughes: Pike 2.2 Seamus Heaney: Follower 2.3 Carol Ann Duffy: Mrs. Faust 2.4 Jo Shapcott: Thetis 2.5 Jackie Kay: Pride	K1-K6	10	1-5

UNIT	CONTENT	CL	Hrs	CO
3	<u>Drama</u> 3.1 Tom Stoppard: <i>Arcadia</i> 3.2 Martin Crimp: <i>The Country</i>	K1-K6	13	1-5
4	<u>Fiction</u> 4.1 Julian Barnes: <i>A History of the World in 10½ Chapters</i> 4.2 Kazuo Ishiguro: <i>The Remains of the Day</i> 4.3 Caryl Phillips: <i>The Final Passage</i>	K1-K6	20	1-5
5	<u>Practical Application Tasks</u> Practical analysis of literary texts/passages applying concepts discussed in the syllabus	K5,K6	9	5

BOOKS FOR REFERENCE

Havighurst, Alfred F. *Modern England 1901-1984*. 2nd Ed. Cambridge University Press 2004.
 Esslin, Martin. *The Theatre of The Absurd*. Bloomsbury Academic, 2015.
 Hutcheon, Linda. *A Poetics of Postmodernism: History, Theory And Fiction*. Routledge, 2003.
 Lodge, David. *The Modes of Modern Writing*. Bloomsbury, 2015.
 Leader, Zachary, Ed, *The Movement Reconsidered*. Oxford University Press, 2009.
 Purse, Nigel. *Tom Stoppard's Plays: Patterns of Plenitude and Parsimony*. Brill, 2016.
 Thwaite, Anthony. *Poetry Today: A Critical Guide to British Poetry 1960-1995*. Routledge, 2016.
 Woods, Tim. *Beginning Postmodernism*. 2nd Ed. Manchester UP, 2009.

JOURNALS

Wasafiri
Modern Fiction
Studies
Boundary 2

WEB RESOURCES

www.poets.org
www.poetryfoundation.org
<https://owl.english.purdue.edu/owl>

RECOMMENDED ONLINE COURSES

<https://nptel.ac.in/courses/109106172>
<https://archive.nptel.ac.in/courses/109/106/109106124/>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
	K4	10	1x10=10 (1 out of 2 questions, 250 words)
D	K5	10	1x10=10 (1 out of 2 questions, 250 words)
	K6	10	1x10=10 (1 out of 2 questions, 250 words)

Other Components: Total Marks: 50

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class
Work – Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10=10 (1 out of 2 questions, 250 words)
B	K2	10	1x10=10 (1 out of 2 questions, 250 words)
C	K3	20	1x20=20 (1 out of 2 questions, 500 words)
	K4	20	1x20=20 (1 out of 2 questions, 500 words)
D	K5	20	1x20=20 (1 out of 2 questions, 500 words)
	K6	20	1x20=20 (1 out of 2 questions, 500 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/LB24												
	Course Title: LITERATURE OF THE BRITISH ISLES – I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	2	2	2	2	3	3	3	3	2
CO 2	3	3	2	3	2	2	2	2	3	3	3	3	2
CO 3	3	3	2	3	2	2	2	2	3	3	3	3	2
CO 4	3	3	3	3	2	2	2	2	3	3	3	3	2
CO 5	3	3	3	3	2	2	2	2	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH VII -ENGLISH

SYLLABUS

(Effective from the academic year 2023-2024)

LITERATURE AND MYSTICISM

CODE:23EL/PC/LM24

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to foster an understanding in students of the breadth, diversity and parallel strains of thought and experience in key literary texts from major religious traditions
- to enable students to explore expressions of mystical experience outside religious traditions
- to encourage students to explore the interface among class, caste, gender and mystical experiences
- to enable students to appreciate the possibilities of non-empirical modes of knowledge
- to train students to think critically about the place of mystical experience and expression in contemporary times across and within religious communities

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	show an understanding of mystical traditions within major religious traditions of the world	K1
CO2	demonstrate knowledge of literary expressions of mystical experiences using relevant reading methods	K2
CO3	identify mystical symbols, categories, practices and terminology across various traditions over a span of about 2500 years	K3
CO4	examine mystical expressions outside religious traditions such as nature mysticism	K4
CO5	explain themes and build critical arguments to produce a pluralistic discourse on mystical expressions embedded within religious traditions	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 The Holy Bible 1.1.1 Psalms 42 1.1.2 Song of Solomon : Chapter 3 1.2 St. Francis of Assisi: Canticle of Brother Sun 1.3 St. John of the Cross :Stanzas of the Soul that Suffers with Longing to See God	K1-K6	15	1-5

UNIT	CONTENT	CL	Hrs	CO
	1.4 John Donne: Batter my heart, three person'd God 1.5 George Herbert : The Collar 1.6 G M Hopkins : The Windhover 1.7 Chelladurai: Iyesubiran Pillaithamizh 63 (from <i>Extraordinary Child</i> p 175)			
2	2.1 Periyazhvar : Anxiety About Her Son (Tr. P V Sundaram) 2.2 Andal : The Song to the Kuyil (from <i>The Secret Garland</i> p 159) 2.3 Sundarar : O madman... (from <i>Eating God</i> , p 100) 2.4 Mahadevi Akka : No God This Man (from <i>Speaking of Siva</i> p 123) 2.5 Rajai : The man of the house ... (from <i>Eating God</i> , p 159) 2.6 Kamalakanta Bhattacharya : Who is this ... (from <i>Singing to the Goddess</i> , p 32) 2.7 Shenkottai Avudai Akka : Mei-poi Villakkam (from <i>Transgressing Boundaries</i> p 179-181)	K1-K6	15	1-5
3	3.1 Kabir : Where are You Searching for Me Friend? (from <i>Sacred Songs of India</i>) 3.1.1. Documentary on Kabir by Shabnam Virmani – not for testing 3.2 Jalal-ud-din Rumi : Reed Flute's Song (from <i>The Essential Rumi</i>) 3.3 Omar Khayyam : Book of Pots from <i>The Rubaiyat of Omar Khayyam</i> 3.4 Rabiya : If I adore you... (http://www.poemhunter.com/poem/) 3.5 Guru Nanak : It is the month of Chet... (from <i>Eating God</i> p 10)	K1-K6	15	1-5
4	4.1 Denise Levertov : Against Intrusion (from <i>Life Around Us</i> , p 72) 4.2 Emily Dickinson : You'll know it... 4.3 Kahlil Gibran : Religion (from <i>The Prophet</i> p.49-50)	K1-K6	15	1-5
5	<u>Practical Application Tasks</u> Practical analysis of literary texts/passages applying concepts discussed in the syllabus	K5, K6	5	5

BOOKS FOR REFERENCE

James, William. *The Varieties of Religious Experience*. Modern Library, 1999.
 Knysh, Alexander. *Sufism: A New History of Islamic Mysticism*. Princeton University Press, 2017.
 Nandakumar, Prema. *Goda's Garland of Devotion*. Samata Books, 1989.
 Sharda, S.R. *Sufi Thought*. Munshiram Manoharlal Publishers, 1998.
 Sivaramakrishna, M and Sumita Roy. *Poet Saints of India*. Sterling Publishers, 1996.
 Underhill, Evelyn. *Christian Mysticism*. Createspace Independent Publishers, 2011.
 Vendler, Helen. *The Poetry of George Herbert*. Harvard University Press, 1996.

JOURNALS

Bhakti Studies
Renascence

WEB RESOURCES

www.innerexplorations.
com www.sacred-
texts.com/isl/

ONLINE COURSES

The origins of Christian Mysticism
<https://www.conted.ox.ac.uk/courses/the-origins-of-christian-mysticism>
The Mystical Teachings of Sufism
<https://www.udemy.com/course/the-enlightened-are-not-bound-by-religion/>
East Asian Religions and Ecology
<https://www.coursera.org/learn/east-asian-religions-ecology>
A Voice of Their Own. Women's Spirituality in the Middle Ages.
<https://www.coursera.org/learn/womens-spirituality>
Women in the Hindu world
<https://ochsonline.org/course/women-in-hinduism/>

PATTERN OF ASSESSMENT

No Unit should be left out. 3.1.1 not for testing.

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
	K4	10	1x10=10 (1 out of 2 questions, 250 words)
D	K5	10	1x10=10 (1 out of 2 questions, 250 words)
	K6	10	1x10=10 (1 out of 2 questions, 250 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

Other Components: Total Marks: 50

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class
Work – Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Examination: Total Marks: 100
No Unit should be left out. 3.1.1 not for testing.

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10=10 (1 out of 2 questions, 250 words)
B	K2	10	1x10=10 (1 out of 2 questions, 250 words)
C	K3	20	1x20=20 (1 out of 2 questions, 500 words)
	K4	20	1x20=20 (1 out of 2 questions, 500 words)
D	K5	20	1x20=20 (1 out of 2 questions, 500 words)
	K6	20	1x20=20 (1 out of 2 questions, 500 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/LM24												
	Course Title: LITERATURE AND MYSTICISM												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	2	3	3	3	3	3	3
CO 2	3	3	2	3	2	1	2	3	3	3	3	3	3
CO 3	3	3	3	3	2	1	2	3	3	3	3	3	3
CO 4	3	3	3	3	2	1	2	3	3	3	3	3	3
CO 5	3	3	3	3	2	2	2	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023 -2024)

CONTEMPORARY CRITICAL THEORY –I

CODE:23EL/PC/CT24

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to guide students to an understanding of major shifts in contemporary critical theory
- to enable students to identify the similarities and differences between various critical theories
- to train students to identify links between theory and text
- to enable students to analyse texts based on critical theories and concepts
- to help students compose critical responses to texts

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	recall critical and conceptual terms related to specific theoretical positions	K1
CO2	explain the ideas/concepts/theoretical positions of contemporary critical theories	K2
CO3	apply critical theories/concepts to specific texts	K3
CO4	analyse texts based on critical theories and concepts	K4
CO5	evaluate different theoretical positions and formulate theoretical responses to texts	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Cleanth Brooks: Irony as a Principle of Structure 1.2 Victor Shklovsky: Art as Technique	K1-K6	12	1-5
2	2.1 Jonathan Culler: Literary Competence (Section on Blake's Sunflower: 113-116) 2.2 Roland Barthes: The Death of the Author	K1-K6	15	1-5
3	3.1 Jacques Derrida: Différance (sections) 3.2 Umberto Eco: Towards a Semiological Guerrilla Warfare	K1-K6	14	1-5
4	4.1 Jean-Francois Lyotard: Defining the Post-Modern 4.2 Wolfgang Iser: The Reading Process: A Phenomenological Approach	K1-K6	12	1-5
5	<u>Practical Application Tasks</u> Practical analysis of literary texts/passages applying concepts discussed in the syllabus	K5,K6	12	5

BOOKS FOR REFERENCE

- Birch, David. *Language, Literature and Critical Practice: Ways of Analysing Text*. Routledge, 2005.
- Collins, Jeff and Bill Mayblin. *Introducing Derrida: A Graphic Guide*. Icon Books, 2014.
- Culler, Jonathan. *Structuralist Poetics: Structuralism Linguistics and the Study of Literature*. Routledge, 2002.
- Green, Keith and Jill Le Brian. *Critical Theory and Practice: A Course Book*. Routledge, 2002.
- Guerin, Wilfred, L., et al. *A Handbook of Critical Approaches to Literature*. Fourth Edition, Oxford UP, 2005.
- Habib, M. A. R. *Modern Literary Criticism and Theory*. Blackwell, 2008
- Ryan, Michael. *Literary Theory: A Practical Introduction*. Blackwell, 2017.
- Schmiz, Thomas, A. *Modern Literary Theory and Ancient Texts: An Introduction*. Blackwell, 2007.
- Selden, Raman. *A Reader's Guide to Contemporary Literary Theory*. Harvester, 2016.
- Tyson, Lois. *Critical Theory Today: A User-friendly Guide*. Routledge, 2015.
- Wolfreys, Julian, ed. *Modern North American Criticism and Theory: A Critical Guide*. Edinburgh UP, 2006.
- -, ed. *Modern European Criticism and Theory: A Critical Guide*. Edinburgh UP, 2006.

JOURNALS

Journal of Literary Theory
Criterion: A Journal of Literary Criticism

WEB RESOURCES

<https://cla.purdue.edu/academic/english/theory/>

ONLINE COURSES

Introduction to Literary Theory <https://nptel.ac.in/courses/109104135>
Literary Theory and Literary Criticism <https://archive.nptel.ac.in/courses/109/106/109106084/>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
	K4	10	1x10=10 (1 out of 2 questions, 250 words)
D	K5	10	1x10=10 (1 out of 2 questions, 250 words)
	K6	10	1x10=10 (1 out of 2 questions, 250 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

Other Components:**Total Marks: 50**

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class Work
 – Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10=10 (1 out of 2 questions, 250 words)
B	K2	10	1x10=10 (1 out of 2 questions, 250 words)
C	K3	20	1x20=20 (1 out of 2 questions, 500 words)
	K4	20	1x20=20 (1 out of 2 questions, 500 words)
D	K5	20	1x20=20 (1 out of 2 questions, 500 words)
	K6	20	1x20=20 (1 out of 2 questions, 500 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

**Mapping of Course Outcomes (COs)
 to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/CT24												
	Course Title: CONTEMPORARY CRITICAL THEORY – I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	2	1	3	3	3	1	2
CO 2	3	3	3	3	2	2	2	1	3	3	3	1	2
CO 3	3	3	3	3	2	2	2	1	3	3	3	1	2
CO 4	3	3	3	3	2	2	2	1	3	3	3	1	2
CO 5	3	3	3	3	2	2	2	1	3	3	3	1	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.A. DEGREE: BRANCH VII – ENGLISH

SYLLABUS

(Effective from the academic year 2023 -2024)

SOFT SKILLS

CODE: 23EL/PK/SS22

CREDITS: 2

L T P: 2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- To empower students and create opportunities for self-development
- To instill confidence in students to face challenges
- To manage emotions and resolve conflicts
- To organize activities and manage time
- To set goals and plan ahead

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- Communicate with confidence and poise
- Accept themselves and improve on their weaknesses
- Strengthen their relationships through confronting and solving problems
- Work more effectively and complete activities on time
- Plan their future with clarity and focus

Unit 1

Behavioural Traits

(6 Hours)

- 1.1 Self- Awareness
- 1.2 Communication Skills –Verbal and Non-Verbal
- 1.3 Leadership Qualities
- 1.4 Etiquette and Good Manners
- 1.5 Experiential Learning –based on activities

Unit 2

Team Work

(5 Hours)

- 2.1. Interpersonal Skills
- 2.2. People Management
- 2.3. Creative Thinking
- 2.4. Critical Thinking
- 2.5. Experiential Learning – based on activities

Unit 3

Time Management

(5 Hours)

- 3.1. Importance of time management
- 3.2. Planning and Prioritizing
- 3.3. Organizing skills
- 3.4. Action Plan
- 3.5. Experiential Learning – based on activities

Unit 4**Conflict Resolution****(5 Hours)**

- 4.1. Reasons for conflict
- 4.2. Consequences of conflict
- 4.3. Managing emotions
- 4.4. Methods of resolving conflicts
- 4.5. Experiential Learning – based on activities

Unit 5**Career Mapping****(5 Hours)**

- 5.1. Goal-setting and Decision-making
- 5.2. Career Planning
- 5.3. Resume Writing
- 5.4. Handling Interviews
- 5.5. Experiential Learning – based on activities

BOOKS FOR REFERENCE

Khera, Shiv. *You Can Win*. Macmillan India, 2002.

Mishra, Rajiv. K. *Personality Development: Transform Yourself*. Rupa, 2004.

Newstorm, John. W. and Scannell. Edward. E. *Games Trainers Play: Experiential Learning*. Tata McGraw Hill, 1980.

PATTERN OF EVALUATION**Internal Assessment:****Total Marks: 50**

Quiz / Group Presentation /Assignment

No End Semester Examination.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023–2024)

POSTCOLONIAL STUDIES

CODE:23EL/PC/PC34

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to introduce the students to some key theoretical formulations in the field
- to read literary texts from the past and present from a postcolonial perspective
- to help develop an awareness of issues – social, political, cultural and economic – relating to the experience of colonialism and after
- to study the intersections of race, colour, caste and gender in the age of postcoloniality
- to encourage dialogue on conditions of marginality and plurality and to question metanarratives

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	define key concepts in postcolonial studies	K1
CO2	illustrate these key concepts using examples from literary and cultural texts	K2
CO3	use the concepts to examine texts that deal with social, cultural and political issues relating to the experience of colonialism and after	K3
CO4	analyse texts to study the interplay of issues of race, colour, caste and gender in a neo-colonial world	K4
CO5	assess how the texts challenge social inequalities existing in colonised regions and communities in the age of postcoloniality and formulate critical responses to them	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Edward Said: Introduction (from <i>Orientalism</i>) 1.2 Robert J.C. Young : Postcolonialism (Chapter 5, <i>Postcolonialism: An Historical Introduction</i>) 1.3 Ania Loomba: Defining the Terms: Colonialism, Imperialism, Neo-Colonialism, Postcolonialism (from Chapter 1, <i>Colonialism/Postcolonialism</i>)	K1-K4	20	1-5

UNIT	CONTENT	CL	Hrs	CO
2	2.1 Jhumpa Lahiri: Unaccustomed Earth (from <i>Unaccustomed Earth</i>) 2.2 Nadine Gordimer: The Train from Rhodesia (from <i>The Harper Anthology of Fiction</i>) 2.3 John Kelly: We are All in the Ojibway Circle (<i>The Faber Book of Contemporary Canadian Short Stories</i>) 2.4 Witi Ihimaera: The Whale (from <i>The Harper Anthology of Fiction</i>) 2.5 Chimamanda Adichie: <i>Americanah</i>	K1-K6	20	1-5
3	3.1 Lisa Bellel: Women's Liberation 3.2 Judith Wright: At Cooloola 3.3 Derek Walcott: Ruins of a Great House 3.4 Gabriel Okara: Piano and Drums	K1-K6	10	1-5
4	4.1 Wole Soyinka: <i>Death and the King's Horseman</i> 4.2 Louis Nowra: <i>Radiance</i>	K1-K6	10	1-5
5	<u>Practical Application Tasks</u> Practical analysis of literary texts/passages applying concepts discussed in the syllabus	K5,K6	5	5

BOOKS FOR REFERENCE

- Ashcroft, Bill. *On Post-Colonial Futures: Transformations of Colonial Culture*. Continuum, 2001.
- Ashcroft, Bill, et al. *Post-Colonial Studies: The Key Concepts*. 2nd ed., Routledge, 2007.
- Ashcroft Bill, et al., editors. *The Post-Colonial Studies Reader*. Routledge, 1995.
- Barker, Francis. et al., editors. *Colonial Discourse/Postcolonial Theory*. Manchester UP, 1996.
- Chew, Shirley, and David Richards, editors. *A Concise Companion to Postcolonial Literature*. Wile- Blackwell, 2010.
- Irvine, Lorna L. *Sub/version: Canadian Fiction by Women*. ECW Press, 2016.
- Jahabegloo, Raman. *India Revisited: Conversations on Continuity and Change*. Oxford UP, 2008.
- Juneja, Om Prakash. *Post Colonial Novel : Narratives of Colonial Consciousness*. Creation, 2008.
- King, Bruce. *New National and Post-colonial Literatures: An Introduction*. Clarendon Press, 1996.
- Lazarus, Neil, editor. *The Cambridge Companion to Postcolonial Literary Studies*. Cambridge UP, 2004.
- McLeod, John, editor. *The Routledge Companion to Postcolonial Studies*. Routledge, 2007.
- Schwarz, Henry and Sangeeta Ray. *A Companion to Postcolonial Studies*. Blackwell, 2005.
- Soyinka, Wole. *Art, Dialogue and Outrage: Essays on Literature and Culture*. Pantheon, 1994.
- Tanti, Melissa et al., editors. *Beyond "Understanding Canada": Transnational Perspectives on Canadian Literature*. U of Alberta Press, 2017.
- Walder, Dennis. *Post-Colonial Literatures in English: History, Language and Theory*. Wiley-Blackwell, 1998.
- Young, Robert J.C. *Postcolonialism: An Historical Introduction*. Wiley & Sons, 2016.

JOURNALS

ARIEL: A Review of International English Literature

Journal of Commonwealth Literature

Postcolonial Studies

Wasafiri

WEB RESOURCES

http://www.mohamedrabeea.com/books/book1_3985.pdf

<http://www.udel.edu/ArtHistory/ARTH435/Ashcroft.pdf>

<http://faculty.ksu.edu.sa/Nugali/English%20461/Postcolonialism.pdf>

ONLINE COURSES

Postcolonial Literature

<https://www.classcentral.com/course/swayam-postcolonial-literatur-7942>

Postcolonialism: English Literature: Introduction to Postcolonial Literature and Theory

Postcolonialism: English Literature | Udemy

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
	K4	10	1x10=10 (1 out of 2 questions, 250 words)
D	K5		1x10=10 (1 out of 2 questions, 250 words)
	K6	10	1x10=10 (1 out of 2 questions, 250 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

Other Components:

Total Marks: 50

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class Work

– Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Examination: Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10=10 (1 out of 2 questions, 250 words)
B	K2	10	1x10=10 (1 out of 2 questions, 250 words)
C	K3	20	2x10=20 (1 out of 2 questions, 500 words)
	K4	20	2x10=20 (1 out of 2 questions, 500 words)
D	K5	20	1x20=20 (1 out of 2 questions, 500 words)
	K6	20	1x20=20(1 out of 2 questions, 500 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/PC34												
	Course Title: POSTCOLONIAL STUDIES												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	3	3	3	3	3	3	2
CO 2	3	3	3	3	2	2	3	3	3	3	3	3	2
CO 3	3	3	3	3	2	2	3	3	3	3	3	3	2
CO 4	3	3	3	3	2	2	3	3	3	3	3	3	2
CO 5	3	3	3	3	2	2	3	3	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023-2024)

LITERATURE AND ECOLOGY

CODE:23EL/PC/LE34

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to introduce students to writings on environmental and ecological issues
- to train students in viewing ecology as a way of reading the world
- to equip students with the appropriate critical tools to apply an ecological mode of thinking to literary texts
- to enable students to understand the intersection of race, class, gender and the environment
- to train students to extend the ecological mode of thinking beyond literary texts to real life

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	define key ecological concepts and literary terms related to the representation of environment in literature	K1
CO2	classify different types of eco-literature across various genres, geographical spaces, and time periods	K2
CO3	identify the ways in which race, class, gender, and the environment are interconnected	K3
CO4	analyze literary history using an ecocritical framework	K4
CO5	criticize texts from an ecocritical perspective and imagine different ways in which we can move towards an ecologically sustainable mode of living	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	<u>Theoretical Considerations</u> 1.1 Cheryl Glotfelty and Harold Fromm: Introduction (from <i>The Ecocriticism Reader: Essays in Literary Ecology</i>) 1.2 Ann Fisher-Wirth and Laura-Gray Street: Editors' Preface (from <i>The Ecopoetry Anthology</i>) 1.3 Nirmal Selvamony: Oikopoetics and Tamil Poetry 1.4 Amitav Ghosh (<i>The Great Derangement</i> Part I Chapters 15-18)	K1-K4	20	1-5

UNIT	CONTENT	CL	Hrs	CO
2	<u>Nature Writing and its Critique</u> 2.1 William Wordsworth: Tintern Abbey 2.2 Terry Tempest Williams: The Bowl (from <i>Sisters of the Earth</i>) 2.3 Orijit Sen: <i>River of Stories</i>	K1-K6	15	1-5
3	<u>Environmentalism and Conservation</u> 3.1 Sarah Orne Jewett: A White Heron (from <i>Sisters of the Earth</i>) 3.2 Sarah Joseph: <i>Gift in Green</i> 3.3 Stanley Kunitz: The Wellfleet Whale 3.4 Wangari Maathai: The Cracked Mirror	K1-K6	15	1-5
4	<u>Ecoliterature</u> 4.1 Denise Levertov: Metier of Blossoming (from <i>This Great Unknowing: Last Poems</i> , p.11) 4.2 Emily Warn: Focus (from <i>The Leaf Path</i> p 15) 4.3 Ronald M Brendt and Catherine M Brendt, eds.: Becoming Birds (from <i>The Speaking Land</i> pp 192-193) 4.4. Louise Erdrich: I was Sleeping where the Black Oaks Move	K1-K6	10	1-5
5	<u>Practical Application Tasks</u> Practical analysis of literary texts/passages applying concepts discussed in the syllabus	K5, K6	5	5

BOOKS FOR REFERENCE

Bryson, Scot. *Ecopoetry: A Critical Introduction*. University of Utah Press, 2002.

---. *The West Side of Any Mountain: Place, Space and Ecopoetry*. University of Iowa Press, 2005. en.bookfi.net. 21 Mar 2014.

Clark, Timothy. *The Cambridge Introduction to Literature and the Environment*. Cambridge University Press, 2011.

---. *Ecocriticism on the Edge: The Anthropocene as a Threshold Concept*. Bloomsbury, 2016.

Fisher-Wirth, Ann and Laura-Gray Street, eds. *The Ecopoetry Anthology*. Trinity University Press, 2013.

Glotfelty, Cheryll and Harold Fromm. *The Ecocriticism Reader: Landmarks in Literary Ecology*. University of Georgia Press, 1996.

Hall, Mathew. *Plants as Persons: A Philosophical Botany*. SUNY Press, 2011.

Levertov, Denise. *New and Selected Essays*. New Directions, 1992.

Longley, Michael. *Earth Songs: A Resurgence Anthology of Contemporary Eco-poetry*. Ed. Peter Abbs. Green Books, 2002.

Mahood, Molly. *The Poet as Botanist*. Cambridge UP, 2008.

Schliepake, Christopher. *Ecocriticism, Ecology, and the Cultures of Antiquity*. Lexington Books, 2017.

Wall, Derek. *Green History: A Reader in Environmental Literature, Philosophy and Politics*. Routledge, 1994. en.bookfi.net. 25 Jan 2014.

JOURNALS

ASLE

Journal of Literature and Science Renaissance

WEBSITES

<http://www.american-buddha.com/lit.sistersearthtoc.htm>

<https://www.environmentandsociety.org/>

ONLINE COURSES

Ecology: Ecosystem Dynamics and Conservation

<https://www.coursera.org/learn/ecology-conservation>

Ecosystem Services: A Method for Sustainable Development

<https://www.coursera.org/learn/ecosystem-services>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
	K4	10	1x10=10 (1 out of 2 questions, 250 words)
D	K5	10	1x10=10 (1 out of 2 questions, 250 words)
	K6	10	1x10=10 (1 out of 2 questions, 250 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

Other Components:

Total Marks: 50

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class Work
– Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10=10 (1 out of 2 questions, 250 words)
B	K2	10	1x10=10 (1 out of 2 questions, 250 words)
C	K3	20	1x20=20 (1 out of 2 questions, 500 words)
	K4	20	1x20=20 (1 out of 2 questions, 500 words)
D	K5	20	1x20=20 (1 out of 2 questions, 500 words)
	K6	20	1x20=20 (1 out of 2 questions, 500 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/LE34												
	Course Title: LITERATURE AND ECOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	2	2	3	3	3	2	3	3	3
CO 2	3	3	2	3	2	2	3	3	3	2	3	3	3
CO 3	3	3	3	3	2	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	2	3	3	3	3	2	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023-2024)

INDIAN LITERATURES - I

CODE:23EL/PC/IL34

CREDITS:4

L T P: 4 2 0

TOTAL TEACHING HOURS:78

OBJECTIVES OF THE COURSE

- to introduce students to important literary, cultural and theoretical trends in India from the classical period to india's independence in 1947
- to familiarise students with the most significant writers and their texts in various bhashas
- to enable students to identify various modes of relationships between literatures across india
- to sensitise students to appreciate and respect the cultural, linguistic and religious diversity of india
- to introduce students to literary and cultural traditions, their continuity and interrogation

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	recall the important literary, cultural and social trends in India during the period under consideration	K1
CO2	identify relevant reading methods to interpret and critique texts produced in India during this period	K2
CO3	demonstrate the ability to place the texts in their respective social, cultural and political contexts	K3
CO4	examine the varied relationships between literatures produced in different languages during this period	K4
CO5	critique the multiple linguistic, literary, cultural and spiritual traditions during this period that have impacted India's identity and formulate critical response to texts	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	<u>Indian Aesthetics and Thought</u> 1.1 Bharatha: On Natya and Rasa: Aesthetics of Dramatic Experience (from The Natya (in fact) to having only one act, from A person who can,...to in this manner, trans. G K Bhatt Indian Literary Criticism. Ed. G N Devy) 1.2 Tolkappiyar: Akathinaiyal, Porulatikaram 1-20 (from Tolkappiyam trans. V. Murugan) 1.3 Rabindranath Tagore: excerpt from Nationalism in India ("I am not against one nation in particular...spirit of toleration has acted all through her history") 1.4 Babasaheb Ambedkar: Castes: Their Mechanism, Genesis and Development in India 1.5 Muthulakshmi Reddy: The Madras Seva-Sadan ("Women's Institutes", <i>My Experience as a Legislator</i> 76-97)	K1-K6	15	1-5
2	<u>Upto 6th century AD</u> 2.1 Mahendravarman: <i>Trivikramam</i> 2.2 Buddha: The Rod, Happiness (from <i>Dhammapada</i> trans. Valerie Roebuck) 2.3 Paripatal: Verse X "They offer the river liquor" (from <i>The River Speaks</i> trans. Muthukumar)	K1-K6	15	1-5
3	<u>7th Century to 18th Century</u> 3.1 Amir Khusro: Verses 33, 40, 49, 65, 69 (from <i>In the Bazaar of Love</i> trans. Paul Losensky and Sunil Sharma) 3.2 Dara Shikoh: I. Invocation IV. Discourse on the Attributes of God, the Most High V. Discourse on the Soul (from <i>Majma- ul-Bahrain</i>) 3.3 Kalhana: <i>Rajatarangini</i> Chapter I Verses 1- 43	K1-K6	15	1-5
4	<u>19th Century to Independence</u> 4.1 Mirza Ghalib: Ghalib's Persian Verses: 16, 130, Urdu Verses: 85, 124, 126 (from <i>Oxford India Ghalib: Life, Letters and Ghazals</i> , ed. Russel) 4.2 Kirupabai Sathianadan: <i>Saguna</i> 4.3 Fakir Mohan Senapati: Dak Munsii (trans. Chinmay Hota) 4.4 Savitribai Phule: Come Along! (<i>Kavya Phule</i> , trans. Priyamwada Redican Chakne)	K1-K6	10	1-5
5	<u>Practical Application Tasks</u> Practical analysis of literary texts/passages applying concepts discussed in the syllabus	K5,K6	5	5

BOOKS FOR REFERENCE

Hoskote, Ranjit. Introduction. *I, Lalla*. Penguin Books, 2013.
Mukherjee, Meenakshi. *Realism and Reality: Novel and Society in India*. OUP, 1994.
Muthukumar V.N. Introduction. *The River Speaks: The Vaiyai Poems from the Paripāṭal*. Penguin Books, 2012.
Ramakrishnan E.V. *Locating Indian Literature*. Orient BlackSwan, 2011.
Thapar, Romila. *The Past as Present: Forging Contemporary Identities through History*. Aleph Book Company, 2014.
---. *What is Nationalism?* Aleph Book Company, 2016.

JOURNALS

Kavya Bharati
Indian Literature
The Little
Magazine

WEB SOURCES

<https://www.sahapedia.org/>
<https://sahitya-akademi.gov.in/journals/indianliterature.jsp>

ONLINE COURSES

An Introduction to Indian Literary Theory
https://onlinecourses.nptel.ac.in/noc23_hs110/preview
Ancient Indian Literature <https://www.bhishmaindics.org/in-literature>
Indian Poetics <https://www.classcentral.com/course/swayam-indian-poetics-58469>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment: **Total Marks: 50** **Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
	K4	10	1x10=10 (1 out of 2 questions, 250 words)
D	K5	10	1x10=10 (1 out of 2 questions, 250 words)
	K6	10	1x10=10 (1 out of 2 questions, 250 words)

Other Components: **Total Marks: 50**

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class Work
– Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Examination: Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10=10 (1 out of 2 questions, 250 words)
B	K2	10	1x10=10 (1 out of 2 questions, 250 words)
C	K3	20	1x20=20 (1 out of 2 questions, 500 words)
	K4	20	1x20=20 (1 out of 2 questions, 500 words)
D	K5	20	1x20=20 (1 out of 2 questions, 500 words)
	K6	20	1x20=20 (1 out of 2 questions, 500 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/IL34												
	Course Title: INDIAN LITERATURE – II												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	3	3	3	2	3	3	3
CO 2	3	3	3	3	2	2	3	3	3	2	3	3	3
CO 3	3	3	3	3	2	2	3	3	3	2	3	3	3
CO 4	3	3	3	3	2	2	3	3	3	2	3	3	3
CO 5	3	3	3	3	2	2	3	3	3	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH VII – ENGLISH

SYLLABUS

(Effective from the academic year 2023-2024)

CONTEMPORARY CRITICAL THEORY II

CODE: 23EL/PC/CT34

CREDITS: 4

L T P: 4 2 0

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- to guide students to an understanding of some important ideas and concepts in contemporary critical and theoretical positions
- to enable students to evaluate contemporary trends in critical theory in the context of literature, culture and media
- to help students to establish links between theory and text
- to provide students with a critical understanding of real life through the framework of contemporary theories
- to equip students to imagine progressive alternatives to the issues pertaining to literature, culture and society

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	define conceptual terms in contemporary critical theory and cultural studies.	K1
CO2	demonstrate the links between theory and text.	K2
CO3	apply theoretical frameworks to literature, culture and media.	K3
CO4	engage with texts / discourses and analyse them in the light of contemporary critical theories.	K4
CO5	evaluate the implications of ideological positions and formulate advanced critical arguments.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Vandana Shiva: Women in Nature (from <i>Staying Alive</i>) 1.2 Johanna Hedva: Sick Woman Theory	K1-K6	15	1-5
2	2.1 Stephen Greenblatt: Introduction to the Power of Forms in the English Renaissance 2.2 Stuart Hall: Excerpt from Modernity and Its Futures (pg. no. 274 -277) 2.3 Hayden White: Historiography - Art or Science	K1-K6	15	1-5
3	3.1 Raymond Williams: Sociology of Culture 3.2 Pierre Bourdieu: The Forms of Capital	K1-K6	15	1-5

4	4.1 Michel Foucault: Panopticism 4.2 Donna Haraway: Cyborg; A Myth of Political Identity (From <i>Cyborg Manifesto</i>)	K1-K6	15	1-5
5	Practical analysis of literary texts/passages/films applying concepts discussed in the syllabus 5.1 George Orwell <i>1984</i> 5.2 Oodgeroo Noonuccal <i>No More Boomerang</i> 5.3 Stephen Daldry <i>The Hours</i> (film)	K5, K6	18	5

BOOKS FOR REFERENCE

Guerin, Wilfred, L., et al. *A Handbook of Critical Approaches to Literature*. Fourth Edition, Oxford UP, 2010.

Nayar, Pramod K. *Reading Culture: Theory, Praxis, Politics*. Sage, 2006.

Ryan, Michael. *Literary Theory: A Practical Introduction*. Blackwell, 2017.

Schmiz, Thomas, A. *Modern Literary Theory and Ancient Texts: An Introduction*. Blackwell, 2007.

Storey, John. *Cultural Theory And Popular Culture: An Introduction*, 8th edition. Routledge, 2018.

Wolfreys, Julian, ed. *Modern North American Criticism and Theory: A Critical Guide*. Edinburgh UP, 2006.

-- -, ed. *Modern European Criticism and Theory: A Critical Guide*. Edinburgh UP, 2006.

JOURNALS:

International Journal of Cultural Studies
IAFOR Journal of Cultural Studies

WEB SOURCES:

<http://culturalstudiesresearch.org/>
<http://www.rhizomes.net/>
<https://docs.lib.purdue.edu/clcweb/>

ONLINE COURSES:

Introduction to Cultural Studies
https://onlinecourses.nptel.ac.in/noc23_hs51/preview
Literature, Culture and Media
https://onlinecourses.nptel.ac.in/noc20_hs32/preview
Introduction to Digital Humanities
<https://pll.harvard.edu/course/introduction-digital-humanities>

PATTERN OF ASSESSMENT**Texts in Unit 5 not to be tested.****Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
	K4	10	1x10=10 (1 out of 2 questions, 250 words)
D	K5	10	1x10=10 (1 out of 2 questions, 250 words)
	K6	10	1x10=10 (1 out of 2 questions, 250 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

Other Components:**Total Marks: 50**

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class Work
– Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Examination:**Total Marks: 100****Duration: 3 hours****Texts in Unit 5 not to be tested.**

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10=10 (1 out of 2 questions, 250 words)
B	K2	10	1x10=10 (1 out of 2 questions, 250 words)
C	K3	20	1x20=20 (1 out of 2 questions, 500 words)
	K4	20	1x20=20 (1 out of 2 questions, 500 words)
D	K5	20	1x20=20 (1 out of 2 questions, 500 words)
	K6	20	1x20=20 (1 out of 2 questions, 500 words) Questions in Section D should be based on a passage given from a text not prescribed on the syllabus

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/CT34												
	Course Title: CONTEMPORARY CRITICAL THEORY – II												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3
High Correlation: 3				Moderate Correlation: 2				Low Correlation: 1					

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH VII – ENGLISH

SYLLABUS

(Effective from the academic year 2023 – 2024)

SUMMER INTERNSHIP

CODE: 23EL/PN/SI32

CREDIT: 2

OBJECTIVE OF THE COURSE

- to enhance practical skills and to provide opportunities for the application of knowledge through hands-on training
- to provide opportunities to learn about possible careers

COURSE LEARNING OUTCOME

On successful completion of the course, the students will be able to

- demonstrate skills that are useful at the workplace
- negotiate the challenges and opportunities of actual work spaces

FIELD WORK: 75 hours

Summer Internship: a minimum period of seventy-five hours during the summer holidays between the second and third semesters

EVALUATION

Oral Presentation
Written Report

Total Marks: 50

25 marks
25 marks

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2019–2020)

LINGUISTICS

CODE:23EL/PC/LG44

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to enable students to perceive language as a science
- to equip them with tools to analyse linguistic units
- to acquaint them with different schools of linguistics
- to introduce them to the relationship between language, culture and society
- to enable students to understand the functioning of the brain and its role in speech production

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	recall and label phonemes, morphemes and sentence patterns	K1
CO2	understand and illustrate the functioning of the brain and its role in speech production, and analyse speech disorders	K2
CO3	identify issues related to the functioning of the English language	K3
CO4	analyse sounds and identify patterns of sounds in the English language. Connect language, society and culture, and understand language variations such as social, regional and historical dialects	K4
CO5	compare and contrast language in terms of systematic differences in phonetics, phonology, morphology, syntax and semantics. Evaluate the socio-cultural variables that impact the production of the varieties of English language	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Phonology 1.1.1 Speech Mechanisms 1.1.2 The Cardinal Vowel Scale 1.1.3 English Vowels, Diphthongs, Consonants 1.1.4 Allophones 1.1.5 Stress, Intonation, Elision, Assimilation 1.1.6 Phonemic Transcription 1.2 Morphology 1.2.1 Definition and Classification of Morphemes 1.2.2 Bound, Free, Derivational, inflectional Morphemes; Empty, Zero Morphemes 1.2.3 Allomorph	K1-K5	25	1-5

UNIT	CONTENT	CL	Hrs	CO
2	2.1 Syntax 2.1.1. Sentence Patterns 2.1.2. I.C. Analysis 2.2 Grammar 2.2.1 Transformational-Generative Grammar	K1-K5	18	1-5
3	3.1 Semantics 3.1.1 Synonymy, Antonymy, Hyponymy 3.1.2 Homophony, Homonymy, Polysemy	K1-K5	7	1-5
4	4.1 Sociolinguistics 4.1.1 Dialects - Social and Geographical 4.1.2 Pidgin, Creole Languages 4.2 Neurolinguistics 4.2.1 Language areas in the brain 4.2.2 Language errors 4.2.3 Aphasia 4.3 Computational Linguistics 4.3.1 Computational and Theoretical Linguistics 4.3.2 Computational Linguistics as Engineering	K1-K5	10	1-5
5	5.1 Langue and Parole 5.2 Saussure's Concept of Sign—Sound Image and Concept	K1-K5	5	5

BOOKS FOR REFERENCE

Balasubramanian, T. *A Text Book of English Phonetics for Indian Students*. Macmillan India Ltd., 2012.

Crystal, David. *The Cambridge Encyclopaedia of the English Language* Cambridge UP, 2018.

Lee, EunHee. *An Introduction to Lexical Semantics: A Formal Approach to Word Meaning and Its Composition*. Routledge, Taylor & Francis Group, 2023.

Yule, George. *The Study of Language – An Introduction*. Oxford UP, 2022.

Ingrid. *Linguistic Diversity and Social Justice: An Introduction to Applied Sociolinguistics*. Oxford UP, 2016.

Pullum, Geoffrey K. *Linguistics: Why it Matters*. Wiley, 2018

Grishman, R. 2002 *Computational Linguistics: An Introduction*. Cambridge: Cambridge University Press.

JOURNALS

Journal of Linguistics
English Language and Linguistics
International Journal of Applied Linguistics

WEB RESOURCES

<https://linguistlist.org/>
<http://www.everytongue.com/>
<http://web.uvic.ca/ling/data/IPAlab/IPAlab.htm>
<https://www.linguisticsociety.org/what-linguistics>

ONLINE COURSES

Introduction To Language And Linguistics

https://onlinecourses.nptel.ac.in/noc23_hs87/preview

Applied Linguistics https://onlinecourses.nptel.ac.in/noc22_hs85/preview

Miracles of Human Language: An Introduction to Linguistics

<https://www.coursera.org/learn/human-language>

PATTERN OF ASSESSMENT

No Unit should be left out.

Alternative questions to be set for students with special needs in Section A, Section C and Section D. (Transcription, Three Term Labels, IPA symbols, Labelling vowels and IC analysis to be excluded)

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	5x1=5 (Three-term Labels) CA 1 5x1=5 (IPA symbols for the given TTL) CA 2
B	K2	10	5x2=10 (Locating the primary stress in the given words) CA1 5x2=10 (Sentence Pattern - Classify) CA 2
C	K3	10	10x1=10 (Transcription) CA 1 10x1=10 (Morphemic Analysis) CA 2
D	K4	10	2x5=10 (2 out of 3 questions) CA 1 5x1=5 (IC Analysis of Sentences) CA 2 5x1=5 (Disambiguate) CA 2
E	K5	15	1x15=15 (1 out of 2 questions)

Other Components:

Total Marks: 50

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class Work
– Passage Analysis /Quiz/Panel Discussion/Group Presentation

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	15	5x1=5 (Three-term Labels) 5x1=5 (IPA symbols for the given TTL) 5x1=5 (Labelling the vowels given and plotting them on the Vowel Chart)
B	K2	20	5x2=10 (Sentence Pattern - Classify) 5x2=10 (Locating the primary stress in the given words)
C	K3	20	5x2=10 (Transcription) 10x1=10 (Morphemic Analysis)
D	K4	15	10x1=10 (IC Analysis of Sentences) 5x1=5 (Disambiguate)
E	K5	30	2x15=30 (2 out of 3 questions)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/LG44												
	Course Title: LINGUISTICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 2	2	3	3	3	3	3	3	3	3	3	3	2	3
CO 3	3	3	2	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	2	3	3	3	3	2	3	3	3
CO 5	2	2	3	3	3	3	3	3	2	3	3	3	3
High Correlation: 3				Moderate Correlation: 2				Low Correlation: 1					

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH VII – ENGLISH

SYLLABUS

(Effective from the academic year 2023-2024)

SHAKESPEARE

CODE: 23EL/PC/SH44

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to understand and appreciate shakespeare's craft
- to acquaint students to shakespeare's sonnets and different genres of shakespearean plays
- to train students to identify the features of different genres of shakespeare's plays
- to interpret shakespeare's texts in contemporary contexts
- to engage critically with theatrical and cinematic interpretations of Shakespeare plays

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	define the features of Shakesperian plays and sonnets.	K1
CO2	interpret the ways and mediums through which Shakespeare's plays have been dispersed and perceived over the past four hundred years	K2
CO3	identify techniques and devices in Shakespeare's plays and sonnets	K3
CO4	analyse the works of Shakespeare within historical, social, theoretical and philosophical contexts	K4
CO5	evaluate the contemporary relevance of Shakespeare and formulate critical responses to the texts	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 <i>Macbeth</i> (for close reading)	K1-K6	20	1-5
2	2.1 <i>A Midsummer Night's Dream</i> (for close reading)	K1-K6	20	1-5
3	3.1 <i>Henry V</i> 3.2 <i>Henry V</i> film version directed by Laurence Olivier 3.3 <i>Henry V</i> film directed by Kenneth Branagh 3.4 Taking on Shakespeare: Kenneth Branagh's "Henry V" - Peter Donaldson, <i>Shakespeare Quarterly</i> , Vol.42, No.1 (Spring 1991) 60-71	K1-K6	15	1-5
4	4.1 Sonnets: VI, LIII, CXVI, CXXIX, CXXX, LXXXVI	K1-K6	5	1-5
5	<u>Practical Application Tasks</u> 5.1 Analysis of plays not prescribed on the syllabus 5.2 Analysis of movie/stage versions, adaptations, retellings of Shakespeare's plays	K5, K6	5	5

BOOKS FOR REFERENCE

Bernard, Mc Elroy. *Shakespeare's Mature Tragedies*. Princeton UP, 2014.
Bloom, Harold. *Shakespeare: The Invention of the Human*. Fourth Estate, 1999.
Brian, Vickers. *Appropriating Shakespeare: Contemporary Critical Quarrels*. Yale UP, 1994.
Campbell, Lily B. *Shakespeare's Histories: Mirror of Elizabethan Policy*. Methuen, 2013.
Charlton, H.B. *Shakespearean Comedy*. Routledge, 2013.
Coghill, Nevill. *Shakespeare's Professional Skills*. Cambridge UP, 2011.
Dillon, Janette. *The Cambridge Introduction to Shakespeare's Tragedies*. Cambridge UP, 2007
Dollimore, Jonathan and Allan Sinfield, editors. *Political Shakespeare: New Essays in Cultural Materialism*. Manchester UP, 1994.
Harris, Jonathan Gil. *Masala Shakespeare: How a Firangi Writer Became Indian*. Aleph Book Company, 2018.
Hattaway Michael. *Shakespeare's History Plays*. Cambridge UP, 2002.
Leggatt, Alexander. *Shakespeare's Comedy of Love*. Routledge, 2005.
Moschovakis, Nick, editor. *Macbeth: New Critical Essays*. Routledge, 2008.
Murphy, Andrew, editor. *The Renaissance Text*. Manchester UP, 2000.
Smith, Emma, editor. *Shakespeare's Tragedies*. Blackwell Publishing Ltd., 2004.
Vendler, Helen. *The Art of Shakespeare's Sonnets*. Harvard University Press, 1999.

JOURNALS

Multicultural Shakespeare
Shakespeare Bulletin
Shakespeare Studies

WEB RESOURCES

<https://www.williamshakespeare.net/>
<https://www.rsc.org.uk/>

ONLINE COURSES

The Renaissance and Shakespeare <https://nptel.ac.in/courses/109106120>
Introduction to Who Wrote Shakespeare <https://www.coursera.org/learn/shakespeare>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
	K4	10	1x10=10 (1 out of 2 questions, 250 words)
D	K5	10	1x10=10 (1 out of 2 questions, 250 words)
	K6	10	1x10=10 (1 out of 2 questions, 250 words)

Other Components: Total Marks: 50

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class Work
– Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10=10 (1 out of 2 questions, 250 words)
B	K2	10	1x10=10 (1 out of 2 questions, 250 words)
C	K3	20	1x20=20 (1 out of 2 questions, 500 words)
	K4	20	1x20=20 (1 out of 2 questions, 500 words)
D	K5	20	1x20=20 (1 out of 2 questions, 500 words)
	K6	20	1x20=20 (1 out of 2 questions, 500 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/SH44												
	Course Title: SHAKESPEARE												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	3	2	1	1	3	3	2	3	3	3
CO 2	3	3	3	3	2	1	2	3	3	3	3	3	3
CO 3	3	2	2	3	2	1	1	3	3	2	2	3	3
CO 4	3	3	3	3	2	1	2	3	3	3	3	3	3
CO 5	3	3	3	3	3	1	2	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023-2024)

INDIAN LITERATURES – II

CODE:23EL/PC/IL44

CREDITS:4

L T P:4 2 0

TOTAL TEACHING HOURS:78

OBJECTIVES OF THE COURSE

- to introduce students to the literary, cultural and theoretical trends in india from india's independence to the present time
- to familiarise students with the important social, cultural, political and economic factors that shaped indian literatures in different has during this period
- to acquaint students with some significant writers and their texts in various languages
- to encourage students to critically examine patterns of continuity and change in indian literature and culture during this period
- sensitise students to appreciate and respect the social, cultural, linguistic and religious diversity of India

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	list the important literary trends in India during the period under consideration	K1
CO2	outline the varied relationships between literatures produced in different bhashas during this period	K2
CO3	identify the varied relationships between literary productions in various bhashas and the socio-cultural and political reality that informs them	K3
CO4	to analyse the texts in relation to their respective social, cultural and political contexts	K4
CO5	to appraise patterns of continuity and change in Indian culture and tradition during this period from the perspective of literary studies	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	<u>Indian Aesthetics and Thought</u> 1.1. Amartya Sen: Secularism and its Discontents (from <i>The Argumentative Indian</i>) 1.2. Bruce King: Rewriting India, Autobiography, History and Globalisation (from <i>Rewriting India</i>) 1.3. G. N. Devy: The Masculine State (from <i>The G. N. Devy Reader</i>)	K1-4	15	1-5

UNIT	CONTENT	CL	Hrs	CO
	1.4. Romila Thapar: Historical Consciousness in Early India (from <i>Cultural Pasts: Essays in Early Indian History</i>)			
2	<u>1947–1980</u> 2.1 Popati Hiranandani: Husband 2.2 Dhoomil: The City, Evening and an Old Man: Me 2.3 R Parthasarathy: Rough Passages 2.4 Khushwant Singh: India is a Strange Country	K1-6	15	1-5
3	<u>1980–2000</u> 3.1 Narayan: Kochareti 3.2 Kunjarani Longjam Chanu: Poison Arrow 3.3 Sidhalingaiah: From A Word With You World (“The College Students Union Elections.... And they were abashed” (pp 120-122), “Perhaps writers didn’t need caste labels,...he had found me a house (pp 246-248), trans. S R Ramakrishna) 3.4 Nissim Ezekiel: In India (from Latter Day Psalms pp50-52) 3.5 A. K. Ramanujan: No Amnesiac King 3.6 Amitav Ghosh: <i>The Calcutta Chromosome</i>	K1-6	20	1-5
4	<u>2000 to the Present</u> 4.1 S. Ramakrishnan: Aravaan 4.2 Brij Nath Betaab: Ghazal 4.3 Arshad Mushtaq: That’s When I Threw Stones 4.4 Arundhati Subramaniam: To the Welsh Critic who doesn’t Find Me Identifiably Indian 4.5 Vivek Narayan :Shooting 4.6 Mamang Dai: Remembrance 4.7 Poile Sengupta: <i>Thus Spake Shoorpanaka, So Said Shakuni</i>	K1-6	20	1-5
5	<u>Practical Application Tasks</u> Practical analysis of literary texts/passages applying concepts discussed in the syllabus	K5,K6	8	5

BOOKS FOR REFERENCE

Deshpande, G. P., editor. *Modern Indian Drama: An Anthology*. Sahitya Akademi, 2001.

Devy, G N. *The Crisis Within: On Knowledge and Education in India*. Aleph Bopok Company, 2016.

D’Souza, Eunice. *Talking Poems: Conversations with Poets*. OUP, 1999.

Karnani, Chetan. *Eminent Indian English Writers*. Rawat, 2001.

Khair, Tabish. *Babu Fictions: Alienation in Contemporary Indian English Novels*. Oxford UP, 2001.

King, Bruce. Rev.ed. *Modern Indian Poetry in English*. Oxford UP, 1998.

Lisa Lau and Om Prakash Dwivedi. *Re-Orientalism and Indian Writing in English*. Palgrave Macmillan, 2014.

Trivedi, Harish. *Colonial Transactions*. Ohio Press, 1995.

JOURNALS

Indian Literature-Sahitya Akademi

Asian Journal of English Studies

Journal of Indian Writing in English

Asian Quarterly : An International Journal of Contemporary Issues AQ

WEB RESOURCES

<https://www.sahapedia.org/>

<https://unacademy.com/content/upsc/study-material/modern-indian-history/the-rise-of-modern-literature-in-indian-languages/>

ONLINE COURSES

Modern Indian Writing in Translation https://onlinecourses.nptel.ac.in/noc23_hs54/preview

Is there a Modern Indian Literature <https://www.torch.ox.ac.uk/event/is-there-a-modern-indian-literature-1>

Modern Indian Writing in Translation from SWAYAM

<https://www.classcentral.com/course/swayam-modern-indian-writing-in-translation-17699>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
	K4	10	1x10=10 (1 out of 2 questions, 250 words)
D	K5	10	1x10=10 (1 out of 2 questions, 250 words)
	K6	10	1x10=10 (1 out of 2 questions, 250 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class Work
– Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10=10 (1 out of 2 questions, 250 words)
B	K2	10	1x10=10 (1 out of 2 questions, 250 words)
C	K3	20	1x20=20 (1 out of 2 questions, 500 words)
	K4	20	1x20=20 (1 out of 2 questions, 500 words)
D	K5	20	1x20=20 (1 out of 2 questions, 500 words)
	K6	20	1x20=20 (1 out of 2 questions, 500 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/IL44												
	Course Title: INDIAN LITERATURES – II												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	3	3	3	2	3	3	3
CO 2	3	3	3	3	2	2	3	3	3	2	3	3	3
CO 3	3	3	3	3	2	2	3	3	3	2	3	3	3
CO 4	3	3	3	3	2	2	3	3	3	2	3	3	3
CO 5	3	3	3	3	2	2	3	3	3	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023–2024)

DISSERTATION

CODE:23EL/PC/DS47

CREDITS:7

L T P:0 9 0

OBJECTIVES OF THE COURSE

- to enable students to identify a research gap
- to train students to formulate a clear research question
- to equip students with higher order critical and analytical skills and techniques of documentation
- to train students to organize arguments coherently
- to acquaint students with ethical issues involved in research

COURSE LEARNING OUTCOMES

On the successful completion of the course, students will be able to

- demonstrate a knowledge of the research process
- identify and use appropriate research methods and terminology
- deal with ethical challenges of research and exhibit a high standard of ethical behaviour
- demonstrate the skills required to write and publish research work

COURSE DESCRIPTION

Analysis / argument in the form of an extended research paper on a topic or aspect of a topic following the MLA (Ninth Edition) documentation and citation style.

LENGTH: Around 6000-9000 words / 25-35 pages, organised in 4-5 chapters

PURPOSE: To demonstrate a student's capability and skill

- a) in undertaking independent, original research work at the postgraduate level
- b) in preparing and writing a sustained and logically structured argument in clear prose
- c) in referencing and documentation
- d) in presentation

SCOPE: Students could work on

- a) an author / authors
- b) a particular theme or issue in the context of a literary work
- c) application of a given theoretical approach to a particular text / group of texts

The above entails extensive reading of primary and secondary texts
(to be done in consultation with the supervisor)

CITATION AND DOCUMENTATION: MLA Handbook, 9th edition

REQUIREMENT:

1. An abstract of 250-300 words
2. A clear thesis statement
3. Works Cited – a minimum of 5 secondary sources including at least 1 article
4. Citation and Documentation using MLA (Ninth Edition) format
5. Drafting and revising process to be followed
6. Plagiarism check certificate soft copy to be submitted

PATTERN OF ASSESSMENT

Continuous Assessment:

Annotated Bibliography

20 marks

Draft

30 marks

Knowledge Level	Marks	Rubrics for Evaluation
K1	5+5	MLA format for citation of secondary source (annotated bibliography 5, draft 5)
K2	15	Explanation of the relevance of the secondary source (annotated bibliography)
K3	5	Explaining the conceptual framework (draft)
K4	10	Textual analysis and use of secondary sources (draft)
K5	5	Research arguments, relevance, coherence, appropriate use of academic language (draft)
K6	5	Research conclusions (draft)

No CA Test

External and Internal Evaluation of Dissertation

100 marks

Knowledge Level	Marks	Rubrics for Evaluation
K1	10	MLA Documentation
K2	15	Formulating and explaining research problem/question
K3	15	Explaining the conceptual framework
K4	25	Textual analysis and use of secondary sources
K5	25	Research arguments, relevance, coherence, appropriate use of academic language
K6	10	Research conclusions

No End-Semester Examination.

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PC/DS47												
	Course Title: DISSERTATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023–2024)

DETECTIVE FICTION

CODE: 23EL/PE/DF15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to introduce the student to detective fiction and its various sub-genres
- to train them to recognise the formulae of classic detective fiction
- to help students identify the conventions of the genre and how they have evolved with the changing times
- to enable students to examine the methods, structures and contexts used in detective fiction.
- to train them to appreciate diverse sub-genres of detective fiction.

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	identify the generic features of detective fiction in select texts	K1
CO2	trace the history and evolution of detective fiction	K2
CO3	explain the salient features of the sub-genres in select texts	K3
CO4	analyse crime and social dynamics of the sub-genres in select texts	K4
CO5	evaluate diverse sub-genres of detective fiction and discuss the historical, political, regional and cultural realities directing the writers and framing the readers of detective fiction	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	<u>Chronology of Crime Fiction</u> 1.1 History and Evolution of Crime Fiction	K1-K6	5	1-5
2	<u>The Role of the Detective</u> 2.1 Dupin in Edgar Allan Poe 2.2 Holmes in Arthur Conan Doyle	K1-K6	10	1-5
3	<u>Twentieth Century Detective Fiction</u> 3.1 Agatha Christie in Golden Age Detective Fiction 3.2 Raymond Chandler in Hard-boiled Detective Fiction	K1-K6	16	1-5
4	<u>Crime Fiction: Sub-genres</u> 4.1 Crime Thriller 4.2 Spy Fiction 4.3 Police Procedural and Nordic Noir	K1-K6	26	1-5

UNIT	CONTENT	CL	Hrs	CO
	4.4 Serial Killer Fiction 4.5 True Crime			
5	<u>Practical Application Tasks</u> Practical analysis of literary texts/passages applying concepts discussed in the syllabus	K5,K6	8	5

BOOKS FOR REFERENCE

Bernthal, J.C. *The Ageless Agatha Christie: Essays on the Mysteries and Legacies*. McFarland, 2016.

Duncan, Paul. *Film Noir: Films of Trust and Betrayal*. Harpenden, 2006.

Emsley, Clive. "Policing before the Police" and "The Coming of the Police." *The English Police*. Routledge, 2014.

Hansen, Kim Toft and Anne Marit Waade. *Locating Nordic Noir: From Beck to The Bridge*. Palgrave Macmillan. 2017.

Messent, P. "Introduction: From Private Eye to Police Procedural - The Logic of Contemporary Crime Fiction." *Criminal Proceedings: The Contemporary American Crime Novel*. Pluto Press, 1997.

Priestman, Martin, editor. *The Cambridge Companion to Crime Fiction*. Cambridge UP, 2003.

Rolls, Alistair et al. *The Cambridge Companion to World Crime Fiction*. Cambridge University Press, 2022.

Rzepka, Charles and Lee Horsley. *Crime Fiction*. Wiley-Blackwell.2010

Scaggs, John. *Crime Fiction*. Routledge, 2005.

Seltzer, Mark. *True Crime Observations on Violence and Modernity*. Routledge. 2007

Worthington, Heather. *Key Concepts in Crime Fiction*. New York: Palgrave Macmillan, 2011.

JOURNALS

Crime Fiction Studies
Clues: A Journal of Detection

WEB RESOURCES

gaslight.mtroyal.ca/vandine.htm.
<https://youtu.be/7PeAPLm5sJM>
<https://youtu.be/p5rJZ1dCXdo>
<https://youtu.be/A1goX5Ly3Uc>

RECOMMENDED ONLINE COURSES

<https://www.futurelearn.com/courses/crime-fiction>
<https://www.classcentral.com/course/crime-fiction-27959>
<https://humanities.yale.edu/special-courses/hums-340-detective-story>

PATTERN OF ASSESSMENT:**Continuous Assessment:**

One written assignment

One seminar

Total Marks: 50

25 marks

25 marks

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

No CA Test**End-Semester Evaluation****Total Marks: 100**

Term paper: Analysis of any work of detective fiction in the light of any of the sub-genres prescribed in the syllabus in about 2000-2500 words

Knowledge Level	Marks
K1	10
K2	10
K3	20
K4	20
K5	20
K6	20

No End-Semester Examination

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code:23EL/PE/DF15												
	Course Title: DETECTIVE FICTION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	2	3	2	2	2	3	3	2	3	3	3
CO 2	2	2	2	3	2	2	2	3	3	2	3	3	3
CO 3	2	2	2	3	2	2	2	3	3	2	3	3	3
CO 4	3	3	3	3	2	2	3	3	3	2	3	3	3
CO 5	3	3	3	3	2	2	3	3	3	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023–2024)

TECHNICAL WRITING

CODE: 23EL/PE/TW15

CREDITS: 5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To introduce students to various styles and methods in technical writing
- To train students in skills required for a technical communicator
- To acquaint students with techniques for accuracy, brevity and objectivity in technical writing
- To train students to produce appropriate technical content
- To train students in using basic online packages and applications as tools of technical writing

Eligibility Criterion

Knowledge of MS Office

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	identify different styles and methods in technical writing.	K1
CO2	demonstrate effective use of visuals.	K2
CO3	apply techniques for accuracy, brevity and objectivity in technical writing.	K3
CO4	categorise skills required for a technical communicator.	K4
CO5	evaluate online packages and applications effectively and compose technical content.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	<u>Introduction</u> 1.1 What is Technical Writing? 1.2 Difference Between Technical and Academic Writing 1.3 The Scope of Technical Writing 1.4 The Role and Essential Skills of a Technical Communicator	K1-K4	5	1-4

UNIT	CONTENT	CL	Hrs	CO
2	<u>Guidelines and Grammar in Technical Writing</u> 2.1. Basic Patterns and Elements of the Sentence 2.2. Common Grammar, Usage, Punctuation Problems 2.3. Writing with Clarity and Precision 2.4. The Fog Factor	K1-K4	12	1-4
3	<u>The Writing Process</u> 3.1 Audience Analysis 3.2 Task Analysis 3.3 Writing and Editing (Using Track Changes) 3.4 Communicating with Visuals	K1-K4	18	1-4
4	<u>Application of Technical Writing - I</u> 4.1 Writing Proposals 4.2 Technical Reports: Survey – Report	K1-K6	15	1-5
5	<u>Application of Technical Writing - II</u> 5.1 Users' Manuals 5.2 Writing for the Web 5.3 Promotional Literature (Drug promotional literature/ Travel Writing)	K5,K6	15	5

BOOKS FOR REFERENCE

Alred, Gerald J, Charles T. Brusaw and Walter E. Oliu. *Handbook of Technical Writing*. 10th Ed. Macmillan Learning, 2019.
 Blicq, Ronald, S and Lisa Moretto. *Technically Write!* Prentice Hall, 2004.
 Marnell, Geoffrey. *Essays on Technical Writing*. Burdock Books, 2016.
 Pearsall, Thomas E. *The Elements of Technical Writing*. Longman 2010.
 Reddy, Devaki and Shreesh Chaudhary. *Technical English*. Macmillan, 2009.
 Rizvi, Ashraf M. *Effective Technical Communication*. Tata McGraw-Hill, 2006.

JOURNALS

Technical Communication
Journal of Business and Technical Communication

WEB RESOURCES

stc.org

ELECTRONIC RESOURCE

Business Writing – Clarity, UK

RECOMMENDED ONLINE COURSES

<https://www.udemy.com/course/technical-writing-and-editing/>
<https://www.coursera.org/courses?query=technical>
<https://alison.com/course/technical-writing-essentials>

PATTERN OF ASSESSMENT:**Continuous Assessment:**

Two written Assignments

Total Marks: 50

2 x 25 = 50 marks

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

No CA Test**End-Semester Evaluation:****Total Marks: 100**

Project: One Promotional Material – flyer/pamphlet/brochure – with an analysis in 1500-2000 words, online submission

Knowledge Level	Marks
K1	10
K2	10
K3	20
K4	20
K5	20
K6	20

No End-Semester Examination

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code:23EL/PE/TW15												
	Course Title: TECHNICAL WRITING												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	3	3	1	1	1	3	2	3	1
CO 2	3	2	3	3	3	3	1	1	1	3	2	3	1
CO 3	3	2	3	3	3	3	1	1	1	3	2	3	1
CO 4	3	2	3	3	3	3	1	1	1	3	2	3	1
CO 5	3	2	3	3	3	3	1	1	1	3	2	3	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH VII -ENGLISH

SYLLABUS

(Effective from the academic year 2023–2024)

ENGLISH LANGUAGE TEACHING

CODE: 23EL/PE/ET15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to enable students to distinguish between language acquisition and language learning
- to equip students with the skill to identify the methods and approaches in language teaching
- to train students in assessing the needs of learners and in preparing lesson plans for different levels of learners
- to train them to prepare materials for teaching the four language skills
- to acquaint students with the different kinds of syllabi and help them gain an understanding of the principles of language testing and the different kinds of tests

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	define the different stages of First Language Acquisition and Second Language Learning.	K1
CO2	compare and contrast different teaching strategies; distinguish between various kinds of tests; and examine the different components of the syllabus and the curriculum.	K2
CO3	identify the language learning strategies as defined by Behaviourist, Cognitivist, and Humanistic schools of psychology.	K3
CO4	analyse the various teaching methods that could be used to train students in the use of language	K4
CO5	evaluate the learners' language proficiency and frame a daily lesson plan to develop the learners' communicative competence; create tasks to train learners in the use of the language and prepare an effective teaching portfolio for the four skills of language.	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	<u>Introduction</u> 1.1 Difference between language acquisition and language learning – L1 and L2 1.2 Psychology of Learning 1.2.1 Behaviorism 1.2.2 Cognitivism 1.2.3 Humanism	K1-K6	15	1-5
2	<u>Approaches and Methods in Teaching English</u> 2.1 Grammar Translation Method 2.2 Situational Method 2.3 Audiolingual Method 2.4 Communicative Approach 2.5 Use of Technology in the Teaching of English (Using the Language Lab)	K1-K6	15	1-5
3	<u>Syllabus</u> 3.1 Definition of Curriculum and Syllabus 3.1.1 Needs Analysis 3.1.2 Defining Objectives 3.2 Types of Syllabus 3.2.1 Structural Syllabus 3.2.2 Functional Syllabus 3.2.3 Communicative Syllabus 3.2.4 Task-based Syllabus	K1-K6	15	1-5
4	<u>Testing</u> 4.1 Validity and Reliability in Testing 4.2 Types of Tests 4.3 Formative and Summative Testing	K1-K6	10	1-5
5	<u>Practical Application Tasks</u> 5.1 Preparing of tasks to teach Four Language Skills 5.2 Lesson Plan 5.3 Teaching Practice	K5,K6	10	5

BOOKS FOR REFERENCE

Baxter, Andy. *Evaluating Your Students: Handbooks for Teachers*. Richmond Publishers, 1999.

Brown, H. Douglas. *Teaching by Principles: An Interactive Approach to Language Pedagogy*. Pearson Education ESL, 2007.

Dunkel, Patricia A. and Frank Pialorsi. *Advanced Listening Comprehension: Listening and Notetaking Skills*. Heinle ELT, 2005.

Epstein, Ruth and Mary Ormiston. *Tools and Tips for Using ELT Materials: A Guide for Teachers*. University of Michigan Press, 2007.

Hutchinson, Tom and Alan Waters. *English for Specific Purposes: A Learner Centred Approach*. Cambridge: Cambridge UP, 1987.

Hanratty, Luan. *TEFL 101: Principles, Approaches, Methods & Techniques*. TEFL Ideas, 2016.

Hughes, Arthur. *Testing for Language Teachers*. Cambridge University Press, 2002.

Hutchinson, Tom and Alan Waters. *English for Specific Purposes: A Learner Centred Approach*. Cambridge UP, 1987.

Krashen, Stephen D. *Second Language Acquisition and Second Language Learning*. Pergamon Press, 1981.

Larsen-Freeman, Diane and Marti Anderson. *Techniques and Principles in Language Teaching*, 3rd edition, Oxford University Press, 2011.

Lefrancois, Guy R. *Psychology for Teaching*. Wordsworth Publishing Co., 2000.

Nunan, David. *The Self-Directed Teacher: Managing the Learning Process*. Cambridge University Press, 1996.

Prabhu, N.S. *Second Language Pedagogy*. Oxford UP, 1987.

Rank Tom et al. *Teaching English Using Ict : A Practical Guide for Secondary School Teachers*. Continuum 2011.

Renandya, Willy A and Handoyo Puji Widodo, eds. *English Language Teaching Today*. Springer, 2016.

Richards, Jack C. and T.S. Rodgers. *Approaches and Methods in Language Teaching: A Description and Analysis*. 2nd ed., Cambridge UP, 2001

Rivers, Wilga. M. *Interactive Language Teaching*. Cambridge UP, 1987.

Weir, C. *Language Testing and Validation: An Evidence-Based Approach*. Palgrave Macmillan, 2005.

ONLINE COURSES

Teach English Now! Second Language Listening, Speaking and Pronunciation offered by Arizona State University

<https://in.coursera.org/learn/tesol-speaking>

Teach English Now! Technology Enriched Teaching offered by Arizona State University

<https://in.coursera.org/learn/tesol-technology>

Teach English Now! Teach Language Online offered by Arizona State University

<https://in.coursera.org/learn/teachlanguageonline>

Teaching EFL/ESL Reading: A Task based Approach offered by University of London

<https://in.coursera.org/learn/esl-reading>

Tesol Certificate, Part 1: Teach English Now! Specialization offered by Arizona State University

<https://in.coursera.org/specializations/tesol>

Tesol Certificate, Part 2: Teach English Now! Specialization offered by Arizona State University

<https://in.coursera.org/specializations/tesol-certificate-2>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5=5 (1 out of 2 questions, 100 words)
B	K2	5	1x5=5 (1 out of 2 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 200 words)
	K4	10	1x10=10 (1 out of 2 questions, 200 words)
D	K5	10	1x10=10 (evaluate appropriate teaching method/approach for a given passage, 200 words)
	K6	10	1x10=10 (frame 2 tasks for each language skill - LSRW Grammar/Vocabulary for a given passage)

Other Components:

Lesson Plan

Total Marks: 50

25 marks

Knowledge Level	Marks
K1	2
K2	2
K3	4
K4	4
K5	5
K6	8

Microteaching (Teaching their own classmates) 25 marks

Knowledge Level	Marks
K1	2
K2	2
K3	4
K4	4
K5	5
K6	8

End-semester Evaluation (Internal)**Total Marks: 100**

Portfolio (Preparation of materials, five lessons)

Knowledge Level	Marks	Rubrics for Evaluation
K1	10	Reflection of the knowledge of concepts related to English Language Teaching
K2	10	Understanding the objectives for the lessons created
K3	15	Application of the knowledge of teaching-learning strategies in creating lessons
K4	15	Analysis of teaching-learning methods
K5	20	Relevance of tasks, coherence and creativity
K6	30	Creating tasks, activities, and lessons for the four skills of language

No End-Semester Examination

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PE/ET15												
	Course Title: ENGLISH LANGUAGE TEACHING												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	2	3	3	2	3	3	3
CO 2	3	3	3	3	3	3	2	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3
High Correlation: 3				Moderate Correlation: 2				Low Correlation: 1					

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH VII – ENGLISH

SYLLABUS

(Effective from the academic year 2023-2024)

CHILDREN'S LITERATURE

CODE:23EL/PE/CL15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to introduce students to the key tenets of children's literature and the postulations of key theorists in the field
- to enable students to become aware of the construct of the child, the existence of different childhoods and the children's book as a cultural artefact
- to introduce students to the features of specific sub-genres in the field leading to the interpretation of literary texts written by adults for children
- to help students comprehend the influence of adult ideologies and the role of socio-cultural constructs in stories written for children across cultures
- to encourage the creation of inclusive narratives for children

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	define Children's Literature, trace its history and list the features of the Fairy Tale, the Folk Tale, the Postmodern Picture Book, the Fantasy, the School Story and the Graphic Novel	K1
CO2	illustrate the paradoxes involved in the term Children's Literature and compare children, childhoods and the role of socio-cultural constructs in texts written for children	K2
CO3	identify the influence of adult ideologies and apply theories postulated by critics to read children's books as cultural artefacts	K3
CO4	examine and and analyse texts intended for children of different abilities belonging to different strata of society across cultures	K4
CO5	evaluate literary texts written for children and create inclusive children's books based on an understanding of socio-cultural contexts	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	<u>Introduction to Children's Literature</u> 1.1 Defining Children's Literature 1.2 How to read Children's literature	K1-K6	10	1-5

UNIT	CONTENT	CL	Hrs	CO
2	<u>The Folk Tale and The Fairy Tale</u> 2.1 Features of the Folk Tale 2.1.1 Mariam Karim Ahlawat and Proiti Roy: <i>Gulla and the Hangul</i> 2.1.2 P Anuradha and A. V. Ilango: <i>Under the Neem Tree</i> 2.2 Features of the Fairy Tale 2.2.1 Fairy Tale Motifs across Cultures: Cinderella Stories Across The World	K1-K6	15	1-5
3	<u>The Postmodern Picturebook</u> 3.1 Features of the Postmodern Picturebook 3.1.1 Stern Nijland and Linda De Haan: <i>King and King</i> 3.2 Metafiction and the Postmodern Picturebook 3.2.1 John Scieszka and Lane Smith: <i>The Stinky Cheese Man and Other Fairly Stupid Tales</i>	K1-K6	15	1-5
4	<u>The Novel</u> 4.1 Features of the Fantasy 4.1.1 J K Rowling: <i>Harry Potter and the Philosopher's Stone</i> 4.2 Features of the Graphic Novel 4.2.1 Cece Bell: <i>El Deafo</i>	K1-K6	15	1-5
5	<u>Practical Application Tasks</u> 5.1 Analysis of texts applying concepts discussed in the syllabus 5.2 Creation of texts of any sub-genre read as Children's Literature	K5,K6	10	5

BOOKS FOR REFERENCE

Alston, Ann. *The Family in English Children's Literature*. Routledge, 2008.

Cullingford, Cedric. *Children's Literature and its Effects: The Formative Years*. Cassel, 1998.

Grenby, M. O., and Kimberley Reynolds. *Children's Literature Studies: A Research Handbook*. Palgrave, 2011.

Haviland, Virginia, editor. *Children and Literature: Views and Reviews*. Bodley Head, 1974.

Kakar, Sudhir. *The Inner World: A Psycho-Analytic Study of Childhood and Society in India*. 2nd ed., Oxford UP, 1981.

Peter, Hunt, editor. *Understanding Children's Literature: Key Essays from the International Companion Encyclopaedia of Children's Literature*. Taylor & Francis e-Library, 1999.

Reynolds, Kimberley. *Children's Literature in the 1890s and the 1990s*. Writers and Their Work Series, Northcote House in association with the British Council, 1994.

---. *Radical Children's Literature: Future Visions and Aesthetic Transformations in Juvenile Fiction*. Palgrave, 2007.

Sipe, Lawrence R., and Sylvia Pantaleo, editors. *Postmodern Picturebooks: Play, Parody, and Self-Referentiality*. Routledge, 2008.

Styles, Morag, and Eve Bearne, editors. *Art, Narrative and Childhood*. Trentham, 2003.

Superle, Michelle. *Contemporary English-Language Indian Children's Literature: Representations of Nation, Culture, and the New Indian Girl*. Routledge, 2011.

JOURNALS

Children's Literature Association Quarterly
Bookbird: A Journal of Children's Literature
Horn Book Magazine

WEB RESOURCES

Anstey, Michele. “„It’s Not All Black and White”: Postmodern Picturebooks and New Literacies.” *Journal of Adolescent & Adult Literacy*, vol. 45, no. 6, 2002, pp. 444+.
Academic Search Elite. www.scribd.com/doc/91921813/Postmodern-Picture-Books.
Berry, Nita. “Social Change through Children’s Books – An Indian Perspective.” *Children and Their Books. Bookbird*, vol. 54, no.1, pp. 48–54. *IBBY*, www.ibby.org.
Gubar, Marah. “Risky Business: Talking about Children in Children’s Literature Criticism.” *Children’s Literature Association Quarterly*, vol. 38, no. 4, 2013, pp. 450–57. *Literature Online*.
Serafini, Frank, and Felicia Tompkins. “Books In/As/Through Books.” *The Reading Teacher*, vol. 68, no. 5, 2015, pp. 344–46. *EBSCOhost*.
Smith, Tamara Ellis. “The Vibrant Triangle: The Relationship between the Picture Book, the Adult Reader, and the Child Listener.” *Bookbird*, vol. 51, no. 2, 2013, pp. 66–69. *IBBY*, www.ibby.org

ONLINE COURSES

Writing for Young Readers: Opening the Treasure Chest
<https://www.coursera.org/learn/writing-for-children>
Exploring Books for Children: Words and Pictures
<https://www.open.edu/openlearn/history-the-arts/exploring-books-children-words-and-pictures/content-section-0?active-tab=description-tab>

PATTERN OF ASSESSMENT:

Continuous Assessment:

One oral presentation (Critical Analysis/Passage analysis)
One written assignment (Creative Writing/Graphic narrative)

Total Marks: 50

25 marks

25 marks

Continuous Assessment Tasks:

Total Marks: 50

Knowledge Level	Marks
K1	5
K2	5
K3	5
K4	5
K5	10
K6	20

No CA Test

End-Semester Evaluation

A 3500-word Term Paper (Critical Analysis/Creative)

Total Marks: 100

No End-Semester Examination.

Knowledge Level	Marks	Rubrics for Evaluation
K1	10	Documentation/Knowledge of concepts related to the child and childhood
K2	10	Formulating and explaining topic statement/knowledge of techniques and strategies in writing narratives
K3	10	Explaining the conceptual framework/knowledge of the features of the sub-genre of the creative work
K4	25	Textual analysis/Narrative content
K5	25	Research arguments, relevance, coherence, appropriate use of academic language/coherence and creativity
K6	20	stating the conclusions/execution of the creative work

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PE/CL15												
	Course Title: CHILDREN'S LITERATURE												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	3	2	3	3	3	3	3	2	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH VII – ENGLISH

SYLLABUS

(Effective from the academic year 2023–2024)

CREATIVE WRITING

CODE:23EL/PE/CW15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to enable students to analyse aspects of poetry, fiction, drama and film scripts
- to enable them to produce a creative piece in a specific genre
- to give students hands-on training in producing a piece of creative writing
- to enable students to understand their writing process
- to equip students with skills to edit their own work and prepare it for publishing

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	recall the aspects of poetry and fiction	K1
CO2	demonstrate an awareness of the features of different literary genres to be used in producing a creative piece in a specific genre	K2
CO3	apply the aspects of poetry and fiction in creative works	K3
CO4	analyse their own writing process and their creative pieces and edit their works in order to publish them	K4
CO5	create and interpret their own works of poetry and fiction	K5-K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	<u>Introduction to Creative Writing</u> 1.1 Why do we write? 1.2 The writing process: tools for inspiration; writers' block; the five stages–research/planning, drafting, sharing and evaluating, revising and editing 1.3 Publishing and marketing	K1-K6	5	1-5

UNIT	CONTENT	CL	Hrs	CO
2	<u>Aspects of Poetry</u> such as: 2.1 Simile 2.2 Metaphor 2.3 Imagery 2.4 Symbol 2.5 Synecdoche 2.6 Metonymy 2.7 Rhyme and rhythm	K1-K6	10	1-5
3	<u>Types of Poetry</u> such as: 3.1 Haiku 3.2 Blackout Poetry 3.3 Performance / Slam Poetry 3.4 Free Verse 3.5 Sonnet	K1-K6	20	1-5
4	<u>Aspects of Fiction</u> such as: 4.1 Creating plot, character and setting 4.2 World building 4.3 Point of view 4.4 Themes and motifs 4.5 Linear and non-linear narratives	K1-K6	10	1-5
5	<u>Types of Fiction:</u> 5.1 Medium such as Terribly Tiny Tales, Flash Fiction, Short Story, Personal Essays, Novel 5.2 Genres such as Speculative Fiction (Fantasy, Science Fiction, Horror etc.), The Novel of Social Realism, The Bildungsroman, Culinary fiction etc. 5.3 Form/Style such as Epistolary, Stream-of-consciousness	K1-K6	20	1-5

BOOKS FOR REFERENCE

Disher, Gary. *Writing Fiction: An Introduction to the Craft*. Allen & Unwin, 2001.
 Eagleton, Terry. *How to Read a Poem*. Blackwell Publishing Ltd, 2007.
 Earnshaw, Stephen editor. *The Handbook of Creative Writing*. Edinburgh University Press, 2007.
 Fry, Stephen. *The Ode Less Travelled*. Hutchinson, 2005.
 Harper, Graeme. *Critical Approaches to Creative Writing*. Routledge, 2018.
 Le Guin, Ursula K. *Steering the Craft*. Mariner Books, 1998.
 Mills, Paul. *The Routledge Creative Writing Coursebook*. Routledge. 2006.

ONLINE RESOURCES

www.poets.org
www.poetryfoundation.org
www.literarydevices.org

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****No CA Test****Continuous Assessment Tasks:****Total Marks: 50**

Creative Work

25 marks

Knowledge Level	Marks	Rubrics for Evaluation
K2	5	Understanding techniques and strategies of writing (in the creative work)
K3	10	Applying knowledge of the features of fiction/poetry in the creative work
K6	10	Execution of the creative work

Oral Presentation

25 marks

Knowledge Level	Marks	Rubrics for Evaluation
K1	5	Highlighting aspects and types of fiction/poetry (in the critical analysis)
K4	10	Appraising peer work: analysis of the creative work of any 2 peers
K5	10	Critical evaluation of one's own of creative work- relevance and coherence (Critical Analysis)

End-Semester Evaluation**Total Marks: 100**

Creative Writing Project (Creative Writing and Critical Analysis)

Creative Writing

50 marks

Critical Analysis

50 marks

Knowledge Level	Marks	Rubrics for Evaluation
K1	10	Highlighting aspects and types of fiction/poetry (in the critical analysis)
K2	10	Understanding techniques and strategies of writing (in the creative work)
K3	20	Applying knowledge of the features of fiction/poetry (in the creative work)
K4	20	Appraising peer work: analysis of the creative work of any 2 peers
K5	20	Critical evaluation of one's own creative work- relevance and coherence
K6	20	Execution of the creative work

No End-Semester Examination

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PE/CW15												
	Course Title: CREATIVE WRITING												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	1	1	3	1	1	1	2	2	1	1	1
CO 2	3	3	3	3	3	1	1	2	3	3	2	2	3
CO 3	3	3	3	3	3	2	2	2	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023–2024)

NEW FICTION AND THE CONTEMPORARY WORLD

CODE:23EL/PE/NF15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to enable students to read, analyse, and assess twenty-first century fiction in the light of global, national and other topical issues
- to equip students with skills to examine and classify contemporary fiction
- to train students to identify and examine narrative strategies in contemporary fiction
- to enable students to examine the social, political, economic, and cultural contexts that shape new fiction
- to encourage them to engage with these issues in ways that will bring them to a deeper understanding and awareness of these in relation to their lives

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	define the general characteristics and trajectories of contemporary fiction	K1
CO2	demonstrate an understanding of the social, political, economic, and cultural contexts that shape new fiction	K2
CO3	identify the relationship between form and content, and the various narrative strategies adopted in fiction	K3
CO4	examine contemporary texts and classify them according to narrative styles, issues raised and socio-political backgrounds	K4
CO5	critically evaluate the cultural and literary contexts that engender various texts and discuss the contemporary discourses embedded in them	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

Course Content

Two award winning novels of the year / previous year to be selected by the course teacher and students. (To select, if possible, one novel in English by an Indian author)

UNIT	CONTENT	CL	Hrs	CO
1	<u>Introduction to Fiction</u> 1.1 The Novel 1.2 The Short Story	K1-K4 K1-K4	10	1,3,4
2	<u>Introduction to the Context/ Text</u> 2.1 Political and Economic Background 2.2 Cultural, Literary and Social Background	K1-K4 K1-K4	10	1,2,4 5
3	Novel 1	K1-K4	17	1-5
4	Novel 2	K1-K4	17	1-5
5	<u>Practical Application Tasks</u>	K5,K6	11	1-5

BOOKS FOR REFERENCE

Eagleton, Robert. *Contemporary Fiction: A Very Short Introduction*. Oxford University Press, 2013.

Eagleton, Robert, and Daniel O'Gorman. *The Routledge Companion to Twenty-First Century Literary Fiction*. Routledge, 2019.

Easthope, Antony. *Literary into Cultural Studies*. Routledge, 1991.

Walder, Dennis. Ed. *Literature in the Modern World: Critical Essays and Documents*. (1990). Oxford UP, (2nd Rev. ed.) 2004.

Continuous Assessment:

Total Marks: 50

No CA Test

One oral presentation

25 marks

One written task

25 marks

Knowledge Level	Marks
K1	5
K2	5
K3	10
K4	10
K5	10
K6	10

End-Semester Evaluation (Internal)

Total Marks: 100

A 3500-word term paper

Knowledge Level	Marks	Rubrics for Evaluation
K1	10	MLA Documentation
K2	15	Formulating and explaining research problem/question
K3	15	Explaining the conceptual framework
K4	25	Textual analysis and use of secondary sources
K5	25	Research arguments, relevance, coherence, appropriate use of academic language
K6	10	Research conclusions

No End-Semester Examination

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PE/NF15												
	Course Title: NEW FICTION AND THE CONTEMPORARY WORLD												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	2	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	2	3	2	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3
High Correlation: 3				Moderate Correlation: 2				Low Correlation: 1					

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023–2024)

READING FILMS

CODE:23EL/PE/RF15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to introduce students to the evolution of films and to significant movements in cinema
- to help students analyse films as an art form, using film language, editing, camera angles and movements as well as the sound in cinema
- to enable students to study various forms of representation in films
- to enable students to analyse the relationship between literature and films through adaptations
- to enhance the students' understanding of representation in cinema through the prescribed texts

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	recall important details related to the evolution of cinema and major film movements	K1
CO2	interpret cinema from various perspectives	K2
CO3	apply their knowledge of film language, editing, camera angles and movements, and sound to specific texts	K3
CO4	examine the relationship between films and literature through adaptations	K4
CO5	criticize films as texts and create an academic discourse on cinema	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	<u>Evolution of Films</u> 1.1 from still to moving pictures 1.2 from black and white to colour 1.3 from silent movies to talkies Texts to be discussed: Lumière Brothers: <i>The Arrival of a Train</i> George Méliès : <i>A Trip to the Moon</i> Edwin Porter: <i>The Great Train Robbery</i>	K1-K6	8	1, 2

UNIT	CONTENT	CL	Hrs	CO
2	<u>Film Language</u> Mise-en-scène—actors, costume and make-up, props, setting, lighting, shot composition Editing—types of cuts, montage, fade, dissolve, iris in/out, etc. Cinematography—composition, camera movements and angles Sound—diegetic, non-diegetic, trans-diegetic	K1-K6	15	1, 2, 3, 5
3	<u>Global Cinematic Movements</u> 3.1 Italian Neo-realism Vittorio De Sica: <i>Ladri di Biciclette</i> 3.2 French New Wave Agnès Varda: <i>Cléo from 5 to 7</i> 3.3 Iranian New Wave Jafar Panahi: <i>Offside</i> 3.4 Indian Parallel Cinema Satyajit Ray: <i>Pather Panchali</i>	K1-K6	16	1, 2, 3, 5
4	<u>Representation in Indian Cinema</u> 4.1 Mari Selvaraj: <i>Pariyerum Perumal</i> 4.2 Karan Johar and Zoya Akhtar: <i>Ajeb Dastaan Hai Yeh and Sheila ki Jawaani</i> from <i>Bombay Talkies</i> 4.3 Alankrita Shrivastava: <i>Lipstick Under My Burkha</i>	K1-K6	16	1, 2, 3, 5
5	<u>Adaptations</u> Vishal Bharadwaj: <i>Maqbool</i> Matthew Warchus: <i>Matilda the Musical</i>	K1-K6	10	1-5

BOOKS FOR REFERENCE

Abrahams, Nathan, et al. *Studying Film*. Arnold: Hodder Headline Group, 2001.

Aitken, Ian. *European Film Theory and Cinema: A Critical Introduction*. Edinburgh University Press, 2001.

Andrew, Dudley. *Concepts in Film Theory*. Oxford University Press, 1984.

Bazin, Andre. *What is Cinema? Vol. I*. University of California Press, 2005.

Bhaskar, Ira. "The Indian New Wave". *Routledge Handbook of Indian Cinemas*. edited by K. Moti Gokulsing and Wimal Dissanayake. Routledge, 2019. pp. 19-34.

Buckland, Warren, editor. *Film Theory and Contemporary Hollywood Movies*. Routledge, 2009.

Butler, Andrew. *Film Studies*. Pocket Essentials, 2005.

Dixon, Wheeler Winston and Foster, Gwendolyn. *A Short History of Film*. Rutgers University Press, 2018.

Elsaesser, Thomas, and Malte Hagener. *Film Theory: An Introduction Through the Senses*. Routledge, 2010.

Hutcheon, Linda. "In Defence of Literary Adaptation as Cultural Production." *Media Culture Journal*, vol. 10, no. 2, May 2007. <http://journal.media-culture.org.au/0705/01hutcheon.php>

Kuhn, Annette, Guy Westwell. *A Dictionary of Film Studies*. OUP, 2012.

Monaco, James. *How to Read a Film: The World of Movies, Media, and Multimedia: Language, History, Theory*. Oxford University Press, 2000.

Nichols, Bill. *Engaging Cinema: An Introduction to Film Studies*. W. W. Norton and Company, 2010.

ONLINE COURSES

https://onlinecourses.nptel.ac.in/noc19_hs60/preview

<https://in.coursera.org/learn/write-a-feature-length-screenplay-for-film-or-television#syllabus>

PATTERN OF ASSESSMENT

No CA Test

Continuous Assessment Tasks: Total Marks: 50

One online quiz (based on film language)

25 marks

Knowledge Level	Marks
K1	4
K2	4
K3	4
K4	4
K5	4
K6	5

One written assignment (analysis of an excerpt from a film)

25 marks

Knowledge Level	Marks
K1	2
K2	2
K3	3
K4	4
K5	7
K6	7

End-Semester Evaluation (Internal)

Total Marks: 100

A 3500-word term paper (critical analysis of a film)

Knowledge Level	Marks	Rubrics for Evaluation
K1	10	MLA Documentation
K2	10	Formulating and explaining research problem/question
K3	20	Explaining the conceptual framework
K4	20	Textual analysis and use of secondary sources
K5	20	Research arguments, relevance, coherence, appropriate use of academic language
K6	20	Research conclusions

No End-Semester Examination

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PE/RF15												
	Course Title: READING FILMS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	2	2	1	2	2	2	2	2	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3
High Correlation: 3				Moderate Correlation: 2				Low Correlation: 1					

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Postgraduate Elective Course offered by the Department of English to
M.A / M.Sc. Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

ENGLISH FOR COMMUNICATION

CODE:23EL/PE/EC23

CREDITS:3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to train students to listen carefully and record accurately vital information in specific contexts, and help students improve their proficiency in spoken english
- to train students to interpret visual representation of facts and ideas and identify grammatical inaccuracies in a text
- to enable students to draft well-structured paragraphs, and letters of application and complaint

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	accurately recall orally communicated information; state coherently using appropriate intonation and pronunciation; list main points of a written text and identify errors in written texts	K1
CO2	accurately report orally communicated information; identify and locate verbal information; and interpret verbal and graphic representation of information	K2
CO3	examine issues through role play; describe clearly and discuss effectively during oral presentations; distinguish main ideas and details in written texts; organise and construct coherent discursive essays and statements of purpose; and distinguish main ideas in written texts and summarise	K3, K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	Hrs	CO
1	<u>Listening</u> 1.1 Listening for gist 1.2. Note-taking - Lectures/Panel Discussions/ Debates/ Podcasts	K1 K2	9	1, 2
2	<u>Speaking</u> 2.1 Using appropriate registers 2.2 Pronunciation 2.3 Intonation 2.4 Tone 2.5 Role Play 2.6 PowerPoint Presentation	K1 K1 K1 K1 K3 K4	10	1-3

UNIT	CONTENT	CL	Hrs	CO
3	<u>Reading</u> 3.1 Discursive Essay 3.1.1 Skimming: Identifying the main points 3.1.2 Scanning: Looking for specific information 3.1.3 Intensive Reading 3.2 Interpreting charts, graphs, pie-diagrams etc.	K1, K2 K1 K2 K3, K4 K2	10	2, 3
4	<u>Writing</u> 4.1 Error identification 4.2 Statement of Purpose 4.3 Discursive Essay 4.4 Summarising	K2 K3 K4 K4	10	2,3

BOOKS FOR REFERENCE

Anand, Renu. Gayatri Khanna. *Oxford Communicative : English Resource Book*. Oxford, 2016.

Jones Macziola, Sarah & Greg White. *Getting Ahead: A Communication Skills Course for Business English: Teacher's Book*. Cambridge, 2001.

.... *Getting Ahead: A Communication Skills Course for Business English: Learner's Book*. Cambridge, 2001.

Jones Leo & Richard Alexander. *New International Business English: Teacher's Book*. Cambridge, 1997.

..., *New International Business English: Student's Book*. Cambridge, 2000.

..., *New International Business English: Workbook*. Cambridge, 2000.

Kumar, Sanjay & Pushp Latha. *Communication Skills*. II Edition. Oxford, 2015.

Mavor, Ferrier. W. *English for Business*. New Jersey, 1988.

Pandey, Meenu, Anant Acharya & Ankush Tripathi. *Ace Your Communication Skills*. Rigi, 2017.

WEB RESOURCES

www.cambridgeenglish.org
www.pearsonlongman.com

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50
Units 1 and 2 not to be tested for CA Test.

Section	Knowledge Level	Marks	Pattern
A	K1	5	5x1=5 (Reading Comprehension - Passages - Skimming)
B	K2	15	5x3=15 (75 words) (Reading Comprehension - Passages/Charts - Scanning; Writing - Error Identification)
C	K3	10	1x10=5 (150 words) (Reading Comprehension - Passages/Charts - intensive reading) CA 1 1x10=10 (1 out of 2 questions, 150 words) (Statement of Purpose) CA 2
D	K4	20	1x20=20 (Summarising) CA 1 1x20=20 (1 out of 2 questions, 300 words) (Discursive Essay) CA 2

Other components**Total Marks: 50**

Section	Knowledge Level	Marks	Pattern
A	K1	10	Listening for gist and specific information
B	K2	10	Listening and Note-taking
C	K3	15	Role Play
D	K4	15	Power-point presentation (graphic representation of facts & figures)

End-Semester Examination: Total Marks: 100**Duration: 3 hours****Units 1 and 2 not to be tested.**

Section	Knowledge Level	Marks	Pattern
A	K1	10	10x1=10 (Reading Comprehension - Passages - Skimming)
B	K2	30	10x3=30 (75 words) (Reading Comprehension - Passages/Charts - Scanning; Writing - Error Identification)
C	K3	20	2x5=10 (1 out of 2 questions, 150 words) (Reading Comprehension - intensive reading) 1x10=10 (1 out of 2 questions, 300 words) (Statement of Purpose)
D	K4	40	1x20=20 (1 out of 2 questions, 300 words) (Summarising) 1x20=20 (1 out of 2 questions, 300 words) (Discursive Essay)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PE/EC23												
	Course Title: ENGLISH FOR COMMUNICATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	2	2	1	1	3	3	2	3	2
CO 2	3	3	2	3	2	2	1	1	3	3	2	3	2
CO 3	3	3	2	3	2	2	1	1	3	3	2	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Postgraduate Elective Course offered by the Department of English to
M.A / M.Sc. Degree Programme**

SYLLABUS

(Effective from the academic year 2023–2024)

LITERATURE AND SPIRITUALITY

CODE:23EL/PE/LS23

CREDIT:3

L T P:3 0 0

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- to introduce students to the spiritual and mystical dimensions of different religious traditions, through literature
- to enable students to explore and appreciate expressions of spiritual experience within major religious traditions
- to promote, in students, an understanding of the commonality and differences among various spiritual traditions

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	recall features of spiritual traditions and practices within major religious traditions of the world	K1
CO2	identify features of spiritual literature	K2
CO3	explain socio-cultural contexts in which spiritual traditions operate and analyse the role of social structures/institutions in spirituality	K3, K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Sumangalamata: At Last Free (<i>from Women in Praise of the Sacred</i> Ed. Jane Hirschfield, p 18) 1.2 Three Tantric Buddhist Women's Song: (<i>from Women in Praise of the Sacred</i> Ed. Jane Hirschfield, p 51-52) 1.3 Surdas: Today My Friend (<i>from Sur's Ocean</i> Trans. John Stratton Hawley, p 33) 1.4 Basavanna: The Elephant is Huge (<i>from Eating God</i> Ed. Arundhati Subramanian, p 134) 1.5 Mirabai: Love has stained my body (<i>from Women in Praise of the Sacred</i> Ed. Jane Hirschfield, p 133)	K1-4	10	1-4

UNIT	CONTENT	CL	Hrs	CO
2	2.1 The Bible: Psalm 23 <i>New King James Version</i> 2.2 The French Beguine: from <i>The Soul Speaks (from Women in Praise of the Sacred</i> Ed. Jane Hirschfield, p 111-112) 2.3 John Donne: Hymn to God the Father 2.4 Christina Rossetti: Spring 2.5 Gerard Manley Hopkins: God's Grandeur	K1-4	10	1-4
3	3.1 Jalal-ud-din Rumi: Story-Water (from <i>Essential Rumi</i> Ed. Coleman Barks, p 171-172, 265) 3.2 Rabi'a al Basra: I am fully qualified (from <i>Women in Praise of the Sacred</i> Ed. Jane Hirschfield p 43) 3.3 Kabir: Saints I See The World Is Mad 3.4 Sheikh Muzaffer: Stories (from <i>Essential Sufism</i> Ed. James Fadiman p 131, 132, 146) 3.5 Yunus Emre: I Haven't Come Here To Settle Down	K1-4	10	1-4
4	4.1 Enheduanna: O my Lady, Beloved of Heaven (from <i>Women in Praise of the Sacred</i> Ed. Jane Hirschfield p 3) 4.2 Sappho: Leave Crete (from <i>Women in Praise of the Sacred</i> Ed. Jane Hirschfield p 16) 4.3 Nahuatl: Invocation for Storing of Corn (from <i>Women in Praise of the Sacred</i> Ed. Jane Hirschfield p 146)	K1-4	9	1-4

BOOKS FOR REFERENCE

Fadiman, James. Ed. *Essential Sufism*. Castle Books, 1997.
Hirschfield, Jane. *Women in Praise of the Sacred*. HarperPerennial, 1994.
James, William. *The Varieties of Religious Experience*. Modern Library, 1999.
King, Ursula. *Christian Mystics: Their Lives and Legacies throughout the Ages*. Routledge, 2004.
Knysh, Alexander. *Sufism: A New History of Islamic Mysticism*. Princeton University Press, 2017.
Subramaniam, Arundhati. Ed. *Eating God*. Penguin Ananda, 2014.
Underhill, Evelyn. *Mysticism: A Study In Nature And Development Of Spiritual Consciousness*. Createspace Independent Publishers, 2011.

JOURNALS

Bhakti Studies
Renascence

WEBSITES

www.innerexplorations.com www.sacred-texts.com/isl/
[http://www.poetry-haikhana.com/Poets/E/Emre Yunus/Ihaventomeh/index.html](http://www.poetry-haikhana.com/Poets/E/Emre_Yunus/Ihaventomeh/index.html)
<http://symbolreader.net/2014/08/24/the-goddess-by-denise-levertov/>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5 (1 out of 2, 100 words)
B	K2	5	1x5 (1 out of 2, 100 words)
C	K3	20	1x20 (1 out of 2, 500 words)
D	K4	20	1x20 (1 out of 2, 100 words)

Other Components: Total Marks: 50

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class Work –
Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	10
K2	10
K3	15
K4	15

End-Semester Examination: Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10 (1 out of 2, 250 words)
B	K2	10	1x10 (1 out of 2, 250 words)
C	K3	40	2x20 (2 out of 4, 500 words)
D	K4	40	2x20 (2 out of 4, 500 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PE/LS23												
	Course Title: LITERATURE AND SPIRITUALITY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	2	2	2	3	3	2	3	3	3
CO 2	3	3	3	3	1	2	2	3	3	2	3	3	3
CO 3	3	2	3	3	1	1	2	3	3	1	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Postgraduate Elective Course offered by the Department of English to
M.A / M.Sc. Degree Programme**

SYLLABUS

(Effective from the academic year 2023–2024)

LITERATURE, MYTH AND FOLKLORE

CODE:23EL/PE/MF23

CREDITS:3

L T P:3 0 0

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- to understand the historical and contemporary significance of mythic and folk narratives from across the world.
- to compare and contrast mythic and folk narratives cross-culturally with reference to cultural distinctiveness, historical interaction and contemporary relevance.
- to analyze the influence of mythic and folk narratives on art, literature, films etc.

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	define the features of mythology and folklore	K1
CO2	interpret mythology and folklore from various perspectives	K2
CO3	identify and analyse the influence of mythology and folklore in contemporary culture	K3, K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	Hrs	CO
1	<u>Myths of Creation</u> 1.1 Lumeraï, the Mother Snake: A Rainbow Serpent Creation Story from the Northern Territory (Australia) 1.2 Odin and Ymir (Norse) 1.3 The Flood, Epic of Gilgamesh (West Asia)	K1-4	10	1-4
2	<u>Myth and Gender</u> 2.1 Pandora (Greek) 2.2 Shiva-Shakti (India) 2.3 Margaret Atwood: The Penelopiad (Greek)	K1-4	10	K1-4
3	<u>Myth/Folklore and the Non-Human World /Natural World</u> 3.1 Anansi: How Stories Came to the World (Africa) 3.2 How Marshlands Came to Be (Siberia) 3.3 Crane Wife (Japan)	K1-4	10	K1-4
4	<u>Contemporary Expressions of Mythology and Folklore</u> 4.1 The People Could Fly (African American) 4.2 <i>Vikram Vedha</i> (Film, India) 4.3 Ambai: Forest (India)	K1-4	9	K1-4

BOOKS FOR REFERENCE

- Bronner, Simon. *Folklore: The Basics*. Taylor & Francis. 2016.
- Bendix, Regina F, and Galit Hasan-Rokem. Ed *A Companion to Folklore*. Blackwell Publishing Ltd., 2012.
- George, Andrew. *The Epic of Gilgamesh: The Babylonian Epic Poem and Other Texts in Akkadian and Sumerian*. Penguin Classics, 2002.
- Gokhale, Namita. *The Book of Shiva*. Penguin UK, 2012.
- Gates Jr., Henry Louis & MariaTatar. *The Annotated African American Folktales*. Liveright, 2017.
- Kenaar, Vered Lev. *Pandora's Senses: The Feminine Character of the Ancient Text*. The University of Wisconsin Press, 2008.
- Sengupta, Poile. *Vikram and Vetal*. Penguin Books, 2016.
- Stookey, Lorena Laura. *Thematic Guide to World Mythology*. Greenwood Press, 2004.

JOURNALS

Journal of Folklore Research
Mythological Studies Journal
Fabula

ONLINE RESOURCES

<https://www.mythologydatabase.com/>
<https://folklore-society.com/resources/>
<http://talkingmyths.com/>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	5	1x5 (1 out of 2, 100 words)
B	K2	5	1x5 (1 out of 2, 100 words)
C	K3	20	1x20 (1 out of 2, 500 words)
D	K4	20	1x20 (1 out of 2, 100 words)

Other Components: Total Marks: 50

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Scheduled Class Work –
Passage Analysis /Quiz/Panel Discussion/Group Presentation

Knowledge Level	Marks
K1	10
K2	10
K3	15
K4	15

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	10	1x10 (1 out of 2, 250 words)
B	K2	10	1x10 (1 out of 2, 250 words)
C	K3	40	2x20 (2 out of 4, 500 words)
D	K4	40	2x20 (2 out of 4, 500 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PE/MF23												
	Course Title: LITERATURE MYTH AND FOLKLORE												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	3	2	2	2	3	3	2	2	3	3
CO 2	3	2	3	3	2	2	3	3	3	2	2	3	3
CO 3	3	3	3	3	2	2	3	3	3	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Postgraduate Elective Course offered by the Department of English to
M.A / M.Sc. Degree Programme**

SYLLABUS

(Effective from the academic year 2023–2024)

FANTASY FICTION

CODE:23EL/PE/FF23

CREDITS:3

L T P:3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to introduce students to various definitions of fantasy fiction
- to introduce students to the history of fantasy fiction
- to train students to identify and analyse the features of various genres of fantasy fiction

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	describe the history and evolution of fantasy fiction	K1
CO2	demonstrate a basic understanding of the sub-genre of fantasy fiction	K2
CO3	identify the genre and features of fantasy fiction and analyse the socio-cultural contexts in fantasy fiction	K3, K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Introduction to Fantasy Fiction: Speculative Fiction Fantasy, the Fantastic and Fantasy Fiction Subgenres of fantasy 'High' and 'Low' fantasy Use of myth and folklore in fantasy fiction	K1-4	7	1-3
2	2.1 Evolution of Fantasy Fiction	K1-2	6	1-2
3	3.1 J R R Tolkien: "Here Follows a Part of the Tale of Aragorn and Arwen" from <i>The Lord of the Rings</i> 3.2 Terry Pratchett: "A Collegiate Casting Out of Devilish Devices" from <i>A Blink of the Screen</i>	K1-4	13	1-3
4	4.1 Nnedi Okorafor: <i>Akata Witch</i> 4.2 Nalo Hopkinson: "The Easthound" from <i>Falling in Love with Hominids</i>	K1-4	13	1-3

BOOKS FOR REFERENCE

Card, Orson Scott. "The Infinite Boundary". *How to Write Science Fiction and Fantasy*. Writers' Digest Books. 1990.

Dalton, A. J. *Sub Genres of British Fantasy Literature*. Luna Press Publishing, 2017.

Hume, Kathryn. *Fantasy and Mimesis*. Methuen, 1984.

Mendelsohn, Farah, Edward James. *A Short History of Fantasy*. Middlesex University Press, 2009.

Reid, Robin Anne. *Women in Science Fiction and Fantasy (Vol. 1 & 2)*. Greenwood Press, 2009.

Sinclair, Frances. *Fantasy Fiction*. School Library Association, 2008.

Stableford, Brian. *The A to Z of Fantasy Literature*. The Scarecrow Press, Inc., 2009. Swinfen, Ann. *In Defense of Fantasy: A Study of the Genre in English and American Literature Since 1945*. Routledge & Kegan Paul, 1984.

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	15	5x3=15 (5 questions, 50 words)
B	K2	15	3x5=15 (3 out of 5 questions, 100 words)
C	K3	10	1x10=10 (1 out of 2 questions, 250 words)
D	K4	10	1x10=10 (1 out of 2 questions, 250 words)

Other Components:

Total Marks: 50

Assignment/Seminar/Presentation/Take Home Test/Open Book Test/Quiz/Panel Discussion/ Group Presentation/Role-Play/Dramatisation/ Creative Writing

Knowledge Level	Marks
K1	20
K2	10
K3	10
K4	10

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	30	10x3=30 (10 questions, 50 words)
B	K2	30	6x5=30 (6 out of 8 questions, 100 words)
C	K3	20	2x10=20 (2 out of 4 questions, 250 words)
D	K4	20	2x10=20 (2 out of 4 questions, 250 words)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23EL/PE/FF23												
	Course Title: FANTASY FICTION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	1	2	1	1	1	1	2	1	1	1	1
CO 2	3	1	1	2	1	1	1	1	2	1	1	1	1
CO 3	3	3	3	3	1	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023–2024)

POPULAR FICTION

CODE:23EL/PI/PF24

CREDITS:4

OBJECTIVES OF THE COURSE

- to encourage students to identify features of popular fiction
- to guide students to an appreciation of the balance between popular appeal and aesthetic value

COURSE LEARNING OUTCOMES

On successful completion of this course, students will be able to

- identify features of popular fiction
- identify and critique techniques that contribute to the popular appeal of works of fiction
- understand and appreciate works of fiction that become a crucial part of the contemporary milieu

COURSE CONTENT

Two bestsellers from the past three years, with literary merit, to be selected by the course teacher and student/s, in consultation with the faculty of the Department

BOOKS FOR REFERENCE

Berberich, Christine, editor. *The Bloomsbury Introduction to Popular Fiction*. Bloomsbury, 2015

Glover, David and Scott McCracken, editors. *The Cambridge Companion to Popular Fiction*. Cambridge UP, 2017.

PATTERN OF ASSESSMENT

End-Semester Examination

Four out of six 850-word essays

Total Marks:100

4x25= 100 marks

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH VII - ENGLISH

SYLLABUS

(Effective from the academic year 2023–2024)

LITERATURE AND SCIENCE

CODE:23EL/PI/LN24

CREDITS:4

OBJECTIVES OF THE COURSE

- to introduce students to the interdisciplinary field of literature and science
- to familiarise students with the reading methods used in this field
- to train students to read and analyse literary texts using concepts from various sciences

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- study trends in literary studies and various sciences alongside each other
- analyse the prescribed texts using concepts from different sciences

Unit	1	
	Theoretical Background	
	1.1 Mathew Arnold	Literature and Science
	1.2 C P Snow	Two Cultures
	1.3 Aldous Huxley	Literature and Science
Unit	2	
	Literature and Physics	
	2.1 Tom Stoppard	Hapgood
Unit	3	
	Literature and Mathematics	
	3.1 Edna St. Vincent Millay	Euclid Alone has Looked on Beauty Bare
Unit	4	
	Literature and Botany	
	4.1 Elizabeth Gilbert	Signature of All Things
Unit	5	
	Practical Application Tasks	

BOOKS FOR REFERENCE

Alexander, Sarah C. *Victorian Literature and the Physics of the Imponderable*. Routledge, 2015.
Gold, Barry J. *Thermopoetics: Energy in Victorian Literature*. MIT Press, 2010.
Gossin, Pamela. *Routledge Encyclopaedia of Literature and Science*. Greenwood Publishing, 2002.
Haydern, Judy. *Literature in the Age of Celestial Discovery: From Copernicus to Flamsteed*. Palgrave, 2016.
Meisel, Martin. *Chaos Imagined: Literature, Art and Science*. Columbia University Press, 2016.

JOURNALS

Journal of Literature and Science Configurations

PATTERN OF ASSESSMENT

End-Semester Examination: Total Marks: 100 Duration: 3 hours
Four out of six 850-word essays 4x25= 100 marks



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

M.A. Degree
Branch X HISTORY OF FINE ARTS
(CHOICE BASED CREDIT SYSTEM)

OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF FINE ARTS

PROGRAMME DESCRIPTION

In keeping with the commitment of Stella Maris College towards nurturing academic excellence, the Department of Fine Arts offers a teaching-learning-evaluation system that assures optimal educational benefits. The M.A. programme employs multiple teaching-learning methodologies. While art and design practice nurtures the creativity of students, the study of art history provides a strong theoretical framework for their artistic expression. The combination of art theory and practice has remained unique to the curriculum and forms the strength of the programme.

The postgraduate programme provides students with a holistic art and design curriculum with focus on vocational and entrepreneurial skills for greater employability. A mandatory summer internship further enhances the exposure of students to art and design. Research is integral to the curriculum and several courses are dependent on critical enquiry, including a mandatory dissertation in the fourth semester.

Various curricular and co-curricular activities such as study tours, guest lectures, workshops, field visits, visits to galleries and museums, certificate courses, conferences, seminars, and collaborative projects with reputed institutions are organised or undertaken on a regular basis to enhance and complement the curriculum.

VISION

To empower individuals through art education to be skilled, creative, ethical, and socially responsible.

MISSION

To provide individuals with relevant art education with emphasis on creativity, vocational training, social responsibility and ethical research.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF FINE ARTS

PSO 1	Demonstrate an understanding of critical concepts in art and competency in design practice
PSO 2	Acquire research skills and career/entrepreneurial capacities in art and design to become empowered individuals
PSO 3	Be equipped with art and design knowledge and skills to respond as leaders to a range of social, cultural, economic and environmental issues
PSO 4	Use the art and design knowledge and skills acquired to navigate local, national and global concerns
PSO 5	Apply art and design learning to sensitively and ethically engage with environmental/ cultural/ socio-economic/ political concerns

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

DISTRIBUTION OF CREDITS AND HOURS

M.A. History of Fine Arts 2023-2024

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC (Theory and Pracitcal)	4	5	4	6	4	5	4	5	16	21
	4	5	4	6	4	6	5	7	17	24
	5	7	4	6	4	6	5	7	18	26
	5	7							5	7
Dissertation							7	8	7	8
PE-dept.	5	5	5	5	5	5			15	15
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PL							2	2	2	2
PN					2				2	0
Library		1				3		1		5
TOTAL	23	30	24	30	24	30	23	30	94	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.A. DEGREE: BRANCH X - HISTORY OF FINE ARTS

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
SEMESTER-I									
23FA/PC/AI14	Arts and Ideas - Indian	4	4	1	0	3	50	50	100
23FA/PC/AW14	Arts and Ideas - Western	4	4	1	0	3	50	50	100
23FA/PC/P115	Drawing Practical	5	0	0	7	3	50	50	100
23FA/PC/P215	Fundamentals of Design Practical	5	0	0	7	3	50	50	100
	Department Elective I								
SEMESTER-II									
23FA/PC/T124	Textile Surface Design Practical	4	0	0	6	-	50	-	100
23FA/PC/C124	Communication Design I Practical	4	0	0	6	-	50	-	100
23FA/PC/P324	Photography Practical	4	0	0	6	-	50	-	100
23FA/PK/SS22	Soft Skills	2	2	0	0	-	50	-	100
CD / ET	Value Education								
	Department Elective II								
	Common Elective I								
SEMESTER-III									
23FA/PC/CI34	Crafts in India	4	4	1	0	-	50	50	100
23FA/PC/T234	Textile Printing Practical	4	0	0	6	-	50	-	100
23FA/PC/C234	Communication Design II Practical	4	0	0	6	-	50	-	100
23FA/PN/SI32	Summer Internship	2	0	0	0	-	50	-	100
CD / ET	Value Education								
	Department Elective III								
	Common Elective II								
SEMESTER-IV									
23FA/PC/VC44	Visual Culture	4	4	1	0	-	50	50	100
23FA/PC/T345	Textile Embellishment and Product Design Practical	5	0	0	7	-	50	-	100
23FA/PC/C345	Communication Design III Practical	5	0	0	7	-	50	-	100
23FA/PC/DS47	Dissertation	7	0	0	8	-	50	50	100
	PA/PL								
Elective Courses Offered to Parent Department									
23FA/PE/P115	Painting Practical	5	0	0	5	-	50	-	100
23FA/PE/P215	Media Exploration Practical	5	0	0	5	-	50	-	100
23FA/PE/CW15	Critical Writing	5	5	0	0	-	50	-	100
23FA/PE/RM15	Research Methodology	5	5	0	0	-	50	-	100
23FA/PE/P315	Book Illustration Practical	5	0	0	5	-	50	-	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.A. DEGREE: BRANCH X - HISTORY OF FINE ARTS

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
23FA/PE/P415	Digital Illustration Practical	5	0	0	5	-	50	-	100
Elective Courses Offered to Other Departments									
23FA/PE/CD23	Creative Design Practical	3	0	0	3	-	50	-	100
23FA/PE/PA23	Paper Art Practical	3	0	0	3	-	50	-	100
The Department will offer one Social Awareness / Service Learning Course									
Social Awareness									
23FA/PA/RD12	Rights of Differently Aabled	2	2	0	0	-	50	-	100
23FA/PA/CR12	Child Rights	2	2	0	0	-	50	-	100
23FA/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100
23FA/PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100
23FA/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100
23FA/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100
23FA/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100
23FA/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100
23FA/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100
Service Learning (Specific to the Department)									
23FA/PL/AC12	Art for Children	2	2	0	0	-	50	-	100
Independent Elective Courses									
23FA/PI/FM24	Fundamentals of Fashion Management	4	0	0	0	3	-	100	100
23FA/PI/IM24	Indian Miniature Painting	4	0	0	0	3	-	100	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

ARTS AND IDEAS - INDIAN

CODE: 23FA/PC/AI14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to enable a historical survey of indian art with emphasis on social, cultural, religious and political contexts
- to provide an overview of indian art from prehistory to the postmodern
- to create an understanding of how artistic styles in painting, sculpture, and architecture were fashioned by the predominant ideas of the respective time period

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	define terms used in Indian art from prehistory to the postmodern	K1
CO2	explain characteristics of specific artworks and art movements in Indian art	K2
CO3	demonstrate how major religions have shaped form and structure of art in India	K3
CO4	critique diverse forms and styles of artistic expression in India	K4
CO5	evaluate ideas and contexts in Indian architecture, sculpture and painting	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction	K1- K3	3	1-3
	1.1 Indus Valley Civilization: Trade and Agriculture			
	1.1.1. Architecture: The Great Bath and Granary, Mohenjodaro 1.1.2. Seals: Humped Bull, Unicorn, Yogi			
	1.2 Indian Religions: Vedic, Buddhism, Jainism, Hinduism, Islam	K1- K5	3	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Buddhist and Jain 2.1 Buddhist: The Human Ideal, Social Reformation 2.1.1 Architecture: Stupa No.1 Sanchi; Chaitya: Karle; Vihara: Cave No.12 (Tin Thal), Ellora 2.1.2 Sculpture: Vedika: Ruru Jataka, Bharhut; Torana: The Great Departure, Salabhanjika/Yakshi, Eastern gateway, Stupa No.1 Sanchi; Gandhara and Mathura Buddha: Heads; Seated Buddha, Sarnath 2.1.3 Painting: Chaddanta Jataka, Cave No.10, Ajanta; Bodhisattva Padmapani, Cave No.1, Ajanta 2.2 Jain: Man and Nature 2.2.1 Architecture: Dilwara temples, Mount Abu 2.2.2 Sculpture: Gommatesvara, Sravana-Belagola 2.2.3. Painting: Sittanavasal murals, Jaina miniatures - Kalpasutra	K1- K5	18	1-5
3	Hindu: Cosmic Mythology, Symbolism and styles 3.1 Architecture 3.1.1 Rockcut architecture: Five Rathas, Mamallapuram; Kailasanatha Temple, Ellora 3.1.2. Structural architecture: North Indian: Kandariya Mahadeo Temple, Khajuraho; Central Indian: Kesava temple, Somnathpur; South Indian: Brihadeswara Temple, Thanjavur 3.2 Sculpture: Ardhanariswara, Gangaikondacholapuram; Kiratarjuniya Panel, Mamallapuram; Vishnu Anantasayana, Deogarh; Plinth Relief sculptures, Hoysalaswara Temple, Halebid; Trimurti, Cave No.1, Elephanta; Nataraja Bronze, Tiruvalangadu; Shakthi: Mahishasuramardini panel, Mahishasura Mandapa, Mamallapuram 3.3 Painting: Bhakthi: Sundarar setting out on his journey to Kailash, Brihadeswara Temple, Thanjavur; Krishna and Radha in the Groves, Kangra miniature painting	K1- K5	15	1-5
4	Islam: Submission to God and Symbols of Power 4.1 Architecture: Qutb complex, Delhi; Jami Masjid, Delhi; Fatehpur Sikri Complex, Agra; Humayun's Tomb, Delhi; Akbar's Tomb, Sikandra; Taj Mahal, Agra 4.2 Mughal Miniatures: Akbar Restrains Havai, Jehangir's Dream	K1- K5	8	1-5

UNIT	CONTENT	CL	Hrs	CO
5	Modern: Nation as Concept: Colonialism, Nationalism, Post Colonialism 5.1 Company Painting; Raja Ravi Varma, 5.2 1900–1940s: Bengal School: Abanindranath Tagore 5.3 Jamini Roy, Amrita Shergil, Rabindranath Tagore D. P. Roy Choudhary, Ram Kinker Baij, 5.4 1940s–1960s: Calcutta Group, Delhi Silpi Chakra, PAG, Bombay: M.F. Husain, S. H. Raza, F. N. Souza, Madras Art Movement, Cholamandal Artist's Village: K.C.S. Paniker, S. Dhanapal, P.V. Janakiram 5.5 1970s: Akbar Padamsee, K.G. Subramaniam, Bhupen Khakker, Redappa Naidu, Anjolie Ela Menon, Bikash Bhattacharjee, R. B. Bhaskaran, Sudhir Patwardhan 5.6 1980s–2010: Rumana Husain, Vivan Sundaram, Nalini Malani, Atul Dodiya, Subodh Gupta, Jitish Kallat	K1- K5	18	1-5

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Bhagat, Ashrafi. *Framing the Regional Modern: K.C.S. Paniker and the Madras Art Movement*. Thrissur: Kerala Lalithakala Akademi, 2011.

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 Singh, Sumit. *Islamic Architecture: A Critical Study*. New Delhi: Cyber Tech Publications, 2014.
 Swaminathan, S. *Mahabalipuram: Unfinished Poetry in Stone*. India: Arkey Graphics, 2011.
 Talim, Meena. *Buddhist Art*. 2 Vols. Delhi: Buddhist World Press, 2014.

PATTERN OF ASSESSMENT

CA Test: **Total Marks: 50** **Duration: 1½ Hours**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No of Questions to be answered	No. of Questions to be set
A – 100 words	K1 (5)	1 X 5 = 5	1 K1 question	2 K1 questions
B – 100 words	K2 (5)	1 X 5 = 5	1 K2 question	2 K2 questions
C – 300 words	K3 (10)	1 X 10 = 10	1 K3 question	2 K3 questions
D – 300 words	K4 (10)	1 X 10 = 10	1 K4 question	2 K4 questions
E – 600 words	K5 (20)	1 X 20 = 20	1 K5 question	2 K5 questions
	Total	50	5	10

Other Components: **Total Marks: 50**

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Examination: **Total Marks: 100** **Duration: 3 Hours**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No of Questions to be answered	No. of Questions to be set
A – 100 words	K1 (10)	2 X 5 = 10	2 K1 question	3 K1 questions
B – 100 words	K2 (10)	2 X 5 = 10	2 K2 question	3 K2 questions
C – 300 words	K3 (30)	2 X 15 = 30	2 K3 question	3 K3 questions
D – 300 words	K4 (30)	2 X 15 = 30	2 K4 question	3 K4 questions
E – 600 words	K5 (20)	1 X 20 = 20	1 K5 question	2 K5 questions
	Total	100	9	14

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PC/AI14													
I	Course Title: ARTS AND IDEAS - INDIAN													
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)					
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	
CO 1	3	3	3	3	3	1	3	3	3	3	3	3	1	
CO 2	3	3	3	3	3	1	3	3	3	3	3	3	2	
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	2	
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3	
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3	

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

ARTS AND IDEAS - WESTERN

CODE: 23FA/PC/AW14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to provide an orientation to art history as an academic discipline
- to learn the appropriate vocabulary and critical tools for discussing and writing about works of art
- to provide a historical survey of western art with emphasis on social, cultural, religious, and political contexts
- to understand how artistic styles in painting, sculpture, and architecture were fashioned by the predominant ideas of the respective time period

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define key terms in the vocabulary of Western art history	K1
CO2	explain characteristics evident in styles and art movements in the West with reference to select artworks	K2
CO3	demonstrate how major ideas shaped Western artistic traditions	K3
CO4	critique select works of art	K4
CO5	appraise artistic styles from specific periods	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction 1.1 Subjects and vocabulary of art history 1.2 Different ways of seeing	K1- K2	5	1-5
2	Classical and Medieval 2.1 Hellenic: Humanism: Doryphorus; Idealism: Hermes and the Infant Dionysus; Rationalism: Parthenon, Athens 2.2 Hellenistic: Realism: Nike of Samothrace, Old Market Woman 2.3 Roman: Organisation, Utilitarianism: Pantheon, Forum of Trajan 2.4 Early Christian and Byzantine: Authoritarianism: Justinian and Theodora mosaics, San Vitale, Ravenna 2.5 Romanesque: Contemplative Life: Last Judgement, west tympanum, Saint-Lazare, Autun, France 2.6 Gothic: Dualism: Chartres Cathedral, Chartres 2.7 Late Medieval: Late Medieval Naturalism: Madonna Enthroned with Saints and Prophets, Cimabue; Madonna Enthroned, Giotto	K1- K5	15	1-5

UNIT	CONTENT	CL	Hrs	CO
3	Renaissance and Baroque 3.1 Renaissance: Classical Humanism: David, Ceiling, Sistine Chapel, Michelangelo; School of Athens, Raphael; Scientific Naturalism: Annunciation, Fra Angelico; Last Supper, Leonardo da Vinci; Renaissance Individualism: Adoration of the Magi, Sandro Botticelli 3.2 Counter-Reformation: Religious Dramas in Dark and Light: Conversion of St. Paul, Caravaggio; Faith and Transformation: St. Teresa in Ecstasy, Gian Lorenzo Bernini; Spirituality and Art: The Burial of Count Orgaz, El Greco; Painter of Courtly Life: Las Meninas, Diego Velazquez 3.3 Baroque: Painter of an Inner Light: The Company of Captain Frans Banning Cocq (Night Watch), Rembrandt van Rijn; Photography before Photography: The Art of Painting, Jan Vermeer	K1- K5	15	1-5
4	Eighteenth and Nineteenth Century 4.1 Neoclassicism: In Service of the Revolution: The Oath of Horatii, Jacques Louis David 4.2 Romanticism: Art and Revolution: Liberty Leading the People, Eugene Delacroix; Painting the News: Raft of the Medusa, Theodore Gericault; The Third of May 1808, Francisco Goya; Back to Nature: Haywain, John Constable; Slavers Overthrowing the Dead and Dying, J M W Turner 4.3 Realism: Social Commentary: Third Class Carriage, Honore Daumier; Realism and Scandal: Olympia, Edouard Manet; Realism and Geometry: The Cotton Exchange at New Orleans, Edgar Degas; Sculptural Realism: Gates of Hell, Auguste Rodin 4.4 Impressionism: Painter of Air and Mist: La Gare Saint Lazare, Claude Monet; Art and the City: Bar at the Folies-Bergere, Edouard Manet 4.5 Post-Impressionism: Alliance of Art and Science: Sunday Afternoon on the Island of La Grande Jatte, Georges Seurat; Mont St. Victoire, Paul Cezanne; Symbolism in the Arts: Starry Night, Vincent van Gogh; Vision after the Sermon, Paul Gauguin	K1- K5	15	1-5

5	<p>Twentieth Century Art</p> <p>5.1 Early Twentieth Century: Modernism</p> <p>5.1.1 Fauvism: Harmony in Red, Henri Matisse</p> <p>5.1.2 Expressionism: The Scream, Edvard Munch; Expressionism in Germany: The Street, Dresden, Ernst Ludwig Kirchner</p> <p>5.1.3 Cubism: Les Demoiselles d' Avignon, Pablo Picasso; Man with a Guitar, Georges Braque</p> <p>5.1.4 Futurism: Nude Descending the Staircase, Marcel Duchamp</p> <p>5.1.5 Surrealism: Persistence of Memory, Salvador Dali; Palace at 4 am, Alberto Giacometti; Two Fridas, Frida Kahlo</p> <p>5.1.6 Abstraction: Composition with Red, Blue and Yellow, Piet Mondrian; Composition VIII, Vassily Kandinsky; Reclining Figure, Henry Moore; The Spiral, Alexander Calder</p> <p>5.1.7 Antiwar Art: The Night, Max Beckmann; The Avenger, Ernst Barlach; Guernica, Pablo Picasso</p> <p>5.2 Mid-twentieth century:</p> <p>5.2.1 Abstract Expressionism: No.1, Jackson Pollock; No.14, Mark Rothko</p> <p>5.2.2 Pop Art: Green Coca-Cola Bottles, Andy Warhol; Hopeless, Roy Lichtenstein; Monogram, Robert Rauschenburg</p> <p>5.3 New Millennium: Postmodernism</p> <p>5.3.1 Photorealism: Supermarket Shopper, Duane Hanson</p> <p>5.3.2 Feminism: The Dinner Party, Judy Chicago; Untitled, Cindy Sherman; Your Gaze Hits the Side of My Face, Barbara Kruger</p> <p>5.3.3 Conceptual Art: One and Three Chairs, Joseph Kosuth</p> <p>5.3.4 Earth Art: Spiral Jetty, Robert Smithson</p> <p>5.3.5 Social and Political Art: Stereo Styles, Lorna Simpson</p> <p>5.3.6 New Media: Mansheshe, Tony Oursler</p>	K1- K5	15	1-5
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- Acton, Mary. *Learning to Look at Modern Art*. London: Routledge, 2004.
- Arnason, H.H. *A History of Modern Art*. 3rd ed. London: Thames and Hudson, 1986.
- Britt, David, ed. *Modern Art: Impressionism to Post-Modernism*. London: Thames and Hudson, 1989.
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- Gombrich, E H. *The Story of Art*. London: Phaidon, 2010.
- Janson, H.W., and Anthony F. Jansen. *History of Art*. New York: Harry N. Abrams, Inc, 1997.
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- Stangos, Nikos, ed. *Concepts of Modern Art*. World of Art Series. London: Thames and Hudson, 1994.
- Walther, Ingo F. *Art of the 20th Century*. 2 vols. London: Taschen, 1998.

PATTERN OF ASSESSMENT

CA Test: **Total Marks: 50** **Duration: 1½ Hours**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No of Questions to be answered	No. of Questions to be set
A – 100 words	K1 (5)	1 X 5 = 5	1 K1 question	2 K1 questions
B – 100 words	K2 (5)	1 X 5 = 5	1 K2 question	2 K2 questions
C – 300 words	K3 (10)	1 X 10 = 10	1 K3 question	2 K3 questions
D – 300 words	K4 (10)	1 X 10 = 10	1 K4 question	2 K4 questions
E – 600 words	K5 (20)	1 X 20 = 20	1 K5 question	2 K5 questions
	Total	50	5	10

Other Components: **Total Marks: 50**

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No of Questions to be answered	No. of Questions to be set
A – 100 words	K1 (10)	2 X 5 = 10	2 K1 question	3 K1 questions
B – 100 words	K2 (10)	2 X 5 = 10	2 K2 question	3 K2 questions
C – 300 words	K3 (30)	2 X 15 = 30	2 K3 question	3 K3 questions
D – 300 words	K4 (30)	2 X 15 = 30	2 K4 question	3 K4 questions
E – 600 words	K5 (20)	1 X 20 = 20	1 K5 question	2 K5 questions
	Total	100	9	14

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PC/AW14												
I	Course Title: ARTS AND IDEAS – WESTERN												
Course Outcome s (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	1	3	3	3	3	3	3	1
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	2
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	2
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

DRAWING PRACTICAL

CODE: 23FA/PC/P115

CREDITS: 5

L T P: 0 0 7

TOTAL TEACHING HOURS: 91

OBJECTIVES OF THE COURSE

- to help establish the basics of a visual vocabulary for drawing
- to prepare the students to produce artwork using varied approaches to drawing
- to provide exposure to perspective and figure drawing
- to enable the students to develop representational drawing

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	sketch contours, forms, and figures using different drawing media, based on an understanding of visual vocabulary	K1, K2
CO2	draw orthographic, isometric, and oblique projections of simple objects	K3
CO3	demonstrate skills in two-dimensional and three-dimensional drawing using perspective	K4
CO4	use methods like crating and varied rendering techniques	K5
CO5	create still life and figure compositions in specific settings	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Visual Vocabulary Point, Line, Plane, Shape, Form, Space, Depth, Colour, Light, Tone, Texture, Composition, Proportion, Balance, Emphasis, Harmony, Rhythm, Movement	K1 – K4	15	1 - 4
2	Approaches to Drawing 2.1 Contour drawing, Cross-contour drawing 2.2 Pictorial Drawing – Orthographic, Isometric and Oblique Projections	K1 – K4	10	1 - 4
3	Perspective Drawing – Rectilinear & Curvilinear forms 3.1 Vanishing points, horizons 3.2 One-point perspective 3.3 Two-point perspective 3.4 Three-point Perspective	K3 – K6	15	4 - 5

4	Representational Drawing 4.1 Memory Drawing 4.2 Dimensional views using Crating 4.3 Rendering Techniques	K3 – K6	25	4 - 5
5	Figure Drawing 5.1 Gesture Drawing 5.2 Proportions of Head and Full Figure	K4 – K6	26	4 - 5

BOOKS FOR REFERENCE

Ching, Francis D. K. *Drawing: A Creative Process*. New York: Van Nostrand Reinhold, 1990.

Gail, Angela. *Drawing: A Step-by-Step Guide to Drawing Techniques*. Twickenham: Tiger Books International, 1997.

Curnow, Vera. *The Best of Coloured Pencil - Vol 5*. Massachusetts: Quarry – Rockport, 1999.

Douet, Valerie C., ed. *Drawing for Pleasure*. Kent: Search, 2001.

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Mulick, Milind, *Sketckbook*. Pune: Jyotsna Prakshan, 2007.

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Hogarth, Burne. *Dynamic Anatomy*. New York: Watson-Guptill Publications, 1990.

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Vebell, Victoria. *Exploring the Basics of Drawing*. New York: Thomson Delmar Learning, 2005.

Woods, Michael. *Pencil Drawing*. New York: Dover, 1987.

Yot, Richard. *Light for Visual Artists*. London: Laurence King Publishing Ltd. 2013

PATTERN OF ASSESSMENT

Continuous Assessment: 50 marks

Classwork 40 marks

Assignments 10 marks

Rubrics for evaluation of classworks and assignments	Marks	Cognitive Level
Use of media and techniques	25	K1 - K4
Drawing skills	25	K5, K6

End Semester Examination

Total Marks: 100

Duration: 3 Hours

Question Paper Pattern

Rubrics for evaluation				
Section	Cognitive Level	Marks	Hours	Pattern
A	K1-K4	25	1	Exercise based on observation & rendering
B	K5, K6	75	2	Figure / still life composition

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PC/P115												
I	Course Title: Drawing Practical												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	1	3	3	2	3	3	3	3	3	3
CO 2	3	3	3	1	3	3	2	3	3	3	3	3	3
CO 3	3	3	3	1	3	3	2	3	3	3	3	3	3
CO 4	3	3	3	1	3	3	2	3	3	3	3	3	3
CO 5	3	3	3	1	3	3	2	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

FUNDAMENTALS OF DESIGN PRACTICAL

CODE: 23FA/PC/P215

CREDITS: 5

L T P: 0 0 7

TOTAL TEACHING HOURS: 91

OBJECTIVES OF THE COURSE

- to develop ‘design seeing’
- to understand the principles of design
- to become familiar with typography as a medium of design
- to introduce the concept of image, symbols and meanings

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	do exercises using the elements of design	K1
CO2	develop designs using the principles of design	K2, K3
CO3	apply colour theories and colour interactions in design	K4
CO4	analyse and apply typography as an effective medium of design	K5
CO5	ideate to combine type and image into effective design.	K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Elements of design 1.1 Dots, line and space 1.2 Form and shape 1.3 Texture	K1 – K3	18	1 - 3
2	Principles of Design 2.1 Balance, emphasis and rhythm 2.2 Unity and variety 2.3 Proportion and scale	K1 – K3	15	1 - 3

UNIT	CONTENT	CL	Hrs	CO
3	Colour 3.1 Colour wheel 3.2 Physical and psychological qualities 3.3 Colour interactions: harmony, contrasts, hue, intensity, value	K1 – K3	18	1 - 3
4	Basics of typography 4.1 Elements of Letterforms 4.2 Type anatomy 4.3 Typestyles and families	K4 – K6	20	4 - 5
5	Idea and Image 5.1 Pictorial Symbols and Meaning 5.2 Symbols and Icons	K4 – K6	20	4- 5

BOOKS FOR REFERENCE

Ames, Lee J. *The Dot, Line and Shape Connection*. New York: Doubleday, 1982.

Carter, Rob, Ben Day, and Philip Meggs. *Typographic Design: Form and Communication*. 4th ed. New Jersey: John Wiley, 2007.

Cole, Alison. *Colour*. London: Dorling Kindersley, 1993.

Hampshire, Mark, and Keith Stephenson. *Communicating with Pattern: Stripes*. New Delhi: RotoVision, 2004.

Hampshire, Mark, and Keith Stephenson. *Communicating with Pattern: Circles and Dots*. New Delhi: RotoVision, 2006.

Morioka, Adams, and Terry Stone. *Colour Design Workbook: A Real World Guide for Using Colour in Graphic Design*. Massachusetts: Rockport, 2006.

Pao, Imin, and Joshua Berger. *30 Essential Typefaces for a Lifetime*. Massachusetts: Rockport, 2006.

Philips, Peter, and Gillian Bunce. *Repeat Patterns: A Manual for Designers, Artists and Architects*. London: Thames and Hudson, 1993.

Sinha, Anil. *Ideating Identity*. Ahmedabad: Maitreya, National Institute of Design, 2010.

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Classwork : 40 marks

Assignment : 10 marks

Rubrics for evaluation of classworks and assignment	Marks	Cognitive Level
Referencing and thumbnails	10	K1 - K2
Design Development	30	K3 - K6
Execution and presentation	10	K3 - K6

End Semester Examination**Total Marks: 100****Duration: 3 Hours**

Question Paper Pattern

Rubrics for evaluation				
Section	Cognitive Level	Marks	Hours	Pattern
A	K1-K4	25	1	Thumbnail designs and colour swatches
B	K5, K6	75	2	Develop any one thumbnail into a completed work

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FAPCP215												
I	Course Title: Fundamentals of Design Practical												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	-	2	1	1	-	3	3	1	2	2
CO 2	3	3	3	-	2	2	2	-	3	3	3	3	3
CO 3	3	3	3	-	2	2	2	-	3	3	3	3	3
CO 4	3	3	3	-	2	2	2	-	3	3	3	3	3
CO 5	3	3	3	-	2	2	2	-	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

TEXTILE SURFACE DESIGN PRACTICAL

CODE: 23FA/PC/T124

CREDITS: 4

L T P: 0 0 6

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- to introduce textiles, construction techniques and end uses
- to provide an understanding of the process of design development for textiles
- to develop skills in design derivation and rendering
- to develop skills in layout and repeat construction
- to enable the creation of original design solutions for textile surfaces

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	assimilate and apply design development methodology for textile surface patterning	K1, K2
CO2	develop patterns from observed and inspired sources	K3
CO3	construct repeats for print design	K4
CO4	develop designs in different layouts	K5
CO5	create surface designs suitable for varied textile applications	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Designing for textiles 1.1 Fibres, yarns and fabrics 1.2 Textiles in fashion and home 1.3 Research and market profiling 1.4 Design approaches – historical, conceptual, trend, market oriented 1.5 Colour forecasting, Pantone fashion and home palette	K1- K2	10	1
2	Design process 2.1 Design statement and concept 2.2 Mood board 2.3 Colour story	K1 - K2	8	1
3	Design derivation and rendering 3.1 Motifs and patterns 3.2 Design rendering in different media	K1 – K6	15	1-5

UNIT	CONTENT	CL	Hrs	CO
4	Layouts and repeat construction 4.1 Tailored repeat structures 4.2 Seamless repeats 4.3 CAD – design editing and repeat development	K1 – K6	15	1-5
5	Pattern development for textile products 5.1 Allovers, borders and engineered patterns 5.2 Colourways and coordinates	K1 – K6	30	1-5

BOOKS FOR REFERENCE

Diane, Tracy, and Tom Cassidy. *Colour Forecasting*. United Kingdom: Blackwell, 2005.

Drudi, Elisabetta Kuky. *Fashion Prints: How to Design and Draw*. Amsterdam: Pepin, 2008.

Hornung, David. *Colour: A Workshop for Artists and Designers*. London: Laurence King, 2005.

Phillips, Peter, and Gillian Bunce. *Repeat Patterns: A Manual for Designers, Artists and Architects*. London: Thames and Hudson, 1993.

San Martin, Macarena. *Patterns in Fashion*. Koln: Evergreen, 2009.

Yates, Marypaul. *Textiles: A Handbook for Designers*. New York: W.W. Norton and Company, 1995.

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Classwork 40 marks
Assignment 10 marks

Rubrics for evaluation of classworks and assignment	Marks	Cognitive Level
Research and process	10	K1 – K2
Design development	30	K3 – K4
Originality	10	K5 – K6

End Semester Submission: Total Marks: 50

A set of works will be prescribed for end semester assessment. These works should not have been part of the continuous assessment.

Rubrics for evaluation	Marks	Cognitive Level
Research and process	10	K1 – K2
Design development	30	K3 – K4
Originality	10	K5 – K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PC/T124												
II	Course Title: TEXTILE SURFACE DESIGN PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	3	2	3	3	3	3	3	3
CO 2	3	3	3	1	3	3	-	3	3	3	3	3	3
CO 3	3	3	3	-	3	-	-	-	3	3	3	3	3
CO 4	3	3	-	1	3	3	2	2	3	3	3	3	2
CO 5	3	3	3	2	3	3	2	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023–2024)

COMMUNICATION DESIGN I PRACTICAL

CODE: 23FA/PC/C124

CREDITS: 4

L T P: 006

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- to understand typographic classification and type specimens
- to provide an overview of grids and layouts in publishing design
- to understand printing techniques and processes to publishing design
- to develop skills in layout and typography
- to enable development of publishing design and communication for print and online sources

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall typographic classification and type specimens	K1,K2
CO2	apply grids and layouts, printing techniques and processes to publishing design	K3
CO3	develop type and image into effective design	K4
CO4	create ready to print publishing works	K5
CO5	create e-publishing design layouts	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRs	CO
1	Typography 1.1 Typographic syntax and communication 1.2 Typographic function and expression	K1 - K3	15	1-2
2	Grid Application and Printing Processes 2.1 Grid 2.2 Template 2.3 Page layout 2.4 Printing techniques and processes	K1 – K6	10	1-5
3	Newspaper design 3.1 Mastheads 3.2 Newspaper layouts	K1 - K4	15	1-4

UNIT	CONTENT	CL	HRs	CO
4	Brochures and Magazines 4.1 Folds 4.2 Pagination 4.3 Wrapper and layout	K1 – K6	20	1-5
5	e-Publishing 5.1 Interactive documents	K1 – K6	18	1-5

BOOKS FOR REFERENCE

Carter, Rob, Ben Day and Philip Meggs. *Typographic Design: Form and Communication*. 4th ed. New Jersey: John Wiley, 2007.

Coulter, Martijn F. Le and Alston W. Purvis. *A Century of Posters*. Hampshire: Lund Humphries, 2002.

Krause, Jim. *Layout Index*. Ohio: How Design Books, 2001. Krause, Jim. *Idea Index*. Ohio: How Design Books, 2000.

Matlock, Marshall C. *The Best of Newspaper Design*. 22nd ed. Massachusetts: Rockport, 2001.

Pao, Imin, and Joshua Berger. *30 Essential Typefaces for a Lifetime*. Massachusetts: Rockport, 2006.

Rabinowitz, Tova. *Typography: In-Depth Guide to the Art and Techniques of Designing with Type*. New York: Thomson Delmar, 2006.

Rivers, Charlotte. *Mag-Art: Innovations in Magazine Design*. Switzerland: RotoVision, 2006.

Rivers, Charlotte. *Promo-Art: Innovations in Invitations, Greetings, and Business Cards*. Switzerland: RotoVision, 2008.

Walton, Roger, ed. *Page Layout: Inspiration Innovation Information*. New York: HBI, 2000.

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Classwork: 40 marks

Assignment: 10 marks

Rubrics for evaluation of classworks and assignment	Marks	Cognitive Level
Referencing and thumbnails	10	K1 – K2
Design development	30	K3 – K6
Execution and presentation	10	K3 – K6

End Semester Submission: Total Marks: 50

A set of works will be prescribed for end semester assessment. These works should not have been part of the continuous assessment.

Rubrics for evaluation	Marks	Cognitive Level
Referencing and thumbnails	10	K1 – K2
Design Development	30	K3 – K6
Execution and presentation	10	K3 – K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PC/C124												
II	Course Title: COMMUNICATION DESIGN I PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	2	3	2	2	3	3	3	2	3
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

PHOTOGRAPHY PRACTICAL

CODE: 23FA/PC/P324

CREDITS: 4

L T P: 0 0 6

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- to enable a creative and aesthetic exploration of digital photography and its applications
- to train in technical aspects of photography
- to develop narrative photo essays
- to enable an understanding of various aspects of studio light settings
- to introduce image processing in Photoshop

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify the elements of photography and visual trajectory created by this medium	K1, K2
CO2	demonstrate skill in capturing photographs applying exposure techniques, lighting and colour theories	K3
CO3	experiment with constructed images of products and portraits	K4
CO4	analyse the subject matter and narrate it through captured images	K5
CO5	create contextual photographs for art and design requirements	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Photography 1.1 History of Photography - an overview 1.2 Cameras and lenses	K1	05	1
2	Elements of Digital Photography 2.1 Exposure, aperture, shutter speed, ISO 2.2 Colour theory 2.3 Study of natural light 2.4 Appreciation of artificial lights	K2	24	1 - 2
3	Appreciation of Commercial Photography 3.1 Product 3.2 Portraiture 3.3 Architecture	K1 – K5	19	CO 1 - 4

UNIT	CONTENT	CL	Hrs	CO
4	Photo Essays 4.1 Documentary 4.2 Photojournalism	K1 – K6	15	CO 1 - 5
5	Applied Photography	K1 – K6	15	CO 1 - 5

BOOKS FOR REFERENCE

Ang, Tom. *Digital Photographer's Handbook*. London: Penguin, 2009.
Ang, Tom. *Digital Photography: A Step-By-Step Guide to Creating and Manipulating Great Images*. London: Mitchell Beazley, 2001.
Busch, David D. *Mastering Digital SLR Photography: The Serious Photographer's Guide to High-Quality Digital SLR Photography*. Boston: Thomson Course Technology, 2005.
Clec'h, Marie- Laure, trans. *Photo Retouching with Photoshop: A Designer's Notebook*. California: O'Reilly Media, 2005.
Hope, Terry. *Better Picture Guide to Black and White Photography 2*. Switzerland, Rotovision, 2001.
Larbalestier, Simon. *The Art and Craft of Montage*. London: Mitchell Beazley, 1993.
London, Barbara and Jim Stone. *A Short Course in Digital Photography*. New Jersey: Pearson Education, 2010.
Warren, Bruce. *Photography*. 2nd ed. New York: Delmar, 2002.

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Classwork: 25 marks
Portfolio: 25 marks

Rubrics for evaluation of classworks and portfolio	Marks	Cognitive Level
Referencing	10	K1 – K2
Technical and aesthetic aspects	30	K3 – K6
Execution and presentation	10	K3 – K6

End Semester Submission: Total Marks: 50

A set of works will be prescribed from Unit 4 and 5 for end semester assessment. These works should not have been part of the continuous assessment.

Rubrics for evaluation	Marks	Cognitive Level
Referencing	10	K1 – K2
Technical and aesthetic aspects	30	K3 – K6
Execution and presentation	10	K3 – K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PC/P324												
II	Course Title: Photography Practical												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	1	3	3	3	3	3	3	2	3	3
CO 2	3	2	2	1	3	3	2	2	3	3	2	2	2
CO 3	3	2	3	2	3	3	3	3	2	3	3	3	3
CO 4	3	3	3	2	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

SOFT SKILLS

CODE: 23FA/PK/SS22

CREDITS: 2

L T P: 2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- to empower students and create opportunities for self-development
- to instill confidence in students to face challenges
- to manage emotions and resolve conflicts
- to organize activities and manage time
- to set goals and plan ahead

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- communicate with confidence and poise
- accept themselves and improve on their weaknesses
- strengthen their relationships through confronting and solving problems
- work more effectively and complete activities on time
- plan their future with clarity and focus

Unit 1

Behavioural Traits

(6 Hours)

- 1.1 Self- Awareness
- 1.2 Communication Skills –Verbal and Non-Verbal
- 1.3 Leadership Qualities
- 1.4 Etiquette and Good Manners
- 1.5 Experiential Learning –based on activities

Unit 2

Team Work

(5 Hours)

- 2.1. Interpersonal Skills
- 2.2. People Management
- 2.3. Creative Thinking
- 2.4. Critical Thinking
- 2.5. Experiential Learning – based on activities

Unit

3

Time Management

(5 Hours)

- 3.1. Importance of time management
- 3.2. Planning and Prioritizing
- 3.3. Organizing skills
- 3.4. Action Plan
- 3.5. Experiential Learning – based on activities

Unit 4

Conflict Resolution

(5 Hours)

- 4.1. Reasons for conflict
- 4.2. Consequences of conflict
- 4.3. Managing emotions
- 4.4. Methods of resolving conflicts
- 4.5. Experiential Learning – based on activities

Unit 5

Career Mapping

(5 Hours)

- 5.1. Goal-setting and Decision-making
- 5.2. Career Planning
- 5.3. Resume Writing
- 5.4. Handling Interviews
- 5.5. Experiential Learning – based on activities

BOOKS FOR REFERENCE

Khera, Shiv. *You Can Win*. Macmillan India, 2002.

Mishra, Rajiv. K. *Personality Development: Transform Yourself*. Rupa, 2004.

Newstorm, John. W. and Scannell. Edward. E. *Games Trainers Play: Experiential Learning*. Tata McGraw Hill, 1980.

PATTERN OF EVALUATION

Internal Assessment:

Total Marks: 50

Quiz / Group Presentation /Assignment

No End Semester Examination.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023–2024)

CRAFTS IN INDIA

CODE: 23FA/PC/CI34

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to introduce craft traditions of india as intrinsic to national identity and heritage
- to enable an appreciation of select textile, metal, wood, and other crafts
- to create an awareness of the contemporary scenario in the craft sector
- to provide an overview of craft revival and support
- to provide an awareness of design intervention in the craft sector

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define key terms and techniques specific to Indian crafts	K1
CO2	explain the characteristic features of different crafts	K2
CO3	relate material, form, process and the role of external agencies in craft making	K3
CO4	analyse crafts in traditional and contemporary contexts	K4
CO5	evaluate crafts in terms of visual and material identity	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Textiles 1.1 Handloom traditions: Balarampuram, Baluchari, Benaras, Chanderi, jamdani, Kani weaving, kota doria, Kancheepuram, Paithani 1.2 Dyed, printed and painted cloth: ajrakh, bandhani and leheria, block prints of Bagh, Bagru and Sanganer; ikkat, patola, sungadi, kalamkari, pichwai, phad 1.3 Stitched embellishment: Kashmiri kashida, Chamba rumal, chikankari, kantha, kasuti, khatwa, kutchi, phulkari, sujani, zardosi, Toda	K1-K5	18	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Metal, Wood, Stone and Clay 2.1 Metal: Aranmula mirror, bidri, Cuttacki tarkashi, dhokra, iron craft of Bastar, koftgiri, meenakari, lamps of Tamil Nadu, Tanjore art plate, thewa 2.2 Wood: lacquer ware of Channapatna, kaavad, Kondapalli toys, wood carving of Kashmir, wood inlay of Mysore and Hoshiarpur 2.3 Stone and clay: blue pottery of Jaipur, longpi of Manipur, pacchikari of Agra, Ayyanar horses of Tamil Nadu	K1-K5	12	1-5
3	Paper, Leather and Fibre 3.1 Paper: Papier mache of Kashmir; Sanjhi of Mathura 3.2 Leather: Leather puppets of Andhra, leather footwear of Kolhapur and Rajasthan 3.3 Fibre: Palm leaf craft and Pattamadai mats of Tamil Nadu, sikki grass craft, Madur kathi craft of Bengal	K1-K5	10	1-5
4	Craft Mediation and Revival 4.1 Government policy and initiatives, Geographical Indications, Handloom Mark and Craftmark 4.2 Apex bodies, craft organisations, handicraft clusters 4.3 Pioneers and craft activists 4.4 Awards and recognition of craftspersons 4.5 Challenges and concerns	K3-K4	10	3-4
5	Contemporary Initiatives 5.1 Khadi and its contemporary identity 5.2 Sustainable approaches: Malkha, Ethicus, Upasana 5.3 Producer groups: Porgai, Urmul, Shrujan, Kala Raksha, WomanWeave 5.3 Regional brands: Anokhi, Kalakshetra, Manjal 5.4 Designer interventions: Gunjan Gupta, Neeru Kumar, Sahil Bagga and Sarthak Sengupta, Sandeep Sangaru, Sanjay Garg, Rahul Mishra	K3-K5	15	3-5

BOOKS FOR STUDY

Jaitly, Jaya. *Crafts Atlas of India*. New Delhi: Niyogi Books, 2012.

Karolia, Anjali. *Traditional Indian Handcrafted Textiles: History,*

Techniques, Processes, Designs - Vol. I & II. New Delhi: Niyogi Books, 2019.

Ranjan, Aditi, and M. P. Ranjan. *Crafts of India: Handmade in India*. New Delhi: Council of Handicraft Development Corporations, 2007.

Varadarajan, Lotika, and Krishna Amin-Patel. *Of Fibre and Loom: The Indian Tradition*. New Delhi: Manohar, 2008.

BOOKS FOR REFERENCE

Baxter, Maggie. *Unfolding Contemporary Indian Textiles*. New Delhi: Niyogi, 2015.

Celebrating Crafts, Kaivalam World Crafts Summit, Crafts Council of India, Chennai, 2013.

Crill, Rosemary. *Indian Ikat Textiles*. New York: Weatherhill, 1998.

Dallapiccola, Anna L., ed. *Indian Painting: The Lesser-known Traditions*. New Delhi: Niyogi Books, 2011.

Deshmukh, Ranjit. *Folk and Tribal Art of India*. Delhi: Edukeen Publisher, 2022.

Edwards, Eiluned. *Block Printed Textiles of India: Imprints of Culture*. New Delhi: Niyogi Books, 2015.

Ghosh, G. K., and Shukla Ghosh. *Indian Textiles: Past and Present*. New Delhi: APH Publishing Corporation. 2011.

Gillow, John and Nicholas Barnard. *Indian Textiles*. London: Thames & Hudson, 2021.

Mathur, Kamlesh. *Crafts and Craftsmen*. Jaipur: Pointer Publishers, 2004.

Naik, Shailaja D. *Traditional Embroideries of India*. New Delhi: APH Publishing Corporation. 2012.

Ramaswamy, Visalakshi. *The Kottan: The Palmyra Basket of Chettinad*. Chennai: M.Rm.Rm. Cultural Foundation, 2013.

Sabnani, Nina. *Kaavad Tradition of Rajasthan: A Portable Pilgrimage*. New Delhi: Niyogi Books, 2014.

Shah, Archana. *Crafting a Future: Stories of Indian Textiles and Sustainable Practices*. New Delhi: Niyogi Books, 2021.

Singh, Martand, ed. *Handcrafted Indian Textiles*. New Delhi: Roli Books, 2000.

Tyabji, Laila. *Threads & Voices: Behind the Indian Textile Tradition*. New Delhi: Marg, 2007.

Venkatesan, Soumhya. *Craft Matters: Artisans, Development and the Indian Nation*. New Delhi: Orient Blackswan, 2009.

WEB SOURCES

<https://artsandculture.google.com/>
<https://handlooms.nic.in/>
<https://www.handicrafts.nic.in/>
<https://www.directcreate.com/>
<https://www.dsource.in/>

JOURNALS

Government of India Geographical Indications Journal

PATTERN OF ASSESSMENT

Continuous Assessment Test: Total Marks: 50 Duration: 1½ hours

Section	Cognitive Level and Allocation of Marks	Marks per Section	No of Questions to be answered	No. of Questions to be set
A – 100 words	K1 (5)	1 X 5 = 5	1 K1 question	2 K1 questions
B – 100 words	K2 (5)	1 X 5 = 5	1 K2 question	2 K2 questions
C – 300 words	K3 (10)	1 X 10 = 10	1 K3 question	2 K3 questions
D – 300 words	K4 (10)	1 X 10 = 10	1 K4 question	2 K4 questions
E – 600 words	K5 (20)	1 X 20 = 20	1 K5 question	2 K5 questions
	Total	50	5	10

Other Components: Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Submission: Total Marks: 50

There will be no end semester examination. A case study/ term paper of a maximum of 2500 words (introduction to conclusion, excluding images) is to be submitted for evaluation by external examiner: 50 marks

Rubrics for Evaluation	Marks	Cognitive Level
Research statement and methodology	10	K1 – K2
Documentation - text and images	25	K3 – K4
Research findings and analysis	15	K5

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PC/CI34												
III	Course Title: CRAFTS IN INDIA												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	1	3	-	3	3	3	3	3
CO 2	3	3	3	3	3	1	3	1	3	3	3	3	3
CO 3	3	3	3	3	3	1	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	1	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	1	1	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

TEXTILE PRINTING PRACTICAL

CODE: 23FA/PC/T234

CREDITS: 4

L T P: 0 0 6

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- to introduce dyeing and printing processes
- to develop design skills for printing
- to enable a personal exploration of textiles, techniques and design
- to execute print projects with professional support
- to enable product development using block, screen and digitally printed textiles

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	use appropriate processes of design development for hand block, screen and digital prints	K1, K2
CO2	demonstrate hand rendered and digital design skills	K3
CO3	apply suitable design approaches for hand block, screen and digital prints	K4
CO4	execute print projects with relevant outsourcing and professional support	K5
CO5	create printed textile products	K6

CL – Cognitive Level

K1 – Remember | K2 – Understand | K3 – Apply | K4 – Analyse | K5 – Evaluate | K6 – Create

UNIT	CONTENT	CL	Hrs	CO
1	Dyeing and Printing Methods 1.1 Fabric dyeing 1.2 Printing - direct, discharge, mordant and resist methods	K1-K2	6	1
2	Block Printing 2.1 Direct and resist techniques 2.2 Design development for wood block printing	KI-K6	20	2 -5
3	Screen Printing 3.1 Hand-screen, automatic flat bed and rotary screen processes 3.2 Design development and repeat construction for hand screen printing	KI-K6	20	2 -5
4	Digital Printing	KI-K6	12	2 -5
5	Product Development with Block, Screen and Digitally Printed Fabrics	KI-K6	20	1 - 5

BOOKS FOR REFERENCE

Storey, Joyce. *The Thames and Hudson Manual of Textile Printing*. London: Thames and Hudson, 1992.
Vatsyayan, Kalpila (ed.). *Culture of Indigo in Asia: Plant, Product, Power*. New Delhi: Niyogi Books, 2014.
Vidyasagar, P.V. *Handbook of Textiles*. New Delhi: Mittal Publications, 1998.
Wells, Kate. *Fabric Dyeing and Printing*. London: Conran Octopus Ltd., 1997.
Yates, Marypaul. *Textiles: A Handbook for Designers*. New York: W.W. Norton and Company, 1995.

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Classwork	40 marks
Assignment	10 marks

Rubrics for evaluation of classworks and assignment	Marks	Cognitive Level
Research and process	10	K1 – K2
Design and print development	30	K3 – K4
Originality	10	K5 – K6

End Semester Submission: Total Marks: 50

A set of works will be prescribed for end semester assessment. These works should not have been part of the continuous assessment.

Rubrics for evaluation	Marks	Cognitive Level
Research and process	10	K1 – K2
Design and print development	30	K3 – K4
Originality	10	K5 – K6

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23FA/PC/T234												
III	Course Title: TEXTILE PRINTING PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	3	3	1	3	3	3	3	3
CO 2	3	3	3	-	3	3	2	2	3	3	3	3	3
CO 3	3	3	3	-	3	3	3	2	3	3	3	3	3
CO 4	3	3	3	-	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	2	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023–2024)

COMMUNICATION DESIGN II PRACTICAL

CODE: 23FA/PC/C234

CREDITS: 4

L T P: 006

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- to understand icons and symbols
- to understand categories of logos and their development
- to develop visual hierarchy and communication in corporate and brand identity
- to develop visual aesthetics related to package design and labels
- to explore and create designs in the field of visual merchandising

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall design development as an integral process of design	K1,K2
CO2	understand corporate and brand identity	K3
CO3	ideate and develop icons and symbols	K4
CO4	display aesthetic skills and understand dimensional spaces for design development	K5
CO5	create effective design for brand identity, packaging and visual merchandising	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Corporate and Brand Identity Designing symbols and logotypes	K1-K3	10	1-5
2	Designing Brand Identity Building brand identity	K1-K6	20	1-5
3	Packaging Design 3.1 Material and design considerations 3.2 Packaging templates, finishes and effects	K1-K4	04	1-4
4	Packaging Applications	K1-K6	24	1-5
5	Visual Merchandising 5.1 Window and in-store display for retail 5.2 Exhibition design	K1-K6	20	1-5

BOOKS FOR REFERENCE

Alan and Livingston, Isabella. *Dictionary of Graphic Design and Designers*: Third Edition. London: Thames and Hudson World of Art, 2012.

Carter, Rob, Ben Day, and Philip Meggs. *Typographic Design: Form and Communication*. 4th ed. New Jersey: John Wiley, 2007.

Cossu, Matteo. *1000 Ideas by 100 Graphic Designers*. Massachusetts: Rockport, 2009.

Cullen, Cheryl Dangel. *The Best of Business Card Design*. Massachusetts: Rockport, 2002.

Gordon, Bob and Maggie Gordon, eds. *A Complete Guide to Graphic Design*. London: Thames and Hudson, 2005.

Groth, Chuck. *Exploring Packaging Design*. New York: Thomson, 2006.

Healey, Matthew. *Deconstructing Logo Design*. Switzerland: RotoVision, 2010.

Jute, Andre. *Grids: The Structure of Graphic Design*. Switzerland: RotoVision, 1996.

Krause, Jim. *Idea Index*. Ohio: How Design Books, 2000.

Pao, Imin, and Joshua Berger. *30 Essential Typefaces for a Lifetime*. Massachusetts: Rockport, 2006.

Rabinowitz, Tova. *Typography: In-Depth Guide to the Art and Techniques of Designing with Type*. New York: Thomson Delmar, 2006.

Rivers, Charlotte. *Logo-Art: Innovation in Logo Design*. Switzerland: RotoVision, 2009.

Sibley/Peteet Design, Austin. *The Best of Business Card Design 8*. Massachusetts: Rockport, 2008.

Sinha, Anil. *Ideating Identity*. Ahmedabad: Maitreya, National Institute of Design, 2010.

Wheeler, Alina. *Designing Brand Identity: A Complete Guide to Creating Building and Maintaining Strong Brands*. New Jersey: John Wiley, 2003.

Shaqqiang, Wang. *Wrap It Up: Creative Structural Packaging Design*. China: Hoaki Books, 2021

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Classwork: 40 marks
Assignment: 10 marks

Rubrics for evaluation of classworks and assignment	Marks	Cognitive Level
Referencing and thumbnails	10	K1 – K2
Design development	30	K3 – K6
Execution and presentation	10	K3 – K6

End Semester Submission: Total Marks: 50

A set of works will be prescribed for end semester assessment. These works should not have been part of the continuous assessment.

Rubrics for evaluation	Marks	Cognitive Level
Referencing and thumbnails	10	K1 – K2
Design development	30	K3 – K6
Execution and presentation	10	K3 – K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PC/C234												
III	Course Title: COMMUNICATION DESIGN II PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	2	2	3	3	3	2	3
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MA DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023–2024)

SUMMER INTERNSHIP

CODE: 23FA/PN/SI32

CREDITS: 2

OBJECTIVES OF THE COURSE

- to enable the student to acquire knowledge necessary for enhancing design competency
- to create opportunities for capacity building through industry experience

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

- enhance their knowledge about the chosen area of design
- understand professional approaches to design
- demonstrate relevant design skills
- use appropriate media in design development
- document and discuss their industry experience with clarity

GUIDELINES

- The student will source and select an organization, firm or facility specializing in textiles or graphic design, where she will be permitted to undergo a mandatory internship / work experience for a duration of four weeks
- The interning agency may be identified in the city of Chennai, or any other feasible location
- The student should finalise her choice of interning agency and obtain necessary approvals from the Department of Fine Arts and the agency before the completion of the second semester of study
- The internship must be completed between the second and third semesters, during the summer vacation
- Students are expected to maintain a logbook/workbook of their internship experiences, which will be submitted along with a report at the beginning of the third semester
- Students will make a presentation of their internship activities and learning
- A Certification Letter stating the duration and nature of internship, along with an attendance certificate from the agency of internship will have to be submitted

Rubrics for evaluation	Marks	Cognitive Level
Logbook/workbook	50	K1 – K2
Report	30	K3 – K6
Presentation	20	K3 – K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PN/SI32												
III	Course Title: Summer Internship												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023–2024)

VISUAL CULTURE

CODE: 23FA/PC/VC44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To examine images and their meaning across disciplinary boundaries such as art history and media studies
- To create an awareness of visual culture through select theories
- To discuss the concepts of appropriation, consumerism and gender constructs in visual culture

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define key terms in Visual Culture	K1
CO2	explain/interpret the meanings and ideas underlying images	K2
CO3	analyse/examine select theories of Visual Culture	K3
CO4	discuss the ideas/impact of societal constructs on its cultural productions	K4
CO5	critically analyse select works of art using theories of Visual Culture	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Visual Culture	K1-K5	5	1-4
2	Image and Meaning 2.1 Sign and semiotics 2.2 Appropriation and cultural production	K1-K5	15	1-5
3	Technologies and the Multiplying Image 3.1 The myth of photographic truth 3.2 Image reproduction: the copy 3.3 Walter Benjamin and mechanical reproduction	K1-K5	15	1-5
4	Consumer Culture 4.1 Advertising and consumer societies 4.2 Commodity culture and commodity fetishism	K1-K5	15	1-5
5	Visualising Gender 5.1 Cultural constructions of femininity and masculinity 5.2 Psychoanalysis of power and desire 5.3 Gaze and spectacle	K1-K5	15	1-5

BOOKS FOR STUDY

Sturken, Marita and Lisa Cartwright; *Practices of Looking: An Introduction to Visual Culture*, 2nd edition, New York: Oxford University Press, 2008.

Hall, Stuart, ed. *Representation: Cultural Representations and Signifying Practices*. London: Sage, 1997.

BOOKS FOR REFERENCE

Bantjes, Marian. *Pretty Pictures*. London: Thames and Hudson, 2013.

Berger, John. *Ways of Seeing*. London: BBC and Penguin, 1972.

Benjamin, Walter. *The Work of Art in the Age of Mechanical Reproduction*. trans. J.A. Underwood, London: Penguin, 2008.

Bird, Michael. *100 Ideas that Changed Art*. London: Laurence King, 2012.

Chandrasekhar, Indira, and Peter C. Seel, eds. *Body City: Siting Contemporary Culture in India*. Delhi: Tulika, 2000.

Kapur, Geeta. *When was Modernism: Essays on Contemporary Cultural Practice in India*. Delhi: Manohar, 2000.

Kromm, Jane, and Susan B. Bakewell, eds. *A History of Visual Culture: Western Civilisation from the 21st Century*. New York: Berg, 2010.

Mirzoeff, Nicholas. *An Introduction to Visual Culture*. London: Routledge, 2000.

Mirzoeff, Nicholas, ed. *The Visual Culture Reader*. London: Routledge, 1998.

Murthy, Laxmi, and Rajashri Dasgupta. *Our Pictures, Our Words: A Visual Journey through the Women's Movement*. New Delhi: Zubaan, 2011. Ramaswamy, Sumathi.

Beyond Appearances. Contributions to Indian Sociology series. New Delhi: Sage, 2003.

Schroeder, Jonathan E. *Visual Consumption*. Oxon: Routledge, 2002.

Sinha, Gayatri. *Art and Visual Culture in India: 1857-2007*. Delhi: Marg, 2009.

Walker John A. and Chaplin S. *Visual Culture: An Introduction*. Manchester: Manchester University Press, 1997.

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Continuous Assessment Test: Total Marks: 50 Duration: 1½ hours

Section	Cognitive Level and Allocation of Marks	Marks per Section	No of Questions to be answered	No. of Questions to be set
A – 100 words	K1 (5)	1 X 5 = 5	1 K1 question	2 K1 questions
B – 100 words	K2 (5)	1 X 5 = 5	1 K2 question	2 K2 questions
C – 300 words	K3 (10)	1 X 10 = 10	1 K3 question	2 K3 questions
D – 300 words	K4 (10)	1 X 10 = 10	1 K4 question	2 K4 questions
E – 600 words	K5 (20)	1 X 20 = 20	1 K5 question	2 K5 questions
	Total	50	5	10

Other Components: Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Submission: Total Marks: 50

There will be no end semester examination. A case study/ term paper of a maximum of 2500 words is to be submitted for evaluation by external examiner: 50 marks

Rubrics for Evaluation	Marks	Cognitive Level
Introduction, methodology, citation and presentation	10	K1 – K2
Documentation - text and images	20	K3 – K4
Research findings and analysis	20	K5

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PC/VC44												
IV	Course Title: VISUAL CULTURE												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

TEXTILE EMBELLISHMENT AND PRODUCT DESIGN PRACTICAL

CODE: 23FA/PC/T345

CREDITS: 5

L T P: 0 0 7

TOTAL TEACHING HOURS: 91

OBJECTIVES OF THE COURSE

- to enable an understanding of stitched embellishment
- to create an awareness of clothing construction
- to enable an understanding of textile product development
- to enhance skills in design for textile applications
- to enable the fabrication of textile products

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand stitched embellishment and clothing construction	K1, K2
CO2	understand the process of textile product development	K3
CO3	make samples of stitched embellishment; implement the various stages of product development	K4
CO4	conceptualise design ideas for varied textile products	K5
CO5	fabricate home textiles and accessories	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Stitched embellishment 1.1 Freestyle embroidery 1.2 Applique 1.3 Fabric manipulation	K1-K4	15	1- 4
2	Product development (theory) 2.1 Market research and demand 2.2 Selection of materials – performance characteristics, aesthetics, cost 2.3 Designing a line – concept, sourcing, sampling, quality standards, costing and pricing 2.4 Labelling, branding and packaging	K1-K3	6	1- 3
3	Apparel (theory and workshop) 3.1 Fashion terminology 3.2 Clothing construction – sizes, pattern layout, cutting, stitches, seams, fullness, making-up methods 3.3 Apparel sub-materials and accessories – interlining, sewing threads, fastenings and trims	K1-K3	20	1- 3

UNIT	CONTENT	CL	Hrs	CO
4	Home textiles Design and product development	K1-K6	25	1- 6
5	Fashion and lifestyle accessories Design and product development	K1-K6	25	1- 6

Guidelines:

- Unit 1 will require the making of samples of prescribed techniques
- Units 4 and 5 - 1 to 2 products will be specified
- Outsourcing of stitched embellishment and fabric manipulation for works assessed as end semester submission is permitted subject to the design idea being conceptualised and developed by the student

BOOKS FOR REFERENCE

Baugh, Gail. *The Fashion Designer's Textile Directory: The Creative Use of Fabrics in Design*. London: Thames and Hudson, 2011.

Bawden, Juliet. *The Art and Craft of Applique*. Great Britain: Mitchell Beazley. 1991.

Cheney, Nigel and McAllister, Helen. *Textile Surface Manipulation*. London: Bloomsbury, 2013.

Collier, Billie J. and Phyllis G. Tortora. *Understanding Textiles*. 6th ed. New Jersey: Prentice Hall, 2001.

Diamond, Jay and Ellen Diamond. *Fashion Apparel, Accessories and Home Furnishings*. New Delhi: Dorling Kindersley, 2008.

Fogg, Marnie. *The Fashion Design Directory*. London: Thames and Hudson, 2011.

Gardiner, Wendy. *The Encyclopedia of Sewing Techniques*. Kent: Search, 2004.

Parchure, J.W. *Fundamentals of Designing for Textiles and Other End Uses*. India: Woodhead Publishing India, 2009.

Yates, Marypaul. *Fabrics: A Guide for Interior Designers and Architects*. New York: W.W.Norton, 2002.

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Classwork 40 marks

Assignment 10 marks

Rubrics for evaluation of classworks and assignment	Marks	Cognitive Level
Samples of stitched embellishment	10	K1 – K4
Design and product development	30	K3 – K4
Originality	10	K5 – K6

End Semester Submission: Total Marks: 50

A set of works will be prescribed for end semester assessment. These works should not have been part of the continuous assessment

Rubrics for evaluation	Marks	Cognitive Level
Research and process	10	K1 – K2
Design and product development	30	K3 – K4
Originality	10	K5 – K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PC/T345												
IV	Course Title: TEXTILE EMBELLISHMENT AND PRODUCT DESIGN PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	3	1	3	2	2	1	3	3	3	3	3
CO 2	3	2	3	1	3	2	2	2	3	3	3	3	3
CO 3	2	2	3	-	3	2	2	2	3	3	3	3	2
CO 4	3	2	3	2	3	3	2	3	3	3	3	3	3
CO 5	3	2	3	1	3	3	2	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023–2024)

COMMUNICATION DESIGN III PRACTICAL

CODE: 23FA/PC/C345

CREDITS: 5

L T P: 007

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- to understand varied media and its relevance to promotion
- to develop skills in raster and vector visual effects
- to provide a brief background to advertising
- to explore design opportunities in the field of advertising and social media
- to provide a foundation in digital arts in relation to web page and mobile application development

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	relate to the field of advertising and its design requirements	K1,K2
CO2	display awareness of design development as an integral process of design	K3
CO3	apply raster and vector visual effects using Adobe Photoshop and other image-editing software for 2-D animation	K4
CO4	design a comprehensive advertising campaign	K5
CO5	create comprehensive designs for web and mobile app platforms	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Advertising process 1.1 Copy and visual 1.2 Layout	K1-K3	15	1-5
2	Advertising campaign 2.1 Public service 2.2 Commercial 2.3 Social media	K1-K6	20	1-5
3	2-D Animation 3.1 Principles of animation 3.2 Storyboarding and scripting 3.3 Motion graphics and animated GIFs	K1-K4	04	1-4

UNIT	CONTENT	CL	Hrs	CO
4	Web page planning 4.1 Composition 4.2 Userflow design, wireframes 4.3 Web page prototype	K1-K6	24	1-5
5	Mobile applications 5.1 User journey, wireframes 5.2 Screen layout 5.3 Prototype	K1-K6	15	1-5

BOOKS FOR REFERENCE

Alan and Livingston, Isabella. *Dictionary of Graphic Design and Designers*: 3rd. ed. London: Thames and Hudson World of Art, 2012.

Beaird, Jason. *The Principles of Beautiful Web Design*. 2nd. ed. Sitepoint, 2010.

Cossu, Matteo. *1000 Ideas by 100 Graphic Designers*. Massachusetts: Rockport, 2009.

Grant Design Collaborative. *1000 More Graphic Elements*. Massachusetts: Rockport, 2009.

Jones, John Philip, ed. *The Advertising Business: Operations, Creativity, Media Planning, Integrated Communications*. California: Sage, 1999.

Roman, Kenneth and Jane Maas. *How to Advertise: What Works, What Doesn't, and Why*. Third Edition, London: Kogan Page, 2003

Goldberg, Eric. *Character Animation Crash Course!* Los Angeles: Silan-James Press, 2008.

Whitaker, Harold, and John Halas. *Timing for Animation, 40th Anniversary Edition*. Boca Raton: CRC Press, 2021.

Williams, Richard. *The Animator's Survival Kit: A Manual of Methods, Principles and Formulas for Classical, Computer, Games, Stop Motion and Internet Animators*. London: Faber & Faber, 2009.

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Classwork: 40 marks

Assignment: 10 marks

Rubrics for evaluation of classworks and assignment	Marks	Cognitive Level
Referencing and thumbnails	10	K1 – K2
Design development	30	K3 – K6
Execution and presentation	10	K3 – K6

End Semester Submission: Total Marks: 50

A set of works will be prescribed for end semester assessment. These works should not have been part of the continuous assessment.

Rubrics for evaluation	Marks	Cognitive Level
Referencing and thumbnails	10	K1 – K2
Design Development	30	K3 – K6
Execution and presentation	10	K3 – K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PC/C345												
IV	Course Title: COMMUNICATION DESIGN III PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

DISSERTATION

CODE: 23FA/PC/DS47

CREDITS: 7

OBJECTIVES OF THE COURSE

- to enable students to demonstrate their capacity to carry out independent academic research on a selected topic
- to provide an opportunity to apply skills and knowledge of art and design to a new issue, area, work or body of work of the student's choice

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	recall MLA and Chicago citation styles	K1
CO2	understand the research problem; demonstrate brainstorming and outlining methods	K2
CO3	develop a thesis statement; write an abstract; apply drafting, revising and editing to thesis writing	K3
CO4	critically think and analyse an argument; write a critical literature review	K4
CO5	create a well-organised clear, coherent, unified argumentative thesis in formal style	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

GUIDELINES

- The student should select a clearly defined dissertation topic in her area of interest in the disciplines of art or design
- The student should present her plan for research to a panel of faculty. This plan should include:
 - A rationale for the topic, indicating the question to be studied and why it is worth studying
 - An outline of the dissertation, indicating the principle chapters or sections
 - An indication of the sources to be consulted, and a basic bibliography
- Following presentation and approval of the research plan, the student will be allotted a faculty supervisor

- The student is required to meet with her supervisor weekly to update on work progress
- The student will be assessed on her capacity to define a topic for examination, to articulate a coherent scheme for examining this topic, to gather the necessary information, and to analyse and present this information in a way that satisfactorily assesses the topic that she has set herself
- The work will be disqualified if found plagiarised

FORMAT

- The dissertation must be word-processed in the prescribed format
- The main part of the dissertation must be double-spaced. Footnotes and bibliography should be single-spaced.
- Margins on the top, right and bottom of the page should be 1” each, with a minimum of 1.5” on the left margin to allow for binding

- The dissertation should contain the following elements:
- **Title page:** This must state the title of the dissertation, the name and department number of the student, and the statement:

Dissertation submitted to Stella Maris College (Autonomous)
in partial fulfilment of the requirements for the degree of
Master of Arts, History of Fine Arts

Department of Fine Arts
Stella Maris College (Autonomous), Chennai 600086
[year-year]

- **Certificate:**

This is to certify that the dissertation [Title], submitted in partial fulfillment of the requirements for the award of the Degree of Master of Art in the History of Fine Arts is the record of work done by [name of student] under the guidance and supervision of [faculty supervisor] in the Department of Fine Arts, Stella Maris College, Chennai, during the period of her study in the years [year-year].

Date:

Place:

[Name of Student]

Head of the Department
Department of Fine Arts
Stella Maris College
Chennai 600 086

Supervisor
Department of Fine Arts
Stella Maris College
Chennai 600 086

Principal
Stella Maris College
Chennai 600 086

- **Declaration:** Students must sign the following declaration:

I hereby declare that the dissertation [Title], submitted by me in partial fulfilment of the requirements for the Masters Degree in the History of Fine Arts is the record of research work done by me during the academic year [year-year], and this dissertation has not been offered for any other course of study. I undertake that all material presented for examination is my own work and has not been written for me, in whole or in part by any other person.

Date:

Place:

[Name of Student]

- **Acknowledgements:** The student may wish to acknowledge any help that she received in the preparation of her dissertation.
- **Table of contents:** This must list the contents of the dissertation by chapters, with sections where appropriate, and the page number for each, together with the page numbers for the notes, bibliography and images. A list of illustrations is to be provided if required.
- **Abstract:** This must provide a brief statement (not more than 200 words) of the main themes or findings of the dissertation.
- **Main text:** Each main heading (introduction, chapters, conclusion, references, bibliography) must start on a new page. Sections within chapters may continue on the same page. The number of pages should be restricted to a minimum of 35 and a maximum of 40, from introduction to conclusion, and not including bibliography.
- **References:** Footnotes should be numbered consecutively and the references to which they refer should be placed either at the bottom of the relevant page or at the end of the dissertation, and before the bibliography. If required, a glossary is to be provided following references.
- **Bibliography:** The bibliography must list all works used in the preparation of the dissertation, including all those noted in the references. A complete bibliography of all resources used/referred to must be attached to the work.
- **Images:** Only one or two images to be placed per page with image numbers

VIVA VOCE

- The student will appear for a viva voce to ascertain the authenticity of the work and whether she has independently and thoroughly researched the topic. The student is expected to demonstrate the ability to analyse/evaluate her own work and conclusions as well as demonstrate knowledge of the subject.

EVALUATION

Continuous assessment by supervisor

- Meetings, discussions and research drafts: 50 marks

Rubrics for evaluation	Marks	Cognitive Level
Meeting deadlines	10	K1
Critical thinking and analysis	10	K5 - K6
Drafts with citation	30	K1 - K4

Final assessment: by supervisor and external examiner

- Dissertation 40 marks
- Viva voce 10 marks

Rubrics for evaluation	Marks	Cognitive Level
Research methods and literature review	10	K1 – K4
Critical analysis	20	K5 - K6
Presentation and writing: well-written, with clear language, correct grammar, and proper citation style. Figures, tables, and other elements should be clear and well-presented.	10	K1 – K4
Viva voce – presentation and defense	10	K5 - K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PC/DS47												
IV	Course Title: Dissertation												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	2	2	2	3	1	1	1
CO 2	3	3	3	3	3	3	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	3	2	2	3	3	2	2	2
CO 4	3	3	3	3	3	3	2	2	3	3	2	2	2
CO 5	3	3	3	3	3	3	2	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

PAINTING PRACTICAL

CODE: 23FA/PE/P115

CREDITS: 5

L T P: 0 0 5

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to provide exposure to painting with watercolours, acrylics and mixed media
- to introduce colour theories and colour relationships
- to enable the creation of art on three-dimensional forms

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	paint using watercolour, inks and acrylics	K1, K2
CO2	create compositions using various techniques	K3
CO3	paint using light and shadow to achieve depth	K4
CO4	relate colour theories and colour relationships to painting three-dimensional forms	K5
CO5	explore and create paintings on simple three-dimensional objects	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction 1.1 Light and Shadow 1.2 Colour Relationships 1.3 Colour Theory	K1- K6	10	1-5
2	Watercolour & Inks Wash, Wet-on-dry, Wet-on-wet, Brush Painting, Masking Techniques	K1 – K6	15	1-5
3	Acrylics Glazing, Alla Prima, Impasto, Knife Painting, Opaque Wash	K1 – K6	15	1-5
4	Mixed Media	K1 – K6	10	1-5
5	Art on Three-Dimensional forms	K4 – K6	15	1-5

BOOKS FOR REFERENCE

- Tappenden, Curtis, Anita Taylor, Paul Thomas, Nick Tidnam. *Complete Art Foundation Course: Drawing, Watercolour, Oils and Acrylics*. London: Cassell Illustrated, 2006.
- Greenman, Geri. *The Complete Photo Guide to Creative Painting*. Minnesota: Creative Publishing International, 2010.
- Fig, Joe. *Inside the Painter's Studio*. New York: Princeton Architectural Press, 2009.
- Harrison, Hazel. *Art School, How to Paint and Draw*. London: Hermes House, 2009.
- Herniman, Barry. *Painting Mood and Atmosphere*. Kent: Search Press, 2004.
- King, Jennifer, ed. *Work Small, Learn Big! Sketching with Pen & Watercolor*. Nevada: International Artist Publishing, 2003.
- Mulick, Milind. *Watercolour*. Pune: Jyotsna Prakashan, 2000.
- Parramon, Jose M. *Basic Techniques and Exercises – Painting Landscape and Still Lifes in Watercolour*. New York: Watson - Guptill Publications, 1998.
- Sidaway, Ian. *Mastering the Art of Oils, Acrylics and Gouache*. London: Hermes House, 2014.
- Simpson, Ian, ed. *Complete Painting Course*, London: HarperCollins Publishers, 1993.
- Tappenden, Curtis, et al. *Complete Art Foundation Course*. London: Octopus Publishing, 2006.
- Webb, David. *Still Life in Watercolour*, Kent: Search Press, 2005.

PATTERN OF ASSESSMENT

Continuous Assessment:	50 marks
Classwork	40 marks
Assignments	10 marks

Rubrics for evaluation of classworks and assignments	Marks	Cognitive Level
Use of media and techniques	25	K1 - K4
Painting skills	25	K5, K6

End Semester Submission**Total Marks: 50**

A set of works will be prescribed for end semester assessment. These works should not have been part of the continuous assessment

Rubrics for evaluation				
Section	Cognitive Level	Marks	Hours	Pattern
A	K1-K4	25	1	Exercise based on observation & techniques
B	K5, K6	75	2	Still life composition

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PE/P115												
	Course Title: PAINTING PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	2	2	3	2	3	2	2	3	3	3	3
CO 2	2	2	3	1	3	3	3	3	3	3	3	3	3
CO 3	2	1	2	1	3	2	1	1	3	3	3	3	3
CO 4	2	2	3	2	3	3	3	3	3	3	3	3	3
CO 5	2	2	3	2	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

MEDIA EXPLORATION PRACTICAL

CODE:23FA/PE/P215

CREDITS: 5

L T P: 0 0 5

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to introduce students to two-dimensional and three-dimensional media
- to enable students to create art combining two-dimensional and three-dimensional forms
- to introduce installation art
- to provide an exposure to visual kinetics

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the applications of two-dimensional and three-dimensional media	K1, K2
CO2	use two-dimensional and three-dimensional forms	K3
CO3	create installation art	K4
CO4	explore visual kinetics to create art like mobiles and stabiles	K5
CO5	create art involving readymades and upcycled materials	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Media Exploration–Two-dimensional	K1 – K3	5	1 - 2
2	Media Exploration–Three-dimensional	K1 – K6	15	1 - 2
3	Integrating 2D and 3D	K1 – K6	15	1 - 2
4	Installation	K1 – K6	15	2 - 3
5	Visual Kinetics	K5 – K6	15	4 - 5

GUIDELINES

- A journal submitted monthly will be a mandatory component of the continuous assessment
- Prescribed coursework is to be completed and presented on scheduled dates during the semester to the course teacher

BOOKS FOR REFERENCE

Felder, Eugene. *Still Life Fundamentals*. London: Kandour, 1956.

Fig, Joe. *Inside the Painter's Studio*. New York: Princeton Architectural Press, 2009.

Harrison, Hazel. Art School, *How to Paint and Draw*. London: Hermes House, 2009.

Herniman, Barry. *Painting Mood and Atmosphere*. Kent: Search Press, 2004.

King, Jennifer, ed. *Work Small, Learn Big! Sketching with Pen & Watercolour*. Nevada: International Artist Publishing, 2003.

Mulick, Milind. *Watercolour*. Pune: Jyotsna Prakashan, 2000.

Parramon, Jose M. *Basic Techniques and Exercises – Painting Landscape and Still Lifes in Watercolour*. New York: Watson - Guptill Publications, 1998.

Sausmarez, Maurice de. *Basic Design: The Dynamics of Visual Form*. London: A & C Black (Publishers) Ltd. 2002.

Sidaway, Ian. *Mastering the Art of Oils, Acrylics and Gouache*. London: Hermes House, 2014.

Simpson, Ian, ed. *Complete Painting Course*, London: Harper Collins Publishers, 1993.

Tappenden, Curtis, et al. *Complete Art Foundation Course*. London: Octopus Publishing, 2006.

Webb, David. *Still Life in Watercolour*, Kent: Search Press, 2005.

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Classwork: 40 marks

Assignment: 10 marks

Rubrics for evaluation of classworks and assignment	Marks	Cognitive Level
Process	10	K1 – K2
Execution – use of media and techniques	30	K3 – K4
Creativity and Originality	10	K5 – K6

End Semester Submission: Total Marks: 50

A set of works will be prescribed for end semester assessment. These works should not have been part of the continuous assessment.

Rubrics for evaluation	Marks	Cognitive Level
Process	10	K1 – K2
Execution – use of media and techniques	30	K3 – K4
Creativity and Originality	10	K5 – K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PE/P215												
	Course Title: MEDIA EXPLORATION PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	1	2	2	3	3	3	3	2
CO 2	3	3	3	3	2	1	2	2	3	3	3	3	2
CO 3	3	3	3	3	2	1	2	2	3	3	3	3	2
CO 4	3	3	3	3	2	1	2	2	3	3	3	3	2
CO 5	3	3	3	3	2	1	2	2	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

CRITICAL WRITING

CODE: 23FA/PE/CW15

CREDITS: 5

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to introduce styles and approaches towards developing competency in writing about art and design through visual experience
- to develop critical thinking and writing skills
- to develop research skills
- to understand citation styles and documentation

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	recall MLA and Chicago citation styles	K1
CO2	demonstrate brainstorming and outlining methods	K2
CO3	understand the modes of discourse in writing	K3
CO4	apply drafting, revising and editing to writing	K4
CO5	create a clear, coherent, unified argumentative essay	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Analytic and Critical Thinking 1.1 Seeing and saying 1.2 Subject matter and content	K1- K4	3	1-3
2	Style and Documentation 2.1 The right word: denotation, connotation, concreteness 2.2 Effective sentences and coherent paragraphs 2.3 Grammar and syntax 2.4 Citation styles: MLA and Chicago	K1- K5	6	1-5

UNIT	CONTENT	CL	Hrs	CO
3	Four Modes of Discourse 3.1 Narration 3.2 DESCRIPTION 3.3 Exposition 3.4 Argument	K1- K5	2	1-5
4	Types of Writing about Art and Design 4.1 Essays and research papers 4.2 Formal analysis 4.3 Comparison and contrast	K1- K5	14	1-5
5	Research and the Writing Process 5.1 Researching resources, data collection, selecting key-points, note-making, summarising, paraphrasing, direct quote, plagiarism 5.2 Thesis statement, outlining, drafting, introduction, body paragraphs, conclusion, revising, editing, proofreading	K1- K5	40	1-5

BOOKS FOR REFERENCE

Anderson, Jonathan, et al. *Thesis and Assignment Writing*. New Delhi: Wiley Eastern, 1992.

Anderson, Marilyn, et al. *Critical Thinking, Academic Writing and Presentation Skills*. Noida: Pearson India, 2010.

Barnet, Sylvan, *A Short Guide to Writing about Art*. 9th edition, New Jersey: Pearson Prentice Hall, 2008.

Booth, Wayne C., et al. *The Craft of Research*. Chicago: University of Chicago Press, 1995.

D'Alleva, Anne. *Look! The Fundamentals of Art History*. 3rd edition, New Jersey: Pearson Education, 2004.

Hudson, Suzanne and Nancy Noonan-Morrissey, *The Art of Writing about Art*. Belmont: Wadsworth, 2002.

Minor, Vernon Hyde. *Art History's History*, 2nd edition, New Jersey: Prentice Hall, 2001.

MLA Handbook for Writers of Research Papers. 7th edition, New York: Modern Language Association, 2009.

Podro, Michael. *The Critical Historians of Art*. New Haven and London: Yale University Press, 1982.

Skwire, David and Sarah Skwire. *Writing with a Thesis: A Rhetoric and Reader*. 8th edition, Fort Worth: Harcourt College Publishers, 2001.

Tyson, Lois. *Critical Theory Today: A User Friendly Guide*. 2nd edition, New York: Routledge, 2006.

William, Robert. *Art Theory: A Historical Introduction*, 2nd edition, West Sussex: Wiley Blackwell, 2009.

WEB RESOURCE

The Chicago Manual of Style Online. www.chicagomanualofstyle.org

PATTERN OF ASSESSMENT

- There will be no end semester examination
- Evaluation will be based on continuous internal assessment of written essays and research paper

Continuous Assessment: Total Marks: 50

Rubrics for Evaluation	Marks	Cognitive Level
Essays	30	K1 – K5
Research paper	20	K1 – K5

End Semester Submission: Total Marks: 50

There will be no end-semester examination. A case study/ term paper of a maximum of 2500 words is to be submitted for evaluation by external examiner: 50 marks

Rubrics for Evaluation	Marks	Cognitive Level
Introduction, methodology, presentation and citation	10	K1 – K2
Documentation - text and images	20	K3 – K4
Research findings and analysis	20	K5

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23FA/PE/CW15												
I	Course Title: CRITICAL WRITING												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	2	2	2	3	1	1	1
CO 2	3	3	3	3	3	3	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	3	2	2	3	3	2	2	2
CO 4	3	3	3	3	3	3	2	2	3	3	2	2	2
CO 5	3	3	3	3	3	3	2	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

RESEARCH METHODOLOGY

CODE: 23FA/PE/RM15

CREDITS: 5

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to inculcate and develop the research habit
- to provide knowledge of the research tools and methods
- to write research papers, reports and dissertation

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define and display the cultivation of a research habit	K1
CO2	demonstrate an understanding of research tools and methods	K2
CO3	demonstrate the ability to collect and analyse data	K3
CO4	write papers and reports using research tools	K4
CO5	write a dissertation using necessary research techniques	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1.	Introduction to Research Methodology Types of Research 1.1 Descriptive vs. Analytical 1.2 Applied vs. Fundamental 1.3 Quantitative vs. Qualitative 1.4 Conceptual vs. Empirical	K1- K4	8	1-5
2.	Research Formulation 2.1 Defining the research problem 2.2 Literature review 2.3 Primary, secondary and tertiary sources 2.4 Developing a working hypothesis	K1- K6	10	1-5

UNIT	CONTENT	CL	Hrs	CO
3	Research Methods 3.1 Traditional methods: historical, institutional, philosophical, comparative 3.2 Modern methods: questionnaire, interview, focus group discussion, observation, case study, content analysis, statistical, experimental, brainstorming techniques	K1- K5	12	1-5
4	Data Collection and Analysis 4.1 Methods of data collection 4.2 Analysis strategies 4.3 Testing of hypothesis	K1- K5	15	1-5
5	Thesis Writing 5.1 Style manuals MLA, Chicago 5.2 Layout, structure and language 5.3 Bibliography, referencing and citation 5.4 Ethics: copyright, Intellectual Property Rights, plagiarism, citation and acknowledgement, reproducibility and accountability	K1- K6	20	1-5

BOOKS FOR REFERENCE

Anderson, Jonathan et al. *Thesis and Assignment Writing*. New Delhi: Wiley Eastern, 1992.

MLA Handbook for Writers of Research Papers. 8th edition. New York: Modern Language Association, 2016.

Skwire, David and Sarah Skwire. *Writing with a Thesis: A Rhetoric and Reader*, 8th ed. Fort Worth: Harcourt College Publishers, 2001.

WEBSITES

The Chicago Manual of Style Online. www.chicagomanualofstyle.org
 Modern language association. www.mla.org

PATTERN OF ASSESSMENT

- There will be no end semester examination
- Evaluation will be based on continuous internal assessment of written essays and research paper

Continuous Assessment: Total Marks: 50

Rubrics for Evaluation	Marks	Cognitive Level
Essays	30	K1 - K5
Research paper	20	K1 - K5

End Semester Submission: Total Marks: 50

There will be no end-semester examination. A case study/ term paper of a maximum of 2500 words is to be submitted for evaluation by external examiner: 50 marks

Rubrics for Evaluation	Marks	Cognitive Level
Introduction, methodology, presentation and citation	10	K1 - K2
Documentation - text and images	20	K3 - K4
Research findings and analysis	20	K5

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PE/RM15												
I	Course Title: Research Methodology												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	2	2	2	3	1	1	1
CO 2	3	3	3	3	3	3	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	3	2	2	3	3	2	2	2
CO 4	3	3	3	3	3	3	2	2	3	3	2	2	2
CO 5	3	3	3	3	3	3	2	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

BOOK ILLUSTRATION PRACTICAL

CODE: 23FA/PE/P315

CREDITS: 5

L T P: 0 0 5

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to facilitate the developing of hand rendered illustration skills
- to enable students to explore styles, techniques and media
- to enable students to develop a personal style of expression
- to foster creativity in developing illustrations for books

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explore media and techniques in executing hand rendered illustrations	K1
CO2	document the process of illustration from ideation to final execution	K2
CO3	illustrate forms and characters from observed and inspired sources	K3
CO4	develop original compositions using personal illustrative style	K4
CO5	create illustrations for picture books	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	The Illustration Process 1.1 Research, ideation 1.2 Building visual references 1.3 Concept and composition	K1 - K6	5	1-5
2	Media and Techniques 2.1 Drawing 2.2 Painting 2.3 Mixed media	K1 – K6	10	1 - 5
3	Style Exploration 3.1 Illustration styles 3.2 Exploring themes in personal styles	K1 – K6	10	1 - 5
4	Character Illustration 4.1 Face, figure, gesture, expression and Movement 4.2 Character development	K1 – K6	10	1 – 5
5	Picture Book Illustration	K1 – K6	30	1 - 5

BOOKS FOR REFERENCE

Bettley, James. *The Art of the Book: From Medieval Manuscript to Graphic Novel*. London: V&A Publications, 2001.

Bossert, Jill. *Children's Book Illustration*. Sussex: Rotovision, 1995.

Chatterji, Roma. *Graphic Narratives and the Mythological Imagination in India*. New York: Routledge, 2020.

Eyre, Doug. *Drawing Caricatures*. Wiltshire: The Crowood Press, 2007

Fleishman, Michael. *Exploring Illustration*. Australia: Thomas Delmar Learning, 2003.

Goldberg, Eric. *Character Animation Crash Course!* Los Angeles: Silan-James Press, 2008.

Haller, Susan. *Stock Workbook Illustration 2*: Scott & Daughters Publishing, Inc., 2000

Lewis, Brian. *An Introduction to Illustration*. London: Grange Books, 1995.

Slade, Catherine. *The Encyclopaedia of Illustration Techniques*. London: Quarto Publishing, 1997.

Stanchfield, Walt. *Drawn to Life: 20 Golden Years of Disney Master Classes*. Boca Raton: Taylor and Francis, 2009.

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Classwork 50 marks

Rubrics for evaluation of classworks and assignment	Marks	Cognitive Level
Referencing and process	10	K1 – K2
Execution – use of media, techniques	20	K3 – K4
Personal style	20	K5 – K6

End Semester Submission: Total Marks: 50

A set of works will be prescribed for end semester assessment. These works should not have been part of the continuous assessment.

Rubrics for evaluation	Marks	Cognitive Level
Referencing and process	10	K1 – K2
Execution – use of media, techniques	20	K3 – K4
Personal style	20	K5 – K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PE/P315												
II	Course Title: BOOK ILLUSTRATION PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	2	2	3	3	3	2	2
CO 2	3	3	3	3	3	3	2	2	3	3	3	2	2
CO 3	3	3	3	3	3	3	3	3	3	3	3	2	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

DIGITAL ILLUSTRATION PRACTICAL

CODE: 23FA/PE/P415

CREDITS: 5

L T P: 0 0 5

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to introduce digital illustration using adobe illustrator and photoshop
- to understand digital colour palettes
- to develop vector and raster illustrations

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the basics of digital illustration and its applications	K1, K2
CO2	explore the process of digital image making - raster and vector	K3
CO3	build digital colour schemes and explore various style	K4
CO4	develop concept-based illustrations using relevant software	K5
CO5	create digital illustrations for various applications	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction 1.1 Image making softwares 1.2 Digital colour schemes – HSV colour theory 1.3 Graphic textures	K1, K2	5	1
2	Digital Image Making Process 2.1 Raster 2.2 Vector 2.3 Image scanning	K1 - K4	10	1-4
3	Digital cartoons and comics	K1 - K6	15	1-5
4	Applications of Digital Illustration 4.1 Fashion 4.2 Picturebooks	K1 - K6	20	1-5
5	Graphic Novels	K1 - K6	15	1-5

BOOKS FOR REFERENCE

Carter, David E. *The New Big Book of Color*. New York: Collins Design, 2006.

Computer Graphics. Hong Kong: Rockport Publishers, Inc. 1992.

Haller, Susan. *Stock Workbook Illustration 2*: Scott & Daughters Publishing, Inc., 2000

Hornung, David. *Colour*. London: Laurence King Publishing Ltd., 2005.

Black Book Illustration 1997. New York: Black Book Marketing Group, 1997.

Sidaway, Ian and Hoggett, Sarah. *The Practical Encyclopedia of Drawing*. London: Hermes House, 2012.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Classwork	40 marks
Assignment	10 marks

Rubrics for evaluation of classworks and assignment	Marks	Cognitive Level
Process	10	K1 – K2
Execution – use of media and techniques	30	K3 – K4
Creativity and Originality	10	K5 – K6

End Semester Submission: Total Marks: 50

A set of works will be prescribed for end semester assessment. These works should not have been part of the continuous assessment.

Rubrics for evaluation	Marks	Cognitive Level
Process	10	K1 – K2
Execution – use of media and techniques	30	K3 – K4
Creativity and Originality	10	K5 – K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23FA/PE/P415												
	Course Title: DIGITAL ILLUSTRATION PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	3	3	3	3	3	3	3	3
CO 2	3	3	3	3	2	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	2	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	2	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	2	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

CREATIVE DESIGN PRACTICAL

CODE: 23FA/PE/CD23

CREDITS: 3

L T P: 0 0 3

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to enable students to develop creative design skills
- to provide an awareness of design applications on varied products

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand design seeing	K1
CO2	explore different media for design rendering	K2
CO3	develop designs for varied applications	K3
CO4	explore possibilities in recycling materials	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	Hrs	CO
1	Painting on Pottery	K1-K4	8	1-5
2	Painting on Fabric	K1-K4	8	1-5
3	Painting on Glass	K1-K4	8	1-5
4	Designing with Paper	K1-K4	10	1-5
5	Designing with Recycled Materials	K1-K4	5	1-5

BOOKS FOR REFERENCE

Espi, Lorette. *Step-by-Step Pottery and Ceramics*. London: New Holland, 1995.
Fairbairn, Caroline. *An Introduction to Decorating and Glazing Pottery*. California: Thunder Bay, 1999.
Foster, Viv. *The Stained Glass Handbook*. London: Quantum, 2006.
Innes, Miranda. *Fabric Painting*. London: Dorling Kindersley, 1996.
Larbalestier, Simon. *The Art and Craft of Montage*. London: Mitchell Beazley, 1993.
Moor, Andrew. *Contemporary Stain Glass*. London: Mitchell Beazley, 1989.
Orthaus, Angelika. *A Creative Guide to Painting on Silk*. London: New Holland, 1994.
Owen, Cheryl. *The Practical Handbook of Card Making*. London: Hermes, 2008.

PATTERN OF ASSESSMENT

- There will be no end semester examination
- Prescribed coursework completed and presented to the course teacher on
- scheduled dates during the semester will be evaluated for 100 marks

Continuous Assessment: Total Marks 100

Rubrics for Evaluation of Class Works	Marks	Cognitive Level
Process	25	K 1 - K2
Execution – use of techniques	75	K 3 - K5

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

PAPER ART PRACTICAL

CODE: 23FA/PE/PA23

CREDITS: 3

L T P: 0 0 3

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to introduce paper as a creative medium of expression
- to enable the exploration of select techniques of paper art

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand types of paper and their characteristics	K1
CO2	explore the possibilities of marbling technique with paper	K2
CO3	develop theme based works with collage technique and paper construction	K3
CO4	explore the use of frottage technique	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction 1.1 Types of paper 1.2 Styles of paper art	K1-K4	5	1 - 5
2	Marbling	K1-K4	8	1 - 5
3	Collage	K1-K4	8	1 - 5
4	Frottage	K1-K4	8	1 - 5
5	Paper Construction	K1-K4	10	1 - 5

BOOKS FOR REFERENCE

Jackson, Paul. *Paper Pop-Ups*. Rockport: Rockport Publishers, 1997.

Lively, Kate, (ed.), *Making Great Papercrafts Origami Stationery and Gift Wraps*, New Delhi: OM Books International, 2008.

Maflin, Andrea. *Decorative Paper*. London: Conran Octopus, 1995.

Rozelle, Lew. *Origami Ornaments*. New York: St. Martins Press, 2000.

Soterious, Alexandra. *Gift of Conquerors: Hand Papermaking in India*, Ahmedabad: Mapin, 1999.

Ziegler, Kathleen and Nick Greco. *Paper Sculpture: A Step-by-Step Guide*. Rockport: Rockport Publishers, 1994.

PATTERN OF ASSESSMENT

- There will be no end semester examination
- Prescribed coursework completed and presented to the course teacher on scheduled dates during the semester will be evaluated for 100 marks

Continuous Assessment: Total Marks 100

Rubrics for Evaluation of Class Works	Marks	Cognitive Level
Process	25	K 1 - K2
Execution – use of techniques	75	K 3- K5

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

FUNDAMENTALS OF FASHION MANAGEMENT

CODE: 23FA/PI/FM24

CREDITS: 4

OBJECTIVES OF THE COURSE

- to introduce fashion management
- to create an awareness of the fashion industry
- to enable an understanding of the business of fashion

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION
CO1	demonstrate a basic understanding of the fashion industry and its management
CO2	understand fashion forecasting
CO3	discuss the dynamics of trends and seasons in the fashion industry
CO4	demonstrate an awareness of fashion branding, marketing and promotion
CO5	discuss the business of fashion

UNIT	CONTENT	CO
1	The Business of Fashion 1.1 The fashion industry in the twentieth century 1.2 Technology 1.3 Influential designers	1 – 5
2	Fashion Trend and Prediction 2.1 Fashion forecasting and its process 2.2 Trend prediction 2.3 Fashion forecasting agencies	1 - 5
3	Fashion Transition 3.1 Fashion buying 3.2 Merchandising 3.3 Retail formats and the retail calendar	1 - 5
4	Fashion Communication 4.1 The fashion consumer 4.2 Branding 4.3 Fashion marketing and promotion 4.4 Visual merchandising and fashion advertising	1 - 5

UNIT	CONTENT	CO
5	Fashion and Business 5.1 Setting up a fashion business 5.2 Creative business planning 5.3 Branding basics 5.4 Innovative marketing and promotion 5.5 Design and copyright	1 - 5

BOOK FOR STUDY

Dillon, Susan. *The Fundamentals of Fashion Management*. Lausanne: AVA Publishing, 2012.

BOOKS FOR REFERENCE

Baugh, Gail. *The Fashion Designer's Textile Directory: The Creative Use of Fabrics in Design*. London: Thames and Hudson, 2011.

Diamond, Jay and Ellen Diamond. *Fashion Apparel, Accessories and Home Furnishings*. New Delhi: Dorling Kindersley, 2008.

Fogg, Marnie. *The Fashion Design Directory*. London: Thames and Hudson, 2011.

Gale, Colin and Jasbir Kaur. *Fashion and Textiles*. Oxford: Berg, 2004.

Gardiner, Wendy. *The Encyclopedia of Sewing Techniques*. Kent: Search, 2004.

Ireland, Patrick John. *Encyclopedia of Fashion Details*. London: B T Batsford, 1996.

San Martin, Marcarena. *How to be a Fashion Designer*. Singapore: Paco Asensio, 2009.

Worsley, Harriet. *100 Ideas that Changed Fashion*. London: Laurence King, 2011.

PATTERN OF ASSESSMENT

End Semester Examination: Total Marks: 100 Duration: 3 Hours

Section A – 4 x 10 = 40 marks (4 out of 6 questions)

Section B – 3 x 20 = 60 marks (3 out of 4 questions)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SYLLABUS

(Effective from the academic year 2023-2024)

INDIAN MINIATURE PAINTING

CODE: 23FA/PI/IM24

CREDITS: 4

OBJECTIVES OF THE COURSE

- to provide an understanding of indian miniature painting traditions such as mughal, deccani and rajput
- to be aware of stylistic variations between the different schools of indian miniature painting

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION
CO1	list out the materials and techniques used in miniature painting
CO2	understand the contexts of creation of Indian miniatures
CO3	identify the styles of Mughal, Deccani and Rajput schools of miniature painting
CO4	analyse regional and period styles with reference to historical, religious, political and social contexts
CO5	evaluate traditional Indian painting using contextual and comparative modes

UNIT	CONTENT	CO
1	Materials, themes and techniques	1 - 5
2	Mughal miniatures under Akbar and Jehangir	1 - 5
3	Deccani miniatures of Ahmednagar	1 - 5
4	Rajput Miniatures: Rajasthani schools 4.1 Bhakthi movement 4.2 Mewar 4.3 Bundi 4.4 Kishangarh	1 - 5
5	Rajput Miniatures: Pahari schools 5.1 Basholi 5.2 Kangra	1 - 5

BOOKS FOR STUDY

Barret, Douglas, and Basil Gray. *Indian Painting*. London: Skira, Macmillan, 1978.

Brijbhushan, Jamila. *The World of Indian Miniatures*. Tokyo: Kodansha International, 1979.

Welch, Stuart Cary. *Imperial Mughal Painting*. New York: George Braziller, 1978.

BOOKS FOR REFERENCE

Brown, Percy. *Indian Painting Under the Mughals*. New York: Hacker Art Books, 1975.

Beach, Milo Cleveland. *The New Cambridge History of India: Mughal and Rajput Painting*. Cambridge: University Press, 2000.

Tömöry, Edith. *A History of Fine Arts in India and the West*. Madras: Orient Longman, 1982.

PATTERN OF ASSESSMENT

End Semester Examination: Total Marks: 100 Duration: 3 Hours

Section A – 4 x 10 = 40 marks (4 out of 6 questions)

Section B – 3 x 20 = 60 marks (3 out of 4 questions)



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

**M.Sc. DEGREE
BRANCH I MATHEMATICS
(CHOICE BASED CREDIT SYSTEM)**

**OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)**

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF MATHEMATICS

PROGRAMME DESCRIPTION

The M.Sc. Mathematics Degree programme lays equal emphasis on motivating and training students towards higher education in the discipline and employability. With the focus on imparting quality education, the students are exposed to pure, applied and applicable Mathematics. Introduction of a scientific computing environment based on mathematical approach caters to the needs of teaching, learning and research and helps students acquire effective professional writing and communication skills and equips the students with enhanced employability skills. Intercollegiate competitions are organised and interclass competitions in Mathematics taps the potentials of the students. Participation are offered to students to widen the horizon of knowledge with a focus on research. The programme offers opportunity for research, and students are encouraged to publish original work in peer reviewed journals.

VISION

- To inculcate in the students logical and analytical thinking, to increase their intellectual curiosity enabling them to become lifelong learners
- To continue to grow in their chosen professions and to function as dynamic citizens
- To establish an international reputation as a centre for excellence in teaching and research of Mathematics

MISSION

- To develop in students logical thinking, analytical reasoning and problem solving skills
- To equip the students with more technical and technological skills and scientific computing techniques based on Mathematical methods to meet the growing demand in the industrial, marketing, communication sectors, etc.
- To offer at all levels a wide array of mathematical approaches in a scientific computing environment to cater to the needs of teaching, research & industrial applications
- To equip them with enhanced employable skills
- To widen their horizon of knowledge with a focus on research

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

PROGRAMME SPECIFIC OUTCOMES (PSO)

On successful completion of the M.Sc. Mathematics Programme, the students will be able to

PSO1	understand the basic concepts, theories and applications of Mathematics and associate the concepts to the real-world problems leading to an advanced level of enhancement in career prospects
PSO2	communicate mathematical concepts and solutions and improve the skill to present the same effectively
PSO3	develop advanced analytical thinking skills and problem-solving abilities in diverse mathematical contexts through internalization of the concepts
PSO4	apply advanced mathematical concepts and mathematical modeling techniques and construct mathematical algorithms for solving problems faced in various domains
PSO5	conduct research using appropriate methodologies, tools and analysis techniques and also create new techniques for transforming the research gains to end users

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
DISTRIBUTION OF CREDITS AND HOURS
M.Sc. Mathematics 2023-2024

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	5	4	5	4	7	4	6	16	23
	4	5	4	5	4	5	4	5	16	20
	4	5	4	5	4	5	4	5	16	20
	4	6			4	5			8	11
Dissertation							7	9	7	9
PE-dept.	5	5	5	5			5	5	15	15
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PA	2	2							2	2
PN					2				2	0
Library		2		3		3				8
TOTAL	23	30	24	30	23	30	24	30	94	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: BRANCH I - MATHEMATICS

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
SEMESTER-I									
23MT/PC/AA14	Abstract Algebra	4	4	2	0	3	50	50	100
23MT/PC/RA14	Real Analysis	4	4	1	0	3	50	50	100
23MT/PC/GT14	Graph Theory	4	4	1	0	3	50	50	100
23MT/PC/OD14	Ordinary Differential Equations	4	4	1	0	3	50	50	100
	PA/PL								
	Department Elective I								
SEMESTER-II									
23MT/PC/LA24	Linear Algebra	4	4	1	0	3	50	50	100
23MT/PC/MI24	Measure Theory and Integration	4	4	1	0	3	50	50	100
23MT/PC/TO24	Topology	4	4	1	0	3	50	50	100
23MT/PK/SS22	Soft Skills	2	2	0	0	-	50	-	100
CD / ET	Value Education								
	Department Elective II								
	Common Elective I								
SEMESTER-III									
23MT/PC/PD34	Partial Differential Equations	4	4	1	0	3	50	50	100
23MT/PC/FA34	Functional Analysis	4	4	1	0	3	50	50	100
23MT/PC/MS34	Mathematical Statistics	4	4	1	0	3	50	50	100
23MT/PC/RT34	Research Methods and Tools	4	2	1	4	3	50	50	100
23MT/PN/SI32	Summer Internship	2	0	0	0	-	50	-	100
CD / ET	Value Education								
	Common Elective II								
SEMESTER-IV									
23MT/PC/CA44	Complex Analysis	4	4	1	0	3	50	50	100
23MT/PC/SP44	Stochastic Processes	4	4	1	0	3	50	50	100
23MT/PC/CF44	Continuum and Fluid Mechanics	4	4	2	0	3	50	50	100
23MT/PC/DS47	Dissertation	7	0	0	9	-	-	100	100
	Department Elective III								
Postgraduate Elective Courses Offered to Parent Department									
23MT/PE/NC15	Number Theory and Cryptography	5	5	0	0	3	50	50	100
23MT/PE/CI15	Calculus of Variation and Integral Equations	5	5	0	0	3	50	50	100
23MT/PE/AL15	Analysis of Algorithms	5	5	0	0	3	50	50	100
23MT/PE/FT15	Fuzzy Set Theory and Applications	5	5	0	0	3	50	50	100
23MT/PE/ME15	Mechanics	5	5	0	0	3	50	50	100
23MT/PE/DG15	Differential Geometry	5	5	0	0	3	50	50	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086**M.Sc. DEGREE: BRANCH I - MATHEMATICS****COURSES OF STUDY****(Effective from the academic year 2023-2024)****CHOICE BASED CREDIT SYSTEM**

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
23MT/PE/MP15	Mathematical Python	5	2	0	3	3	50	50	100
Postgraduate Elective Courses Offered to Other Departments									
23MT/PE/ED23	Essentials of Discrete Mathematics	3	3	0	0	3	50	50	100
23MT/PE/AM23	Elements of Applicable Mathematics	3	3	0	0	3	50	50	100
23MT/PE/DR23	Data Analysis using R	3	1	0	2	3	50	50	100
The Department will offer one Social Awareness Course									
Social Awareness Courses									
23MT/PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100
23MT/PA/CR12	Child Rights	2	2	0	0	-	50	-	100
23MT/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100
23MT/PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100
23MT/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100
23MT/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100
23MT/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100
23MT/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100
23MT/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100
Independent Elective Course									
23MT/PI/MM24	Mathematical Modeling	4	0	0	0	3	-	100	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH I –MATHEMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

ABSTRACT ALGEBRA

CODE: 23MT/PC/AA14

CREDITS: 4

L T P: 4 2 0

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- develop a solid understanding of fundamental concepts and structures in abstract algebra, including groups, rings, and fields, and their properties and operations
- apply abstract algebraic principles and techniques to solve problems, construct proofs, and demonstrate mathematical reasoning within the context of abstract algebra
- analyze and interpret theorems and mathematical structures in abstract algebra, including sylow's theorems, extension fields, galois groups, and polynomial rings
- evaluate and compare different algebraic structures, such as groups and rings, based on their properties, characteristics, and applications
- synthesize abstract algebraic knowledge and skills to solve advanced problems and explore new areas of research in Abstract Algebra

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the basic concepts used in the theory of Sylow's theorems, extension of fields, Galois groups and Ring Theory	K1
CO2	demonstrate the ability to apply abstract algebraic principles to solve advanced problems	K2
CO3	apply the theory of Sylow's theorems, extension of fields and Galois group in solving the problems in polynomial equations and the properties and concepts of a ring theory to solve problems related to factorization, divisibility, and prime elements	K3
CO4	analyze Sylow theorems and the theory of extension of fields and Galois groups and analyze polynomial rings and their properties, specifically focusing on polynomials over the rational field and polynomial rings over commutative rings	K4
CO5	evaluate extension fields, roots of polynomials, the concept of Galois theory, and critically evaluate and compare the properties and characteristics of different rings	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Group Theory 1.1 Counting Principle 1.2 Cauchy's Theorem 1.3 Sylow's Theorem (second proof only) 1.4 Direct Products 1.5 Finite Abelian Groups	K1- K5	17	CO1-5
2	Ring Theory-I 2.1 Euclidean Rings 2.2 Unique Factorization Theorem 2.3 A particular Euclidean ring 2.4 Fermat's Theorem	K1- K5	13	CO1-5
3	Ring Theory-II 3.1 Polynomial Rings 3.2 Polynomials over the Rational Field 3.3 Polynomial Rings over Commutative Rings	K1- K5	14	CO1-5
4	Fields-I 4.1 Extension Fields 4.2 Roots of Polynomials 4.3 More about Roots	K1- K5	17	CO1-5
5	Fields-II 5.1 The Elements of Galois Theory 5.2 Solvability by Radicals 5.3 Galois Groups over the Rationals	K1- K5	17	CO1-5

BOOK FOR STUDY

Herstein, I. N. *Topics in Algebra*. 2nd Ed. New Delhi: Wiley Eastern Limited, 2017.
Chapter 2 Sections 2.11 – 2.14 (omit Lemma 2.12.1, Lemma 2.12.2)
Chapter 3 Sections 3.7 - 3.11
Chapter 5 Sections 5.1, 5.3, 5.5 - 5.8

BOOKS FOR REFERENCE

Reis, Clive. *Abstract Algebra – An Introduction to Groups, Rings and Fields*. Singapore: World Scientific Printers, 2012.

Fraleigh, John B. *A First Course in Abstract Algebra*. Seventh Edition, New Delhi: Pearson Education in South Asia, 2012.

Artin, Michael. *Algebra*. Delhi: Pearson Education in South Asia, 2007.

MacLane, Saunders, and Garrett Birkhoff. *Algebra*. Third Edition. Kolkata: American Mathematical Society – Indian Edition, 2013.

PATTERN OF ASSESSMENT**No Unit should be left out.****Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:**Total Marks: 50**

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PC/AA15												
	Course Title: ABSTRACT ALGEBRA												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	1	1	3	3	2	2	2
CO 2	3	3	3	3	2	2	1	1	3	3	2	2	2
CO 3	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 4	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 5	3	3	3	3	3	2	1	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

M.Sc. DEGREE: BRANCH I –MATHEMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

REAL ANALYSIS

CODE: 23MT/PC/RA14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- develop a strong understanding of fundamental concepts in real analysis, including point set topology, functions of bounded variation, and the riemann-stieltjes integral
- acquire analytical skills by applying real analysis techniques to solve complex mathematical problems, such as evaluating limits, continuity, and differentiability of functions, and interpreting results within the context of real analysis
- gain proficiency in problem-solving by utilizing real analysis techniques to evaluate mathematical arguments and proofs, including theorems related to multivariable differential calculus and implicit functions
- enhance critical thinking by analyzing the properties of real-valued functions, such as uniform continuity, integrability, and convergence, and applying these concepts to evaluate and interpret mathematical statements within real analysis
- foster creativity and independent thinking to formulate and present well-structured mathematical arguments and proofs to the concepts of real analysis and to explore advanced topics

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the fundamental concepts, theorems, and techniques from point set topology, functions of bounded variation, Riemann-Stieltjes integral, multivariable differential calculus, and implicit functions and extremum problems in real analysis	K1
CO2	demonstrate understanding and articulate the significance of the concepts learnt	K2
CO3	apply analytical and problem-solving skills to solve complex mathematical problems and demonstrate proficiency in techniques such as integration by parts, change of variable in integrals, and determining extrema of real-valued functions of one or several variables	K3
CO4	analyze the relationships between different concepts and theorems in real analysis, such as the connections between open sets, closed sets, compactness, and continuity, as well as the interplay between the Riemann-Stieltjes integral and functions of bounded variation	K4
CO5	evaluate and critique mathematical arguments and proofs, specifically in the context of real analysis, including analysis of differentiability conditions, properties of upper and lower integrals, and the applicability of concepts studied in theorems	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Elements of point set Topology 1.1 Euclidean Space R^n 1.2 Open Balls and Open Sets in R^n 1.3 Closed Sets – Adherent and Accumulation points 1.4 Bolzano-Weierstrass Theorem 1.5 Cantor Intersection Theorem 1.6 Lindelöf Covering Theorem 1.7 Heine–Borel Covering Theorem 1.8 Compactness in R^n	K1- K5	14	CO1-5
2	Functions of Bounded Variation 2.1 Properties of Monotonic Functions 2.2 Functions of Bounded Variation 2.3 Total Variation 2.4 Additive Property of Total Variation 2.5 Total Variation on $[a, x]$ as a function of x 2.6 Functions of Bounded Variation expressed as the Difference of Increasing Functions 2.7 Continuous functions of Bounded Variation Riemann-Stieltjes Integral-I 2.8 Linear Properties 2.9 Integration by Parts 2.10 Change of Variable in a Riemann- Stieltjes Integral	K1- K5	10	CO1-5
3	Riemann-Stieltjes Integral-II 3.1 Reduction to a Riemann Integral 3.2 Step Functions as Integrators 3.3 Reduction of a Riemann-Stieltjes Integral to a Finite Sum 3.4 Monotonically Increasing Integrators - Upper and Lower Integrals 3.5 Additive and Linearity Properties of Upper and Lower Integrals 3.6 Riemann's Condition 3.7 Comparison Theorems 3.8 Integrators of Bounded Variation 3.9 Necessary and Sufficient Condition for Existence of Riemann-Stieltjes Integrals 3.10 Mean Value Theorems for Riemann-Stieltjes Integrals 3.11 The Integral as a Function of the Interval 3.12 Change of Variable in a Riemann Integral 3.13 Riemann-Stieltjes Integrals depending on a Parameter 3.14 Differentiation under the Integral Sign 3.15 Interchanging the Order of Integration	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
4	Multivariable Differential Calculus 4.1 The Directional Derivative 4.2 Directional Derivative and Continuity 4.3 Total Derivative - Total Derivative expressed in terms of Partial Derivatives 4.4 Jacobian Matrix 4.5 Chain rule – Matrix Form 4.6 Mean Value Theorem 4.7 Sufficient Condition for Differentiability 4.8 Equality of Mixed Partial Derivatives 4.9 Taylor's formula for functions from R^n to R^1	K1- K5	14	CO1-5
5	Implicit Functions and Extremum Problems 5.1 Functions with non-zero Jacobian Determinant 5.2 The Inverse Function Theorem 5.3 Implicit Function Theorem 5.4 Extrema of Real Valued Functions of One Variable 5.5 Extrema of Real Valued Functions of Several Variables	K1- K5	14	CO1-5

BOOK FOR STUDY

Apostol, Tom M. *Mathematical Analysis*. 2nd Edition, New Delhi: Addison – Wesley /Narosa Indian Student Edition, 1981 20th Reprint, 2003.

Chapter 3	Sections 3.1 – 3.3; 3.5 – 3.12
Chapter 6	Sections 6.1 – 6.8
Chapter 7	Sections 7.1 – 7.9, 7.11 – 7.19, 7.21, 7.23 – 7.25
Chapter 12	Sections 12.1 - 12.5, 12.7 - 12.14
Chapter 13	Sections 13.1 - 13.6

BOOKS FOR REFERENCE

Denlinger, Charles G. *Elements of Real Analysis*. New Delhi: Jones & Bartlett Learning, 2011.

Malik, S C. *Principles of Real Analysis*. Third edition, New Delhi: New Age International Publishers, 2011.

Vakil, Nader. *Real Analysis through Modern Infinitesimals*. New York: Cambridge University Press, 2011.

Quinn, Terrance J, and Sanjay Rai. *Pathways to Real Analysis*. New Delhi: Narosa Publishing House, 2009.

PATTERN OF ASSESSMENT**No Unit should be left out.****Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:**Total Marks: 50**

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PC/RA14												
	Course Title: REAL ANALYSIS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	1	1	3	3	2	2	2
CO 2	3	3	3	3	2	2	1	1	3	3	2	2	2
CO 3	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 4	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 5	3	3	3	3	3	2	1	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

GRAPH THEORY

CODE: 23MT/PC/GT14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to give a broader view of the basic concepts in graph theory
- to analyse the various characteristics of graphs using the concepts of connectivity, planarity and coloring in graphs
- to determine the matching and domination number of a graph
- to emphasize on application aspects of graph theory to solve real time problems
- to introduce interconnection networks and to study some networks and its topological properties

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and define fundamental concepts of graphs and networks	K1
CO2	understand advanced concepts in graph theory	K2
CO3	apply graph theory concepts to solve real life problems	K3
CO4	analyse the topological properties of graphs	K4
CO5	determine and interpret parameters involved in graph problems	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Graphs and Subgraphs 1.1 Classification and properties of Graphs 1.2 Shortest Path Problem 1.3 Dijkstras Algorithm 1.4 Trees 1.5 Cut Edges and Bonds 1.6 Cut Vertices 1.7 Directed Graphs	K1- K5	13	CO1-5
2	Connectivity, Matchings and Independent Sets 2.1 Connectivity 2.2 Matchings 2.3 Matchings and Coverings in Bipartite Graphs 2.4 Independent Sets	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
3	Vertex Colourings and Edge Colorings 3.1 Chromatic Number 3.2 Brooks' Theorem 3.3 Chromatic Polynomials 3.4 Edge Chromatic Number 3.5 Vizing's Theorem 3.6 The Timetabling Problem	K1-K5	14	CO1-5
4	Planar Graphs and Domination Number 4.1 Plane and Planar Graphs 4.2 Euler's Formula 4.3 Kuratowski's Theorem 4.4 Five-Colour Theorem 4.5 Dominating Sets 4.6 Minimal Domination Number 4.7 Independent Dominating Sets	K1- K5	15	CO1-5
5	Interconnection Networks and Graphs, Well-known Topological Structures of Interconnection Networks 5.1 Graphs and Interconnection Networks- Interconnection Networks, Adjacency Matrices and other Concepts, Trees and k -ary Trees, Embedding of Graphs, Diameter of Graphs 5.2 Basic Principles of Network Design 5.3 Cayley Method, Vertex-Transitive Graphs 5.4 Hypercube Networks 5.5 De Bruijn Networks 5.6 Kautz Networks 5.7 Circulant Networks	K1- K5	10	CO1-5

BOOKS FOR STUDY

Bondy, J.A., and U.S.R. Murty. *Graph Theory with Application*. London: The Macmillan Press Ltd., 1982.

- Chapter 1 Sections 1.1 - 1.8
- Chapter 2 Sections 2.1 - 2.3
- Chapter 3 Section 3.1
- Chapter 5 Sections 5.1, 5.2
- Chapter 6 Sections 6.1 – 6.3
- Chapter 7 Section 7.1
- Chapter 8 Sections 8.1, 8.2, 8.4
- Chapter 9 Sections 9.1, 9.3, 9.5 (Theorem 9.10 statement only),
9.6 (Omit Theorem 9.12)
- Chapter 10 Sections 10.1

Murugan, M. *Topics in Graph Theory & Algorithms*. Chennai: Muthali Publishing House, 2003.

- Chapter 11 Sections 11.1 – 11.3

Xu, Junming. *Topological Structure and Analysis of Interconnection Networks*. U.S.A.: Kluwer Academic Publishers, 2001.

Chapter 1	Sections 1.1, 1.1.1, 1.1.2, 1.2.4, 1.3.1, 1.3.2, 1.4.1 (definitions only), 1.6, 1.6.1 & 1.6.2
Chapter 2	Sections 2.2, 2.2.1 (Theorem 2.2.2 – statement only)
Chapter 3	Sections 3.1, 3.1.1 & 3.1.2, 3.2, 3.2.1, 3.2.6, 3.3, 3.3.1, 3.4.5 (Theorem 3.4.12 - statement only); (Omit Theorems 3.2.1, 3.4.13)

BOOKS FOR REFERENCE

Aldous, Joan M., and Robin J. Wilson. *Graphs and Applications: An Introductory Approach*. New York: Springer International Edition, 2007.

Arumugam, S, and S. Ramachandran. *Invitation to Graph Theory*. Chennai: Scitech Publications India Pvt. Ltd., Reprint 2013.

Balakrishnan, R, et al. *Graph Theory and its Applications*. New Delhi: Narosa Publishing House, 2004.

Diestel, Reinhard. *Graph Theory*. New York: Springer, 2006.

Agarnarsson, Geir, and Raymond Greenlaw. *Graph Theory: Modeling, Applications and Algorithms*. New Delhi: Pearson Education, 2012.

Parthasarathy, K.R. *Basic Graph Theory*. New Delhi: Tata McGraw-Hill Publishing Company Limited, 1994.

WEB RESOURCES

<http://world.mathigon.org/GraphTheory>
<http://press.princeton.edu/titles/10314.html>
<http://www.open-graphtheory.org>
<http://www.math.nsysu.edu.tw/~zhu/papers.html>
<http://www.worldscientific.com/worldscinet/join>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PC/GT14												
	Course Title: GRAPH THEORY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	2	3	3	2	2	2
CO 2	3	3	3	3	2	2	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

ORDINARY DIFFERENTIAL EQUATIONS

CODE: 23MT/PC/OD14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to understand the genesis of ordinary differential equations
- to develop strong background on finding solutions to homogeneous and non-homogeneous differential equations with constant and variable coefficients
- to introduce mathematical techniques for solving ordinary differential equations using special functions
- to identify and apply a suitable technique to obtain solution of a given differential equation
- to formulate Green's function for boundary value problems

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify the physical phenomena modeled by differential equations and dynamical systems	K1
CO2	understand and establish solution for all ODE using analytical and numerical approaches	K2
CO3	apply theoretical ideas to find the solution to all linear homogeneous and non-homogeneous differential equations	K3
CO4	analyse the qualitative behavior of solutions of differential equations and systems of differential equations	K4
CO5	estimate potential solutions for different types of ordinary differential equations using appropriate methods	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Higher Order Linear Differential Equations 1.1 Higher Order Equations 1.2 A Mathematical Model 1.3 Linear Dependence and Wronskian 1.4 Basic Theory for Linear Equations	K1- K5	12	CO1-5
2	System of Linear Differential Equations 2.1 Existence and Uniqueness Theorem 2.2 Fundamental Matrix 2.3 Non – Homogeneous Linear Systems 2.4 Linear Systems with Constant Coefficients 2.5 Linear Systems with Periodic Coefficients	K1- K5	13	CO1-5
3	Solutions in Power Series 3.1 Second – Order Linear Equations with Ordinary Points 3.2 Legendre Equation and Legendre Polynomials 3.3 Second – Order Equations with Regular Singular Points 3.4 Bessel’s Functions	K1- K5	13	CO1-5
4	Existence and uniqueness of solutions 4.1 Picard’s Successive Approximations 4.2 Picard’s Theorem – Some Examples 4.3 Continuation and Dependence on Initial Conditions 4.4 Existence of Solutions in the Large 4.5 Existence and Uniqueness for Systems	K1- K5	14	CO1-5
5	Boundary Value Problems 5.1 Sturm Liouville Problem 5.2 Green’s Functions 5.3 Application of BVPs	K1- K5	13	CO1-5

BOOK FOR STUDY

Deo, S. G, et al. *Textbook of Ordinary Differential Equations*. New Delhi: McGraw Hill Education (India) Private Limited, 2018.

Chapter 2	Sections 2.1 – 2.8
Chapter 4	Sections 4.1 – 4.5
Chapter 5	Sections 5.4 – 5.8
Chapter 6	Sections 6.2 – 6.5
Chapter 8	Sections 8.1 – 8.4

BOOKS FOR REFERENCE

Ahmed, Shair, and M Rama Mohana. *Theory of Ordinary Differential Equations with Applications in Biology and Engineering*. New Delhi: Affiliated East – West Press Pvt. Ltd., 1999.

Coddington, Earl A. *An Introduction to Ordinary Differential Equations*. New Delhi: Prentice – Hall of India Pvt. Ltd., 1998.

Raisinghania, M.D. *Advanced Differential Equations*. 18th Edition, New Delhi: S.Chand & Co. Ltd., 2015.

Simmons, George F. *Differential Equations with Applications and Historical Notes*. New Delhi: Tata McGraw – Hill Publishing Company Ltd., 1991.

WEB RESOURCES

www.physics.nus.edu.sg/~phylimhs/SeriesODE7.pdf
<https://www.ias.ac.in/article/fulltext/reso/022/05/0491-0507>
<https://nptel.ac.in/courses/111104031/2>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PC/OD14												
	Course Title: ORDINARY DIFFERENTIAL EQUATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	2	3	3	2	2	2
CO 2	3	3	3	3	2	2	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

LINEAR ALGEBRA

CODE: 23MT/PC/LA24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to understand specific linear algebra concepts including the various canonical forms, characteristic values, inner product spaces and the operators on inner product spaces
- to master the concepts of characteristic values, eigenvectors and invariant subspaces, enabling the analysis of linear transformations and the decomposition of vector spaces
- to explore inner product spaces, linear functionals, unitary operators and normal operators, and apply them to solve problems involving orthogonality, norms and transformations
- to analyse complex linear transformations using canonical forms and concepts like simultaneous triangulation, simultaneous diagonalization, and operator properties to gain insights of their behavior
- to evaluate the properties and applications of advanced linear algebra in solving both conceptual and real world problems

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	demonstrate the key concepts including canonical forms, characteristic values, inner product spaces and the operators on inner product spaces	K1
CO2	develop a deep comprehension of canonical forms in linear transformations, explaining their mathematical principles, significance in simplifying matrix representations and connections to the underlying vector space structure	K2
CO3	apply the concepts of canonical forms, characteristic values, invariant subspaces, inner product spaces and operators to solve a variety of theoretical and practical problems in linear algebra	K3
CO4	analyse the concepts of characteristic values, simultaneous triangulation & diagonalization, and normal operators, thereby assessing their interrelationships and implications in linear algebra	K4
CO5	demonstrating mastery of understanding, application, analysis and evaluation of the concepts introduced	K5
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Linear Transformations 1.1 Canonical Forms: Triangular Forms 1.2 Canonical Forms: Nilpotent Transformations	K1- K5	13	CO1-5
2	More on Canonical Forms 2.1 Canonical Forms: A Decomposition of V: Jordan Form 2.2 Canonical Forms: Rational Canonical Form	K1- K5	13	CO1-5
3	Elementary Canonical Forms 3.1 Characteristic Values 3.2 Annihilating Polynomials 3.3 Invariant Subspaces 3.4 Simultaneous Triangulation; Simultaneous Diagonalization	K1- K5	14	CO1-5
4	Inner Product Spaces 4.1 Linear Functionals and Adjoints 4.2 Unitary Operators 4.3 Normal Operators	K1- K5	13	CO1-5
5	Operators on Inner Product Spaces 5.1 Forms on Inner Product Spaces 5.2 Positive Forms 5.3 Applications of Inner Product Spaces	K1- K5	12	CO1-5

BOOKS FOR STUDY

I N, Herstein. *Topics in Algebra*. 2nd Edition, New Delhi: Wiley, 2007 Reprint
2017 Chapter 6 Sections 6.4 – 6.7

Hoffman, Kenneth and Ray Kunze. *Linear Algebra*. 2nd Edition, New Delhi: Prentice -
Hall of India, Private Ltd., 1971, Reprint 1997
Chapter 6 Sections 6.2 - 6.5
Chapter 8 Sections 8.3 - 8.5
Chapter 9 Sections 9.1 - 9.3

BOOKS FOR REFERENCE

Artin, Michel. *Algebra*. New Delhi: Prentice Hall of India Private Ltd., 2007. Reprint 2017.

Chenay, Ward and David Kincaid. *Linear Algebra – Theory and Applications*. 2nd Edition: Jones & Bartlett Student Edition, 2014.

Lang, Serge. *Algebra*. 3rd Revised Edition New Delhi: Springer International Edition, 2004.

Strang, Gilbert. *Linear Algebra and its Applications*. 4th Edition. New Delhi: Cengage Learning India Pvt. Ltd., 2006.

Thomas, S Shores. *Applied Linear Algebra and Matrix Analysis*. New York: Springer, 2007.

WEB RESOURCES

<https://math.animations.fossee.in/contents/linear-algebra/vector-spaces/inner-product-spaces> <https://prezi.com/p/2x9biebjhwg/applications-of-inner-product-spaces/>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PC/LA24												
	Course Title: LINEAR ALGEBRA												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	1	1	3	3	2	2	2
CO 2	3	3	3	3	2	2	1	1	3	3	2	2	2
CO 3	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 4	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 5	3	3	3	3	3	2	1	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

MEASURE THEORY AND INTEGRATION

CODE: 23MT/PC/MI24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to introduce the concept of non-negative measures on the real line
- to introduce the concept of abstract measures and abstract measurable functions
- to develop the theory of integration through measure, the knowledge of which is essential for working in most branches of modern analysis
- to apply the concept of measures in probability theory and integration theory
- to appreciate the concept of signed measures and its importance in modern analysis

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	remember the basic definitions of measure on the real line	K1
CO2	understand the concepts of measure and measure spaces and related theorems	K2
CO3	apply the properties of theoretical concepts of measure, abstract measure, signed measure and product measure to solve problems	K3
CO4	analyse the properties of measure and integration and use it to develop the theory of signed measures	K4
CO5	evaluate the concepts learnt and its application in applied mathematics and probability	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Measure on the Real Line 1.1 Lebesgue Outer Measure 1.2 Measurable Sets 1.3 Regularity	K1- K5	12	CO1-5

UNIT	CONTENT	CL	Hrs	CO
2	Measure on the Real Line and Integration of Functions of a Real Variable Measure on the Real Line 2.1 Measurable Functions 2.2 Borel and Lebesgue Measurability Integration of Functions of a Real variable 2.3 Integration of Non-negative Functions 2.4 The General Integral 2.5 Riemann and Lebesgue Integrals	K1- K5	14	CO1-5
3	Abstract Measure Spaces 3.1 Measures and Outer Measures 3.2 Completion of a Measure 3.3 Integration with respect to a Measure	K1-K5	13	CO1-5
4	Signed Measures and their Derivatives 4.1 Signed Measures and the Hahn Decomposition 4.2 The Jordan Decompositions 4.3 The Radon- Nikodym Theorem 4.4 Some Applications of the Radon-Nikodym Theorem	K1- K5	13	CO1-5
5	Measure in Product Space and Probability Spaces 5.1 Measurability in a Product Space 5.2 The Product Measure and Fubini's Theorem Probability Spaces 5.3 Kolmogorov's Probability Model 5.4 Random Variables and Random Vectors	K1- K5	13	CO1-5

BOOKS FOR STUDY

Athreya, Krishna B, and Soumendra N Lahiri. *Measure Theory*. Hindustan book agency, 2006

Chapter 6 Sections 6.1, 6.2

Barra, G De. *Measure Theory and Integration*. New Age International Pvt. Limited, Third edition 2023

Chapter 2 Sections 2.1 – 2.5
 Chapter 3 Sections 3.1, 3.2, 3.4
 Chapter 5 Sections 5.1, 5.4, 5.6
 Chapter 8 Sections 8.1 - 8.4
 Chapter 10 Sections 10.1 – 10.2

BOOKS FOR REFERENCE

Ash, Robert B, and Catherine A Doleans-Dade. *Probability and Measure Theory*. Academic press An Imprint of Elsevier, 2005

H L, Royden. *Real Analysis*. Prentice- Hall of India Private Limited, Third edition 9th Indian Reprint 2003.

I K, Rana. *An introduction to Measure and Integration*. Narosa Publishing House, 3rd Reprint 2000.

M E, Munroe. *Introduction to Measure and Integration*. USA : Addison Wesley, Publishing Company, Inc. (Second Printing), 1959.

V, Ganapathy Iyer. *Mathematical Analysis*. Tata McGraw Hill Publishing Company Ltd., 1977.

WEB RESOURCES

<https://ocw.mit.edu/courses/18-125-measure-and-integration-fall-2003/pages/lecture-notes/>

<https://web.stanford.edu/class/stats310a/lnotes.pdf>

<https://arxiv.org/pdf/2110.00602.pdf>

<https://www.youtube.com/watch?v=xZ69KEg7ccU>

<https://www.youtube.com/watch?v=wgV0rjJqpqI>

<https://www.youtube.com/watch?v=u5IouBwYji4>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PC/MI24												
	Course Title: MEASURE THEORY AND INTEGRATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	1	1	3	3	2	2	2
CO 2	3	3	3	3	2	2	1	1	3	3	2	2	2
CO 3	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 4	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 5	3	3	3	3	3	2	1	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

TOPOLOGY

CODE: 23MT/PC/TO24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to introduce the structural study of topology
- to introduce various types of topological spaces
- to introduce the concepts of compactness and connectedness in a topological space
- to understand the concepts of continuous functions and product topology
- to analyse countability and separation axioms

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the concepts of topological spaces	K1
CO2	understand the characterizations of topological spaces	K2
CO3	apply results on limit points, continuity, completeness, compactness and connectedness with topological spaces	K3
CO4	analyse the relation between various topological spaces	K4
CO5	assess the applications of the spaces under study in calculus and analysis	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Topological Spaces 1.1 Topological Spaces 1.2 Basis for a Topology 1.3 The Product Topology on $X \times Y$ 1.4 The Subspace Topology 1.5 Closed Sets and Limit Points	K1- K5	13	CO1-5
2	Continuous Functions and Metrizable spaces 2.1 Continuous Functions 2.2 The Product Topology 2.3 The Metric topology	K1- K5	13	CO1-5
3	Connectedness 3.1 Connected Spaces 3.2 Connected Subspaces of the Real Line 3.3 Components and Local Connectedness	K1- K5	12	CO1-5

UNIT	CONTENT	CL	Hrs	CO
4	Compactness 4.1 Compact Spaces 4.2 Compact Subspaces of the Real Line 4.3 Limit Point Compactness	K1- K5	12	CO1-5
5	Countability and Separation Axioms 5.1 The Countability Axioms 5.2 The Separation Axioms 5.3 Normal Spaces 5.4 The Urysohn Lemma 5.5 The Urysohn Metrization Theorem 5.6 The Tietz Extension Theorem	K1- K5	15	CO1-5

BOOK FOR STUDY

Munkres, James R. *Topology*. New Delhi: PearsonIndia Education Services Pvt. Ltd., Updated 2nd Edition 2022.

Chapter 2	Sections 12, 13, 15 – 20
Chapter 3	Sections 23 – 28
Chapter 4	Sections 30 – 35

BOOKS FOR REFERENCE

Fred H, Croom. *Principles of Topology*. New Delhi: 1st Indian Reprint 2008.

Kumaresan S. *Topology of Metric Spaces*. Ed. 2 New Delhi: Narosa Publishing House, 2011, 9th Reprint 2017.

Patty, Wayne C. *Foundations of Topology*, Ed. 2, New Delhi: Jones & Bartlett Learning, 2010, Reprint 2012.

Simmons, G.F. *Introduction to Topology and Modern Analysis*. New-York : McGraw Hill Book Co. Inc., 2004 18th Reprint 2012.

Ya, Viro O. *et al. Elementary Topology*. American Mathematical Society, 2008.

WEB RESOURCES

http://math.nie.edu.sg/wkho/Talks_files/topappl.pdf

<http://www.msc.uky.edu/droyster/courses/fall99/math4181/classnotes/notes5.pdf>

PATTERN OF ASSESSMENT**No Unit should be left out.****Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:**Total Marks: 50**

Seminars / Assignments / Problem Solving / Theorem Writing Technique/ Exhibition / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PC/TO24												
	Course Title: TOPOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	1	1	3	3	2	2	2
CO 2	3	3	3	3	2	2	1	1	3	3	2	2	2
CO 3	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 4	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 5	3	3	3	3	3	2	1	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: BRANCH I –MATHEMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

SOFT SKILLS

CODE: 23MT/PK/SS22

CREDITS: 2

L T P: 2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- to empower students and create opportunities for self-development
- to instill confidence in students to face challenges
- to manage emotions and resolve conflicts
- to organize activities and manage time
- to set goals and plan ahead

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- communicate with confidence and poise
- accept themselves and improve on their weaknesses
- strengthen their relationships through confronting and solving problems
- work more effectively and complete activities on time
- plan their future with clarity and focus

Unit 1

Behavioural Traits

(6 Hours)

- 1.1 Self- Awareness
- 1.2 Communication Skills –Verbal and Non-Verbal
- 1.3 Leadership Qualities
- 1.4 Etiquette and Good Manners
- 1.5 Experiential Learning –based on activities

Unit 2

Team Work

(5 Hours)

- 2.1. Interpersonal Skills
- 2.2. People Management
- 2.3. Creative Thinking
- 2.4. Critical Thinking
- 2.5. Experiential Learning – based on activities

Unit

3

Time Management

(5 Hours)

- 3.1. Importance of time management
- 3.2. Planning and Prioritizing
- 3.3. Organizing skills
- 3.4. Action Plan
- 3.5. Experiential Learning – based on activities

Unit 4

Conflict Resolution

(5 Hours)

- 4.1. Reasons for conflict
- 4.2. Consequences of conflict
- 4.3. Managing emotions
- 4.4. Methods of resolving conflicts
- 4.5. Experiential Learning – based on activities

Unit 5

Career Mapping

(5 Hours)

- 5.1. Goal-setting and Decision-making
- 5.2. Career Planning
- 5.3. Resume Writing
- 5.4. Handling Interviews
- 5.5. Experiential Learning – based on activities

BOOKS FOR REFERENCE

Khera, Shiv. *You Can Win*. Macmillan India, 2002.

Mishra, Rajiv. K. *Personality Development: Transform Yourself*. Rupa, 2004.

Newstorm, John. W. and Scannell. Edward. E. *Games Trainers Play: Experiential Learning*. Tata McGraw Hill, 1980.

PATTERN OF EVALUATION

Internal Assessment:

Total Marks: 50

Quiz / Group Presentation /Assignment

No End Semester Examination.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

PARTIAL DIFFERENTIAL EQUATIONS

CODE: 23MT/PC/PD34

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to familiarize the students with first and second order partial differential equations and their classification
- to provide a broad coverage of various mathematical techniques that is widely used for solving and to get analytical solutions to partial differential equations of first and second order
- to obtain the solutions of dirichlet and neumann boundary value problems over rectangles and circles
- to apply green's function to solve heat and wave equations
- to introduce various applications of partial differential equations in many fields of science and engineering

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the basic concepts of differential equations and to acquire skill to classify first and second order PDEs	K1
CO2	understand the geometrical behavior of solution space of first and second order PDEs	K2
CO3	apply in-depth knowledge of mathematical techniques for solving first and second order partial differential equations	K3
CO4	analyse the physical problems of first and second order PDEs under given constraints and to compare the solutions obtained by analytical and numerical methods	K4
CO5	investigate and explore possible solutions of a system of partial differential equations for problems arising from real-life situations	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Partial Differential Equations of the First Order 1.1 Integral Surfaces Passing through a Given Curve 1.2 Cauchy Problem for First order Equations 1.3 First order Non-Linear Equations 1.4 Compatible Systems of First-order Equations 1.5 Charpit's Method Partial Differential Equations of the Second Order 1.6 Classification of Second Order PDE 1.7 Canonical Forms	K1-K5	14	CO1-5
2	Elliptic Differential Equations 2.1 Occurrence and Derivation of Laplace Equation 2.2 Separation of Variables 2.3 Dirichlet and Neumann Problem for a Rectangle 2.4 Interior and Exterior Dirichlet Problem for a Circle 2.5 Interior Neumann Problem for a Circle	K1-K5	13	CO1-5
3	Parabolic Differential Equations 3.1 Occurrence of the Diffusion Equation 3.2 Boundary Conditions 3.3 Elementary Solutions of the Diffusion Equation 3.4 Dirac Delta Function 3.5 Separation of Variables method	K1-K5	12	CO1-5
4	Hyperbolic Differential Equations 4.1 Occurrence and Derivation of One-dimensional Wave Equation 4.2 Solution of One-dimensional Wave Equation by Canonical Reduction 4.3 The Initial Value Problem; D'Alemberts Solution 4.4 Vibrating String – Variables Separable Solution 4.5 Forced Vibrations – Solution of nonhomogeneous Equation	K1-K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
5	Green's Function 5.1 Green's Function for Laplace equation 5.2 The Methods of Images 5.3 The Eigen Function Method 5.4 Green's Function for the Wave Equation - Helmholtz theorem 5.5 Green's Function for the Diffusion Equation	K1-K5	13	CO1-5

BOOK FOR STUDY

Rao, K Sankara. *Introduction to Partial Differential Equations*. New Delhi: Prentice-Hall of India Pvt. Ltd., Third edition, sixteenth printing 2017.

- Chapter 0 Sections 0.6, 0.7, 0.9 – 0.11
- Chapter 1 Sections 1.1 – 1.3
- Chapter 2 Sections 2.1 (omit 2.1.2), 2.5 – 2.10
- Chapter 3 Sections 3.1 – 3.5
- Chapter 4 Sections 4.1 – 4.6
- Chapter 5 Sections 5.2 - 5.6

BOOKS FOR REFERENCE

Greenspan , Donald. *Introduction to Partial Differential Equations*, New Delhi: Tata McGraw – Hill Publishing Co. Ltd., 1961.

J.N, Sharma and Singh Kehar. *Partial Differential Equations for Engineers and Scientist*. New Delhi: Narosa Publishing House, 2000.

M.D, Raisinghania. *Advanced Differential Equations*. 18th Edition, New Delhi: S.Chand & Co. Ltd., 2015.

Myint, U. Tyn and Lokenath Debnath. *Linear Partial Differential Equations for Scientists and Engineers*, Boston: Birkhauser, 2007.

Y, Pinchover and Rubinstein J. *An Introduction to Partial Differential Equations*. New York: Cambridge University Press, 2005.

WEB RESOURCES

<https://web.iitd.ac.in/~sreenadh/PDE/Firstorder.pdf>

<http://tutorial.math.lamar.edu/Classes/DE/SeparationofVariables.aspx>

<http://faculty.uml.edu/spennell/Teaching/PDE/classification.pdf>

<http://ddugu.ac.in/ePathshala Attachments/chapter-3.pdf>

<https://shareok.org/bitstream/handle/11244/26094/Thesis-1977D-T324i.pdf;jsessionid=3F648CC4D2967039AC91E3D490C7D409?sequence=1>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23MT/PC/PD34												
	Course Title: PARTIAL DIFFERENTIAL EQUATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	2	3	3	2	2	2
CO 2	3	3	3	3	2	2	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

FUNCTIONAL ANALYSIS

CODE: 23MT/PC/FA34

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to highlight the interplay between algebraic structures and distance structures
- to introduce the theory of normed spaces and Banach spaces and its application to classical analysis
- to introduce the concept of bounded linear maps and its application to Fourier series
- to study the duality between normed space and the space of bounded linear functionals
- to give a geometric structure to Linear space through inner product spaces

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the basic definitions of normed spaces	K1
CO2	explain and illustrate the concept of normed spaces, Banach spaces, bounded linear maps, linear functionals through simple problems and related theorems	K2
CO3	investigate the properties of normed spaces, Banach spaces, bounded linear maps, linear functionals	K3
CO4	analyse the properties learnt and use it to develop the theory of Hilbert spaces	K4
CO5	evaluate the concepts learnt and find its applications in numerical analysis and approximation theory	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Fundamentals of Normed Spaces 1.1 Normed Spaces 1.2 Continuity of Linear Maps 1.3 Hahn-Banach Theorems 1.4 Banach Spaces	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
2	Bounded Linear Maps on Banach Spaces 2.1 Uniform Boundedness Principle 2.2 Closed Graph and Open Mapping Theorems 2.3 Bounded Inverse Theorem 2.4 Spectrum of a Bounded Operator	K1- K5	15	CO1-5
3	Spaces of Bounded Linear Functionals 3.1 Duals and Transposes 3.2 Weak and Weak * Convergence	K1-K5	12	CO1-5
4	Geometry of Hilbert Spaces 4.1 Inner Product Spaces 4.2 Orthonormal Sets 4.3 Projection and Riesz Representation Theorems	K1- K5	13	CO1-5
5	Bounded Operators on Hilbert Spaces 5.1 Bounded Operators and Adjoints 5.2 Normal, Unitary and Self- Adjoint Operators	K1- K5	12	CO1-5

BOOK FOR STUDY

Limaye, Balmohan V. *Functional Analysis*. Chennai: New Age International private limited, Revised third edition 2017, Reprint 2022

Chapter II Sections 5 – 8 (omit Pages 117 -124)

Chapter III Sections 9 – 12 (omit Pages 144 – 165; 174 -181; 187-191;198 –215)

Chapter IV Sections 13, 15 (omit Pages 226 – 235; 272 – 280)

Chapter VI Sections 21, 22, 24 (omit Pages 392 - 401; 427- 440)

Chapter VII Sections 25, 26 (omit Pages 451- 459 ;474 – 482)

BOOKS FOR REFERENCE

Casper, et al. *First Course in Functional Analysis*. New Delhi: Prentice Hall of India Private Limited, 1974

H, Siddiqi A, and Manchanda P. *Introduction to Functional Analysis with Application*. New Delhi: Anamaya, 2006.

Rao, et al. *Functional Analysis*. New Delhi: Narosa Publishing House, Second Edition, 2006

S, Kesavan. *Functional Analysis*. New Delhi: Hindustan Book Agency, 2009

Thamban, et al. *Functional Analysis: A first course*. New Delhi: Prentice Hall Pvt., Ltd., 2002

WEB RESOURCES

<https://www.sciencedirect.com/journal/journal-of-functional-analysis>

<https://www.springer.com/journal/10688>

<https://ocw.mit.edu/courses/18-102-introduction-to-functional-analysis-spring-2009/>

<https://www.sciencedirect.com/topics/mathematics/functional-analysis>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23MT/PC/FA34												
	Course Title: FUNCTIONAL ANALYSIS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	1	1	3	3	2	2	2
CO 2	3	3	3	3	2	2	1	1	3	3	2	2	2
CO 3	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 4	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 5	3	3	3	3	3	2	1	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS
(Effective from the academic year 2023-2024)

MATHEMATICAL STATISTICS

CODE: 23MT/PC/MS34

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to impart extended knowledge of characteristic function and its properties
- to introduce essential concepts of convergence for statistical distributions and estimation theory
- to familiarize with probability distributions, limit theorems and sampling distribution
- to understand the concepts of various statistical inequalities and demonstrate them through real life problems
- to apply the concept of estimator in finding a good estimation for the various parameters

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recognize common probability distributions, characteristic functions, moments and estimators for discrete and continuous random variables	K1
CO2	understand the statistical concepts of inequalities, limits theorems, sample moments and estimators	K2
CO3	derive the characteristic function and moments for a range of probability distributions, calculate probabilities for sampling distributions related to the normal distribution and construct suitable estimators	K3
CO4	analyse the concept of convergence, use mathematical tools, including calculus and linear algebra, to study probability and mathematical statistics including properties of desirable estimators	K4
CO5	evaluate probabilities relevant to various distributions and use the laws to interpret real time problems	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Characteristic Functions 1.1 Properties of Characteristic Functions 1.2 The Characteristic Function and Moments 1.3 The Characteristic Function of the Sum of Independent Random Variables 1.4 Determination of the Distribution Function by the Characteristic Function	K1-K5	12	CO1-5
2	Probability Distributions 2.1 One Point and Two Point Distribution 2.2 The Gamma Distribution 2.3 The Beta Distribution 2.4 The Cauchy and Laplace Distribution	K1-K5	12	CO1-5
3	Limit Theorems 3.1 Stochastic Convergence 3.2 Bernoulli's Law of Large Numbers 3.3 The Convergence of Sequence of Distribution Function 3.4 The Levy – Cramer Theorem 3.5 The de-Moivre's – Laplace Theorem 3.6 The Lindberg – Levy Theorem 3.7 Poisson's, Chebyshev's and Khintchin's Law of Large Numbers	K1-K5	14	CO1-5
4	Sample Moments and their Functions 4.1 The Notions of Sample and Statistic 4.2 The Distribution of Arithmetic Mean of Independent Normally Distributed Random Variables 4.3 The Chi-Square Distribution 4.4 The Distribution of the Statistic (\bar{X}, S) 4.5 Student's – t Distribution 4.6 Fisher's Z – Distribution	K1-K5	14	CO1-5

UNIT	CONTENT	CL	Hrs	CO
5	Theory of Estimation 5.1 Characteristics of Estimators 5.2 Unbiasedness 5.3 Consistency 5.4 Efficient Estimators 5.5 Sufficiency of an Estimate 5.6 Cramer Rao Inequality 5.7 Methods of Estimation 5.8 Method of Maximum Likelihood Estimation	K1-K5	13	1-5

BOOKS FOR STUDY

Fisz, Marek. *Probability Theory and Mathematical Statistics*. New York: John Wiley and Sons. Inc., Third Edition, 1963.

- Chapter 4 Section 4.1, 4.2, 4.4, 4.5
- Chapter 5 Section 5.1, 5.8, 5.9, 5.10
- Chapter 6 Section 6.2 – 6.4, 6.6 – 6.8, 6.11
- Chapter 9 Section 9.1 – 9.7 (omit 9.6E.)

S.C, Gupta, and V K Kapoor. *Fundamentals of Mathematical Statistics*. New Delhi: Sultan Chand & Sons, Eleventh Edition, June 2002, Reprint 2007.

- Chapter 17 Sections 17.1 – 17.3, 17.6, 17.6.1

BOOKS FOR REFERENCE

David, Freedman, *et al.* *Statistic*. New Delhi: Vinod Vaistha for Viva Books, 4th Edition 2009.

R.V, Hogg and A T Craig. *Introduction to Mathematical Statistics*. New Delhi: Pearson Education Ltd., Fifth Edition, 2002.

Ramdas, B, Bhat. *Modern Probability Theory An Introductory Text Book*. New Delhi: New age international, 1999.

O. P, Gupta and Vishal Sharma, *Mathematical Statistics*. Meerut: Mohan Print Media (P) Ltd., 2019.

WEB RESOURCES

- <http://www.randomservices.org/random/point/index.html>
- <http://www.kean.edu/~fosborne/bstat/05samp.html>
- <https://newonlinecourses.science.psu.edu/stat500/node/27/>
- <https://kurser.math.su.se/mod/resource/view.php?id=2807>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23MT/PC/MS34												
	Course Title: MATHEMATICAL STATISTICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	2	3	3	2	2	2
CO 2	3	3	3	3	2	2	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

RESEARCH METHODS AND TOOLS

CODE: 23MT/PC/RT34

CREDITS: 4

L T P: 2 1 4

TOTAL TEACHING HOURS: 91

OBJECTIVES OF THE COURSE

- to provide a comprehensive overview of the research process, including its various stages, from problem identification to data analysis and reporting
- to discuss the ethical principles and guidelines governing research, including informed consent, confidentiality, and the responsible conduct of research
- to introduce the tools and techniques for typesetting mathematical equations and symbols, including cross-referencing and bibliography
- to visualise data and concepts using drawing, plotting, and presentation
- to provide an overview of the built-in functions and create and execute user-defined scripts and functions in MATLAB

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and understand the various types of research, the procedures and ethics involved in research design, and the tools required for research	K1, K2
CO2	apply various techniques involved in research process with the ethical principles governing research and use the appropriate tools for the study	K3
CO3	analyse the structure of typesetting mathematical documents using LaTeX including figures and plots obtained from MATLAB	K4
CO4	execute MATLAB scripts to automate repetitive tasks and perform calculations and present the results using LaTeX	K5
CO5	create applications using MATLAB and LaTeX	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 Create		

UNIT	CONTENT	CL	Hrs	CO
1	Research Methodology 1.1 Introduction – Motivation 1.2 Formulating a Research Problem 1.3 Data Collection – Analyzing and Processing 1.4 Report Writing – Content – Format – Text Layout – Style – Packaging and Presentation, Characteristics of Good Reporting, Suggestions and Recommendations	K1- K3	15	CO1-2

UNIT	CONTENT	CL	Hrs	CO
2	Ethics in Scientific Research and Research Metrics 2.1 Scientific Integrity and Research Ethics 2.2 Intellectual Honesty and Research Integrity - Environment and Bases of Research Integrity - Promoting Integrity in Research 2.3 Scientific Misconduct - Poor Practices vs. Misconduct - Fabrication/Falsification 2.4 Publication Ethics - Committee on Publication Ethics (COPE) - Plagiarism: Issue and Facts 2.5 Database and Research Metrics - Bibliometrics - Calculating Journal Impact Factor - SCImago Journal Rankings - H-Index - Web of Science - Scopus - Google Scholar Citations, Profiles, and Rankings	K1- K3	15	CO1-2
3	Creating a Document Using LaTeX 3.1 Simple Typesetting – Font – Document – Document Class – Page Style – Page Numbering – Parts of a Document – Dividing the Document 3.2 Displayed Text and Tables 3.3 Typesetting Mathematics and Typesetting Theorems 3.4 Floats – the Figure Environment – Creating Floating Figures – Figure Placement – Customizing Float Placement 3.5 Bibliography, Footnotes and Cross References in Math	K1- K6	20	CO1-5
4	Drawing, Plotting and Presentation in LaTeX 4.1 Drawing: tikzpicture Environment - Grids – Paths - Coordinate Labels - Colour - Drawing the Path - Line Width - Dash Patterns - Arrows - Filling a Path - Nodes and Node Labels - Node Options - Connecting Nodes - Coordinate Systems - Coordinate Calculations - The \foreach Command 4.2 Beamer Presentations: Frames - Incremental Presentations - Visual Alerts - Adding Some Style Mathematical Software: MATLAB 4.3 Introduction to MATLAB 4.4 Constants, Variables and Expressions 4.5 Vectors and Matrices: Matrix and Array Operations, Matrix Manipulation, Functions with Array Inputs 4.6 Input – Output Statements: Interactive Inputs – input, menu, pause, Output Commands – format, disp commands	K1- K6	21	CO1-5
5	Plotting and Scripting in MATLAB 5.1 Polynomials – Polynomial Evaluation, Roots of a Polynomial, Characteristic Equation of a Matrix, Polynomial Differentiation & Integration, Polynomial Curve Fitting 5.2 Two Dimensional Plots – plot, polar, area, bar, barh, hist, pie functions 5.3 Three Dimensional Plots – plot3, bar3, bar3h, pie3, meshgrid, mesh, surf, contour functions 5.4 Writing Programs and Functions	K1- K6	20	CO1-5

BOOKS FOR STUDY AND REFERENCE

Bansal, Raj Kumar, et al. *MATLAB and its Applications in Engineering*. New Delhi: Dorling Kindersley Pvt. Ltd., 2015.

Chandra, Suresh, and Mohit Kr. Sharma. *Research Methodology*. New Delhi: Narosa Publishing House, 2013.

Driscoll, Tobin A, and Aaker D.A. *Learning MATLAB*. USA: SIAM, 2009.

Kothari, C R. *Research Methodology*. New Delhi: New Age International Publishers Ltd, Fourth Edition 2019.

Krantz, Steven G. *Mathematical Publishing – A Guide book*. USA: AMS Publication, 2005.

Lamport, Leslie. *LaTeX: A Documentation Preparation System User's Guide and Reference Manual*. USA: Addison Wesley Profession, 1994.

Singh, Kirani Y, and B.B. Chaudhuri. *MATLAB programming*. New Delhi: Prentice-Hall of India, 2007.

Yadav, Santosh Kumar, *Research and Publication Ethics*. Springer with Ane Books Pvt. Ltd, 2023.

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Theory Pattern

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQ to be set)
B	K2	5	$1 \times 5 = 5$ (internal choice)
C	K3	10	$1 \times 10 = 10$ (internal choice)
	Total	20	

Practical Pattern

Cognitive Level	Marks	Pattern
K4	10(internal choice)	Latex / Latex
K5	10(internal choice)	Matlab / Matlab
K6	10(internal choice)	Latex / Matlab
Total	30	

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100 Duration: 3 hours

(Question paper to be prepared jointly by one course teacher and one internal external examiner)

Theory Pattern (Units 1 & 2)

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQ to be set)
B	K2	10	$2 \times 5 = 10$ (4 questions to be set)
C	K3	10	$1 \times 10 = 10$ (2 questions to be set)
	Total	30	

Practical Pattern (Units 3 – 5)

Cognitive Level	Marks	Pattern
K4	25(internal choice)	(Latex + Matlab) / (Latex + Matlab)
K5	25(internal choice)	(Latex + Matlab) / (Latex + Matlab)
K6	20(internal choice)	Latex / Matlab
Total	70	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PC/RT34												
	Course Title: RESEARCH METHODS AND TOOLS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	2	3	3	2	2	2
CO 2	3	3	3	3	2	2	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

SUMMER INTERNSHIP

CODE : 23MT/PN/SI32

CREDITS : 2

OBJECTIVE OF THE COURSE

To provide opportunity to gain experience in various fields

COURSE LEARNING OUTCOME

To have understood opportunity to gain experience in field of choice

FIELD WORK : (3 Weeks)

Summer Internship: a minimum period of three weeks during the summer holidays between the second and third semester.

EVALUATION:

SUMMER INTERNSHIP : 50 Marks

(Mathematical work: 20 + Presentation: 20 + Report: 10)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS
(Effective from the academic year 2023-2024)

COMPLEX ANALYSIS

CODE: 23MT/PC/CA44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to introduce a modern treatment to classical complex analysis
- to understand the fundamental concepts of an analytic function
- to represent an analytic function as a power series and use its representation to evaluate complex integrals
- to develop clear thinking and analyzing capacity for research
- to explore applications of complex analysis in various fields

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define functions of complex variables	K1
CO2	understand the behaviour of complex functions in certain region through different techniques	K2
CO3	apply complex integration to analytic functions	K3
CO4	analyse mappings on simply connected region	K4
CO5	assess explicit analytic expressions	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Complex Integration 1.1 Fundamental Theorems: Line Integrals as Functions of Arcs 1.2 Cauchy's Theorem for a Rectangle 1.3 Cauchy's Theorem in a Disk 1.4 Cauchy's Integral Formula: The Index of a Point with respect to a Closed Curve 1.5 The Integral Formula 1.6 General Form of Cauchy's Theorem: Chains and Cycles	K1- K5	12	CO1-5

UNIT	CONTENT	CL	Hrs	CO
2	Cauchy's Theorem and Harmonic Functions 2.1 Simple Connectivity 2.2 Homology 2.3 The General Statement of Cauchy's Theorem 2.4 Proof of Cauchy's Theorem 2.5 Harmonic Functions: Definition and Basic Properties 2.6 The Mean Value Property 2.7 Poisson's Formula 2.8 Schwarz's Theorem 2.9 The Reflection Principle	K1- K5	14	CO1-5
3	Series and Product Development 3.1 Partial Fractions and Factorization: Partial Fractions 3.2 Infinite Products 3.3 Canonical Products 3.4 The Gamma Function 3.5 Entire Functions: Jensen's Formula 3.6 The Riemann Zeta Function: The Product Development 3.7 Extension of $\zeta(s)$ to the Whole Plane 3.8 The Functional Equation 3.9 The Zeros of the Zeta Function	K1- K5	13	CO1-5
4	Normal Families and Riemann Mapping Theorem 4.1 Normal Families: Equicontinuity 4.2 Normality and Compactness 4.3 Arzela's Theorem 4.4 Families of Analytic Functions 4.5 The Riemann Mapping Theorem: Statement and Proof	K1- K5	14	CO1-5
5	Conformal mapping 5.1 Boundary Behavior 5.2 Use of the Reflection Principle 5.3 Analytic Arcs 5.4 Conformal Mapping of Polygons: The Behaviour at an Angle 5.5 The Schwarz-Christoffel Formula 5.6 Application to Fluid Dynamics: Fluid Flow in a Channel through a Slit 5.7 Application to Fluid Dynamics: Flow in a Channel with an Offset	K1- K5	12	CO1-5

BOOKS FOR STUDY

Ahlfors, Lars V. *Complex Analysis*. 3rd ed. International Series in Pure and Applied Mathematics, New Delhi: McGraw Hill International Book Co., 12th reprint 2017.

Chapter 4	Section 1: 1.3 – 1.5 Section 2: 2.1- 2.2 Section 4: 4.1– 4.5 Section 6: 6.1 – 6.5
Chapter 5	Section 2: 2.1 – 2.4 Section 3: 3.1 Section 4: 4.1 – 4.4 Section 5: 5.1 – 5.4
Chapter 6	Section 1: 1.1 – 1.4 Section 2: 2.1 – 2.2

J.W, Brown and R V Churchill. *Complex Variables and Applications*. New York: McGraw Hill Education, International Edition 1990, Ninth edition, Fourth reprint 2022.

Chapter 11	Sections 131, 132
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BOOKS FOR REFERENCE

Conway John B. *Functions of one complex variable*. New Delhi: Narosa Publishing House, 1973.

Howie, John M. *Complex Analysis*. London: Springer-Verlag, 2003.

Gamelin W. Theodore. *Complex Analysis*. New York: Springer-Verlag, 2006.

Palka, Bruce P. *Introduction to Complex Function Theory*. New York: Springer-Verlag, 2012.

S, Ponnusamy. and Herb Silverman, *Complex Variables with Applications*. United States of America: Birkhäuser Boston, 2006

WEB RESOURCES

<http://www.math.ucla.edu/~tao/java/Ftoc.html>

<http://fermi.la.asu.edu/ccli/applets/confmap/conform.html>

<https://medium.com/analytics-vidhya/an-introduction-to-complex-analysis-and-applications>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:**Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:**Total Marks: 50**

Seminars/ Quiz /Assignments/Theorem Writing Technique/Problem Solving / Exhibition

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PC/CA44												
	Course Title: COMPLEX ANALYSIS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	1	1	3	3	2	2	2
CO 2	3	3	3	3	2	2	1	1	3	3	2	2	2
CO 3	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 4	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 5	3	3	3	3	3	2	1	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

STOCHASTIC PROCESSES

CODE: 23MT/PC/SP44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to introduce essential concepts of stochastic process
- to develop strong knowledge of poisson processes, markov chains and martingales
- to introduce mathematical techniques for solving problems based on probabilities and markovian properties
- to analyse and interpret theorems based on brownian motion and its variations
- to synthesize fundamental knowledge of stochastics models and apply in relevant areas of application

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the basic concepts in stochastic process	K1
CO2	demonstrate the ability to use the appropriate statistical tools to solve problems of random process	K2
CO3	apply the mathematical models under stochastic process	K3
CO4	analyse the use of concepts in various stochastic models, Markov chains and Martingales	K4
CO5	evaluate the processes from the point of view of probabilistic theory	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Stochastic Processes 1.1 Examples of Stochastic Processes 1.2 The Poisson Process 1.3 Inter arrival and Waiting Time Distributions 1.4 Conditional Distribution of the Arrival Times 1.5 The M/G/1 Busy Period	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
2	Markov Chains 2.1 Chapman – Kolmogorov Equations and Classification of States 2.2 Limit Theorems 2.3 Transitions Among Classes, the Gambler’s Ruin Problem and Mean Times in Transient Status 2.4 Branching Process 2.5 Applications of Markov Chains 2.5.1 A Markov Chain Model of Algorithmic Efficiency 2.5.2 An Application to Runs – A Markov Chain with a Continuous State Space 2.5.3 List Ordering Rules – Optimality of the Transposition Rule	K1- K5	13	CO1-5
3	Continuous – Time Markov Chain 3.1 Continuous – Time Markov Chain 3.2 Birth and Death Processes 3.3 The Kolmogorov Differential Equations 3.4 Limiting Probabilities	K1- K5	13	CO1-5
4	Martingales 4.1 Stopping Times 4.2 Azuma’s Inequality for Martingales 4.3 Submartingales, Supermartingales and the Martingale Convergence Theorem	K1- K5	12	CO1-5
5	Brownian Motion and Other Markov Processes 5.1 Hitting Times, Maximum Variable and Arc Sine Laws 5.2 Variations on Brownian motion 5.2.1 Brownian motion Absorbed at a Value 5.2.2 Brownian Motion Reflected at the Origin 5.2.3 Geometric Brownian Motion 5.2.4 Integrated Brownian Motion 5.3 Brownian Motion with Drift 5.3.1 Using Martingales to Analyze Brownian Motion	K1- K5	14	CO1-5

BOOKS FOR STUDY

Ross, Sheldon M. *Stochastic Processes*. Second Edition, Singapore: John Wiley & Sons Pvt. Ltd., 2004.

Chapter 1	Sections 1.1 – 1.5
Chapter 2	Sections 2.1 – 2.3
Chapter 4	Sections 4.1 – 4.6
Chapter 5	Sections 5.1 – 5.5
Chapter 6	Sections 6.1 – 6.4
Chapter 8	Sections 8.1 – 8.4

BOOKS FOR REFERENCE

Medhi J. *Stochastic Processes*. New Delhi: New Age International (P) Ltd., Publishers, 2006.

Mehata K.M. *Stochastic Processes*. New Delhi : Tata McGraw-Hill, 1976.

Jitendra, Parikh C. *Stochastic Processes and Financial Markets*. New Delhi: Narosa Publishing House Private Limited, 2003.

WEB RESOURCES

https://web.ma.utexas.edu/users/gordanz/notes/introduction_to_stochastic_processes.pdf

<https://www.coursera.org/learn/stochasticprocesses>

<https://nptel.ac.in/courses/111102014/>

<https://link.springer.com/book/10.1007/978-1-4613-9742-7>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PC/SP44												
	Course Title: STOCHASTIC PROCESSES												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	2	3	3	2	2	2
CO 2	3	3	3	3	2	2	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

CONTINUUM AND FLUID MECHANICS

CODE: 23MT/PC/CF44

CREDITS: 4

L T P: 4 2 0

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- to understand and apply tensor algebra, including concepts like cartesian tensors, dyadics, and indicial notation, to describe and manipulate physical quantities in continuum mechanics
- to grasp the fundamental concepts of stress and strain in continuum mechanics, including the cauchy stress principle, stress transformation laws, and deformation tensors
- to gain a deep understanding of the kinematics of fluid motion, including concepts like velocity potential, vorticity vector, and equations of continuity, essential for describing fluid behavior
- to comprehend the equations governing fluid motion, including euler's equation of motion, bernoulli's equation, and the stream function, for both ideal and real fluids
- to explore the properties of viscous flow, understand the Navier-Stokes equation of motion for viscous fluids, and solve practical problems related to viscous flow in different geometries

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and summarize the key concepts related to tensors, stress, strain, and kinematics of fluid motion	K1
CO2	demonstrate an understanding of tensor algebra, stress principles, deformation, and the basics of fluid motion	K2
CO3	apply the principles of tensor algebra and fluid mechanics to solve complex problems	K3
CO4	analyse and solve problems in various fields, demonstrating the ability to adapt their skills to diverse applications	K4
CO5	assess stress and strain situations, evaluate fluid flow conditions, and synthesize solutions to problems involving stress, strain, and fluid dynamics	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Cartesian Tensors and Algebra of Tensors 1.1 Tensors and Continuum Mechanics 1.2 General Tensors - Cartesian Tensors - Tensor Rank 1.3 Dyads and Dyadics 1.4 Coordinate Systems-Base Vectors - Unit Vector Triads 1.5 Linear Vector Functions - Dyadics as Linear Vector Operators 1.6 Indicical Notation - Range and Summation Conventions - Kronecker Delta, Permutation Symbol 1.7 Transformation Laws for Cartesian Tensors - The Orthogonality Conditions 1.8 Operations on Cartesian Tensors 1.9 Symmetry of Dyadics, Matrices and Tensors 1.10 Principal Values and Principal Directions of Symmetric Second-Order Tensors	K1-K5	16	CO1-5
2	Stress and Strain 2.1 Continuum Concept 2.2 Homogeneity, Isotropy, Mass-Density 2.3 Body Forces, Surface Forces 2.4 Cauchy's Stress Principle, The Stress Vector 2.5 State of Stress at a Point, Stress Tensor 2.6 The Stress Tensor-Stress Vector Relationship 2.7 Force and Moment, Equilibrium, Stress Tensor Symmetry 2.8 Stress Transformation Laws 2.9 Stress Quadric of Cauchy 2.10 Particles and Points 2.11 Continuum Configuration, Deformation and Flow Concepts 2.12 Position Vector, Displacement Vector 2.13 Lagrangian and Eulerian Descriptions 2.14 Deformation Gradients, Displacement Gradients 2.15 Deformation Tensors, Finite Strain Tensors	K1-K5	17	CO1-5
3	Kinematics of Fluid Motion 3.1 Real Fluids and Ideal Fluids – Velocity of a Fluid at a Point 3.2 Stream Lines and Path Lines – Velocity Potential – Vorticity Vector 3.3 Local and Particle Rates of Change 3.4 Equation of Continuity - Worked Examples 3.5 Acceleration of a Fluid – Conditions at a Rigid Boundary 3.6 Sources, Sinks and Doublets	K1-K5	14	CO1-5

UNIT	CONTENT	CL	Hrs	CO
4	Equations of Motion of a Fluid 4.1 Pressure at a Point in a Fluid at Rest 4.2 Pressure at a Point in a Moving Fluid – Conditions at a Boundary of two Inviscid Immiscible Fluids 4.3 Euler’s Equation of Motion – Bernoulli’s Equation 4.4 Steady Motion Under Conservative Body Forces 4.5 Meaning of Two-Dimensional Flow 4.6 Use of Cylindrical Polar Coordinates 4.7 The Stream Function 4.8 The Complex Potential for Two-Dimensional, Irrotational, Incompressible Flow - Some Standard Two- Dimensional Flows	K1-K5	16	CO1-5
5	Viscous Flow 5.1 Newton’s Law of Viscosity 5.2 The Rate of Strain Quadric 5.3 Navier – Stokes Equation of Motion of a Viscous Fluid 5.4 Steady Motion between Parallel Planes 5.5 Steady Viscous Flow in Tubes of Uniform Cross-Section	K1-K5	15	CO1-5

BOOK FOR STUDY

Mase, George E. *Schaum’s Outline of Theory and Problems of Continuum Mechanics*. New Delhi: Tata McGraw Hill, 2005.

Chapter 1 Sections 1.1, 1.2, 1.6 - 1.19

Chapter 2 Sections 2.1 - 2.9

Chapter 3 Sections 3.1 - 3.6

Chorlton, F. *Text book of Fluid Dynamics*. 1st ed. New Delhi: CBS. Publishers & Distributors, Shadara, 1985, Reprint 2004.

Chapter 2 Sections 2.1 - 2.9

Chapter 3 Sections 3.1 - 3.7

Chapter 4 Sections 4.2

Chapter 5 Sections 5.1, 5.5

Chapter 8 Sections 8.10.1, 8.11

Raisinghania, M D. *Fluid Dynamics*, S.Chand & Co. Ltd, Revised Edition, Reprint 2021.

Chapter 13 Section 13.1, 13.15

Chapter 14 Section 14.1

BOOKS FOR REFERENCE

Chandrasekhraia., D.S. and Loknath Debnath. *Continuum Mechanics*. New York: Academic Press, 1994

Duncan, W.J. et al. *Mechanics of Fluids*. Great Britain: The English Language Book Society, 1975.

Joseph, H. Spurk. *Fluid Mechanics: Problems and Solutions*. USA: Springer- Verlag, 2003.

Temam Roger M and Srivastava,R.J. *Mathematical Modeling in Continuum Mechanics*, London: Cambridge University Press, 2005.

WEB RESOURCES

<https://physics.weber.edu/schroeder/fluids/>

<https://www.khanacademy.org/science/physics/fluids/density-and-pressure/v/fluids-part-3>

<https://andrew.gibiansky.com/blog/physics/fluid-dynamics-the-navier-stokes-equations/>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:		Total Marks: 50	Duration: 90 minutes
Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

Mapping of Course Outcomes (COs)

to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23MT/PC/CF44												
	Course Title: CONTINUUM AND FLUID MECHANICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	2	3	3	2	2	2
CO 2	3	3	3	3	2	2	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE : BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023 – 2024)

DISSERTATION

CODE: 23MT/PC/DS47

CREDITS : 7

PREPARATION OF DISSERTATION

The dissertation shall contain around 40 pages and shall be typed with doublespacing. The format for the dissertation is as follows:

1. Cover page shall contain
 - a) Title of the dissertation
 - b) Dissertation submitted at the core level for the M.Sc. degree course in the IV semester
 - c) Name of the Candidate
 - d) Department number
 - e) Department of Mathematics
Stella Maris College (Autonomous),
Chennai – 600 086
 - f) Month, Year
2. The dissertation shall contain
 - a) Contents page
 - b)
 - i. Certificate page
 - ii. Acknowledgement page
 - c) At least 3 chapters including an introductory chapter (comprising motivation, basic concepts needed / used in the dissertation and outline of the dissertation)
 - d) Conclusions / interpretations arrived at may be given at the end of each problem / each chapter concerned
 - e) List of figures / list of abbreviations (if needed) shall be given as an appendix
 - f) Bibliography shall be given in alphabetical order at the end in MLA format
3. Each candidate may prepare 3 copies of the dissertation using LaTeX, one copy for her and submit 2 copies to the Head of the department 15 days before the commencement of the fourth semester examination.
4. The Controller of Examination is requested to arrange for the valuation of the Dissertation as well as the conduct of the Viva – Voce at the college where the candidates take examinations, within two weeks of the last date of examination for M.Sc. degree. The panel of examiners will consist of an external examiner and the guide.

The guidelines for the Viva-Voce examiners would be that

- a) They will satisfy themselves that this is a work of the candidate as certified by the department
- b) The dissertation is in the given form and
- c) The candidate has clear understanding of the concepts, discussed in the dissertation.

The department should certify as follows:

*This is to certify that the dissertation in the broad area_____titled
_____is
submitted by_____at
the core level for the degree of Master of Science (Mathematics) during the year____*

*sd/
Head of the Department*

*sd/
Guide*

5. PATTERN OF ASSESSMENT: There will be double valuation for the dissertation by the guide and an external examiner who will conduct the viva – voce.

Dissertation – 75 marks

Rubrics for evaluation	Marks	Cognitive Level
Key Facts, Theories and Concepts	10	K1
Conceptual Clarity	10	K2
Methodology and Application of Knowledge	15	K3
Critical Examination of Existing Literature and Identifying Patterns and Findings	25	K4
Assessing the Significance and Implications of the Research Findings / the Limitations of the Study	10	K5
Original Contribution to the Field	5	K6

Viva Voce – 25 marks

Rubrics for evaluation	Marks	Cognitive Level
Clarity, Organization and Understanding of the Research Topic	10	K2
Ability to Apply the Knowledge to Defend the Work	10	K3
Ability to Critically Evaluate and Demonstrate the Work and Respond to Questions	5	K5

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PC/DS47												
	Course Title: DISSERTATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	3	2	2	3	3	3	2	2
CO 2	3	3	3	3	3	3	2	2	3	3	3	3	3
CO 3	3	3	3	3	3	3	2	2	3	3	3	3	3
CO 4	3	3	3	3	3	3	2	2	3	3	3	3	3
CO 5	3	3	3	3	3	3	2	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

NUMBER THEORY AND CRYPTOGRAPHY

CODE: 23MT/PE/NC15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to provide an introductory course in number theory
- to introduce the fast growing and relevant topics in cryptography as an application of number theory
- to start with the fundamental assumption and move on to the derivation of all congruence guiding rules
- to elucidate the foundations of the primitive roots
- to illustrate the applications in cryptosystems

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the basic concepts of number theory and their applications in cryptography	K1
CO2	understand the fundamental ideas of number theory and cryptography	K2
CO3	apply the concepts of number theory and cryptography in problems	K3
CO4	analyse the analytics of residues and congruences and its relevance to cryptography	K4
CO5	evaluate and exhibit crypto models as an application of number theory and cryptography	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Elementary Number Theory 1.1 Time Estimates for doing Arithmetic 1.2 Divisibility and the Euclidean Algorithm 1.3 Congruences 1.4 Some Applications to Factoring	K1- K5	15	CO1-5
2	Finite Fields and Quadratic Residues 2.1 Finite Fields 2.2 Quadratic Residues and Reciprocity	K1- K5	14	CO1-5
3	Cryptography 3.1 Some Simple Cryptosystems 3.2 Enciphering Matrices	K1- K5	12	CO1-5
4	Public Key 4.1 Public Key Cryptography 4.2 RSA	K1- K5	12	CO1-5
5	Primality and Factoring 5.1 Pseudoprimes 5.2 The Rho Method 5.3 Fermat Factorization and Factor Bases	K1- K5	12	CO1-5

BOOK FOR STUDY

Koblitz, Neal. *A Course in Number Theory and Cryptography*. 2nd Edition, New York: Springer – Verlag, 2002.

Chapter 1	Sections. 1 – 4
Chapter 2	Sections. 1, 2
Chapter 3	Sections. 1, 2
Chapter 4	Sections. 1, 2
Chapter 5	Sections. 1, 2, 3

BOOKS FOR REFERENCE

Paar, Christof, and Jan Pelzl. *Understanding Cryptography*. New York: Springer, 2010.

Delfs, Hans, and Helmut Knebl. *Introduction to Cryptography, Principles and applications*. New York: Springer, 2003.

Ireland, Kenneth, and Michael Rosen. *A Classical Introduction to Modern Number Theory*. 2nd Edition, New York: Springer Verlag, 2004.

Herkommer, Mark. *Number Theory: A Programmer's Guide*. New York: McGraw-Hill, 1999.

Yaschenko, V.V. *Cryptography: An Introduction*. Volume 18, American Mathematical Society, India: Universities Press(India) Private Limited, 2022.

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

Total Marks: 50**End-Semester Examination: Total Marks: 100 Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PE/NC15												
	Course Title: NUMBER THEORY AND CRYPTOGRAPHY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	2	3	3	2	2	2
CO 2	3	3	3	3	2	2	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS
(Effective from the academic year 2023-2024)

CALCULUS OF VARIATION AND INTEGRAL EQUATIONS

CODE: 23MT/PE/CI15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to introduce the methods for finding the extrema of a functional defined over a class of functions
- to inculcate the concept of integral equations and converting initial and boundary value problems as integral equations
- to differentiate and apply the variational problems with fixed boundaries and moving boundaries
- to relate the concepts of ordinary differential equations and integral equations
- to evaluate the problems based on variational problems, fredholm integral equation and volterra Integral Equation

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the basic concepts of integration and ordinary differential equations, in particular, initial value problems and boundary value problems	K1
CO2	appreciate the concepts of the theory of variation in problems and identify the different types of integral equations	K2
CO3	apply suitable techniques to find the solution of maxima and minima of a functional and an integral equation	K3
CO4	analyse the solutions of functional of various types and integral equations	K4
CO5	evaluate by choosing an appropriate method for variational problems and integral equations and obtain suitable solutions to real life situations	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Variation in Problems with Fixed Boundaries 1.1 Variation and its Properties 1.2 Euler's Equation 1.3 Functional of the Form $\int_{x_0}^{x_1} F(x, y_1, y_2, \dots, y_n, y'_1, y'_2, \dots, y'_n) dx$ 1.4 Functional Dependent on Higher-Order Derivatives 1.5 Functional Dependent on the Functions of Several Independent Variables 1.6 Variational Problems in Parametric Form 1.7 Some Applications	K1- K5	13	CO1-5
2	Variational Problems with Moving Boundaries 2.1 An Elementary Problem with Moving Boundaries 2.2 The Moving-Boundary Problem for a Functional of the Form $\int_{x_0}^{x_1} F(x, y, z, y', z') dx$ 2.3 Extremals with Corners 2.4 One-Sided Variations 2.5 Isoperimetric Problems	K1- K5	13	CO1-5
3	Integral Equations 3.1 Abel's Problem 3.2 Integral Equation 3.3 Kernels 3.4 Classification of Integral Equation 3.5 Solution of an Integral Equation Solution of Fredholm Integral Equations of the Second Kind 3.6 Characteristic Value and Characteristic Function 3.7 Solution of Homogeneous Fredholm Integral Equation of the Second Kind with Separable Kernel	K1- K5	13	CO1-5
4	Solution of Fredholm Integral Equations of the Second Kind 4.1 Orthogonality of Two Functions 4.2 Orthogonality of Eigen functions 4.3 Iterated Kernel & Resolvent Kernel 4.4 Solution of Fredholm Integral Equation of the Second Kind by Successive Substitution	K1- K5	13	CO1-5
5	Applications to Ordinary Differential Equations 5.1 Initial Value Problems 5.2 Boundary Value Problems 5.3 Dirac Delta Function 5.4 Green's Function Approach	K1- K5	13	CO1-5

BOOKS FOR STUDY

Elsgolts, L. *Differential Equations and the Calculus of Variations*. 3rd edition, Moscow: Mir Publishers, 1977.

Chapter 6 Sections 1 – 7

Chapter 7 Sections 1 – 4

Chapter 9 Section 3

Kanwal, Ram P. *Linear Integral Equations Theory and Technique*. New York: Academic Press, 1971.

Chapter 5 Sections 5.4 – 5.6

Sharma, D.C. and Goyal M.C. *Integral Equations*. 1st Edition. New Delhi: PHI Learning Private Limited, 2017.

Chapter 1 Sections 1.1, 1.2, 1.4 – 1.10

Chapter 2 Sections 2.1, 2.2, 2.4

Chapter 3 Sections 3.1 – 3.6

Chapter 6 Sections 6.1 – 6.5

BOOKS FOR REFERENCE

Gelfand, I.M., *Calculus of Variations*, New York: Dover Publications, 1991.

Gupta, A.S., *Calculus of Variations with Applications*, New Delhi: Prentice Hall of India Pvt., Ltd., 1997.

Raisinghania, M.D., *Advanced Differential Equations*, New Delhi: S. Chand and Company Ltd., 2015.

Sharma, R. K., *Calculus of Variations*, India: Medtech Publishers, 2017.

WEB RESOURCES

<https://www.iist.ac.in/sites/default/files/people/COVMain.pdf>

<https://www.open.edu/openlearn/mod/resource/view.php?id=72745>

<https://math.mit.edu/classes/18.086/2006/am72.pdf>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:**Total Marks: 50**

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PE/CI15												
	Course Title: CALCULUS OF VARIATION AND INTEGRAL EQUATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	1	1	3	3	2	2	2
CO 2	3	3	3	3	2	2	1	1	3	3	2	2	2
CO 3	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 4	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 5	3	3	3	3	3	2	1	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH I –MATHEMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

ANALYSIS OF ALGORITHMS

CODE: 23MT/PE/AL15

CREDITS: 4

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to introduce different algorithms to solve problems in an abstract setup
- to analyse algorithms in order to choose the better algorithm
- to impart knowledge of growth rate and order of algorithms
- using the acquired knowledge, to design algorithms for problems involving searching and sorting techniques
- to analyse the time complexity of a given algorithm using the concept of NP completeness

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall simple algorithms written in pseudocode	K1
CO2	understand iterative and recursive algorithms for searching and sorting	K2
CO3	identify suitable algorithm for a problem using the best case, worst case and average case	K3
CO4	analyse algorithms in order to choose the better algorithm	K4
CO5	interpret different algorithm design techniques and evaluate their performance	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Analysis of Algorithm 1.1 Input Classes 1.2 Space Complexity 1.3 Cases to Consider 1.4 Rates of Growth 1.5 Divide and Conquer Algorithms 1.6 Recurrence Relations	K1-K5	10	CO1- 5
2	Searching and Selection Algorithms 2.1 Sequential Search – Case Analysis 2.2 Binary Search – Case Analysis 2.3 Selection	K1-K5	13	CO1-5
3	Sorting Algorithms 3.1 Insertion Sort – Case Analysis 3.2 Heap Sort – Case Analysis 3.3 Merge Sort – MergeLists Analysis, MergeSort Analysis 3.4 Quick Sort – Case Analysis	K1-K5	14	CO1-5
4	Matching Algorithm 4.1 String Matching 4.2 Finite Automata 4.3 Knuth-Morris-Pratt Algorithm Graph Algorithms 4.4 Data Structures for Graphs 4.5 Depth First and Breadth First Traversal Algorithms 4.6 Minimum Spanning Tree Algorithms 4.7 The Dijkstra-Prim Algorithm 4.8 The Kruskal Algorithm	K1-K5	15	CO1-5
5	Nondeterministic Algorithms 5.1 NP-Complete Problems 5.2 Conditions for NP 5.3 Job Scheduling – Graph Coloring	K1-K5	13	CO1-5

BOOK FOR STUDY

McConnell, Jefferey J. *Analysis of Algorithms: An Active Learning Approach*. New Delhi: Narosa Publishing House, 2002.

- Chapter 1 Sections 1.1, 1.2, 1.4 -1.6
- Chapter 2 Sections 2.1 – 2.3
- Chapter 3 Sections 3.1, 3.5 – 3.7
- Chapter 5 Sections 5.1, 5.1.1, 5.1.2
- Chapter 6 Sections 6.1 – 6.4
- Chapter 8 Sections 8.1 – 8.4

BOOKS FOR REFERENCE

Gajavelli, S.S., and Bhishma Rao. *Discrete Structures and Graph Theory*. Chennai: Scitech Publications Pvt. Ltd., 2005.

Horowitz, Ellis, et al. *Fundamentals of Computer Algorithms*. 2nd Edition, New Delhi: Galgotia Publication Pvt. Ltd., 2007.

Lee, R.C.T, et al. *Introduction to the Design and Analysis of Algorithms: A Strategic Approach*. New Delhi: Tata McGraw-Hill Edition, 2012.

Neapolitan, Richard E and Kumarss Naimipour. *Foundations of Algorithms using C++ Pseudocode*. New Delhi: Narosa Publishing House, 2005.

WEB RESOURCES

https://www.tutorialspoint.com/data_structures_algorithms/sorting_algorithms.htm

<https://codeburst.io/algorithms-i-searching-and-sorting-algorithms-56497dbaef20>

<https://interactivepython.org/courselib/static/pythonds/Graphs/DijkstrasAlgorithm.html>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PE/AL15												
	Course Title: ANALYSIS OF ALGORITHMS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	2	3	3	2	2	2
CO 2	3	3	3	3	2	2	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

FUZZY SET THEORY AND APPLICATIONS

CODE: 23MT/PE/FT15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to understand the foundational concepts of fuzzy sets
- to explore the properties of fuzzy sets through decomposition theorems, and understand the extension principle for fuzzy sets
- to investigate crisp and fuzzy relations, particularly binary relations, and study fuzzy relational equations
- to analyse the arithmetic of fuzzy numbers, linguistic variables, and fuzzy intervals
- to apply the knowledge gained to comprehend the concepts and its applications in various fields

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and list key concepts and operations relating to fuzzy sets and number	K1
CO2	grasp the underlying principles behind various operations and understand the implications of applying these operations to model uncertainty	K2
CO3	apply the principles of fuzzy sets, including their operations, relations, and arithmetic, to solve practical problems in various domains	K3
CO4	analyse the implications of fuzzy operations, while considering their mathematical intricacies and practical consequences	K4
CO5	evaluate and critique the practical impact, limitations, and future potential of fuzzy sets and operations, and fuzzy logic applications in various domains	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs.	CO
1	Fuzzy Sets and Operations 1.1 Fuzzy Sets – Basic Concepts 1.2 Characteristics and Significance of the Paradigm Shift 1.3 Operations on Fuzzy Sets 1.4 Types of Fuzzy Sets 1.5 Properties of α – cuts	K1-K5	12	CO1-5
2	Properties of Fuzzy Sets 2.1 Decomposition Theorems 2.2 Extension Principle for Fuzzy Sets 2.3 Crisp and Fuzzy Relations – Binary Relations 2.4 Fuzzy Relational Equations	K1-K5	13	CO1-5
3	Operations on Fuzzy Sets 3.1 Fuzzy Complements 3.2 Fuzzy Union 3.3 Fuzzy Intersection 3.4 Combination of Operations	K1-K5	14	CO1-5
4	Fuzzy Arithmetic 4.1 Fuzzy Numbers 4.2 Linguistic Variables 4.3 Arithmetic Operation of Fuzzy Intervals 4.4 Arithmetic Operation of Fuzzy Numbers 4.5 Lattice of Fuzzy Numbers 4.6 Fuzzy Equations	K1-K5	13	CO1-5
5	Fuzzy System with Applications 5.1 Fuzzy Systems and Neural Networks 5.2 Fuzzy Systems and Genetic Algorithms 5.3 Current Applications	K1-K5	13	CO1-5

BOOK FOR STUDY

Klir, George J. and Yuan Bo. *Fuzzy Sets & Fuzzy Logic Theory and Applications*. New Delhi: Prentice Hall India, 2009.

Chapter 1 Sections 1.3 – 1.5

Chapter 2 Sections 2.1 – 2.3

Chapter 4 Sections 4.1 – 4.6

Chapter 12 Sections 12.4

Klir, George J. and Folger Tina A. *Fuzzy Sets, Uncertainty and Information*. New Delhi: Prentice Hall India, 2004.

Chapter 2 Sections 2.2 – 2.5

Chapter 3 Sections 3.1, 3.2, 3.8

BOOKS FOR REFERENCE

Hooda., D.S. and Vivek Raich. *Fuzzy Set Theory and Fuzzy Controller*. Chennai: Narosa Publishing House, 2015, New Delhi

Huaguang Zhang. *Fuzzy modeling and Fuzzy control*. Birkhauser: Control Engineering, 2006.

Lotfi A.Zadeh. *Fuzzy Sets and Their Applications to Cognitive and Decision Processes*. New York: Academic Press, 1975.

Hanss, Michael and Deshmukh S.K. *Applied Fuzzy Arithmetic*. Netherland: Springer, 2005.

Cox, Earl. *Fuzzy Modeling and Genetic Algorithms for Data Mining and Exploration*. New Delhi: Elsevier 2005.

Terano, Toshiro, et.al. *Applied Fuzzy Systems*. New York: A.P. Professional, 1994.

WEB RESOURCES

http://www.scholarpedia.org/article/Fuzzy_neural_network

https://wiki.sch.bme.hu/images/5/57/Lagyszamitas_jegyzet_2011_fuzzy_lantos.pdf

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:		Total Marks: 50	Duration: 90 minutes
Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PE/FT15												
	Course Title: FUZZY SETS AND APPLICATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	2	3	3	2	2	2
CO 2	3	3	3	3	2	2	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

B.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

MECHANICS

CODE: 23MT/PE/ME15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to introduce various principles in dynamical systems
- to teach the techniques involved in calculus of variations
- to improve critical thinking skills to formulate and solve problems in classical mechanics
- to familiarize with the mathematical techniques associated with classical mechanics
- to analyse and predict the motion of bodies with the help of theoretical laws

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the basic concepts in dynamical system	K1
CO2	understand the basic mechanical concepts related to discrete and continuous mechanical systems	K2
CO3	apply the mathematical techniques to solve problems involving the dynamical motion of classical mechanical system	K3
CO4	analyse the Lagrange - Hamiltonian formulation of classical mechanics and Kinematics of a rigid body	K4
CO5	summarize the motion of a mechanical system using Lagrange-Hamilton formulations	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Elementary Principles of Mechanics 1.1 Mechanics of a Particle 1.2 Mechanics of a System of Particles 1.3 Constraints 1.4 D'Alembert's Principle and Lagrange's Equations 1.5 Velocity – Dependent Potentials and the Dissipation Function 1.6 Simple Applications of the Lagrangian Formulation	K1-K5	12	CO1-5

UNIT	CONTENT	CL	Hrs.	CO
2	Variational Principles 2.1 Hamilton's Principle 2.2 Some Techniques of the Calculus of Variations 2.3 Derivation of Lagrange's Equations from Hamilton's Principle 2.4 Extending Hamilton's Principle to Systems with Constraints 2.5 Advantages of Variational Principle Formulation	K1-K5	14	CO1-5
3	The Kinematics and Equations of Motion of a Rigid Body 3.1 The Independent Coordinates of a Rigid Body 3.2 The Euler Angles 3.3 Euler's Theorem on the Motion of a Rigid Body 3.4 Rate of Change of a Vector 3.5 The Coriolis Effect 3.6 Angular Momentum and Kinetic Energy of Motion about a Point 3.7 The Heavy Symmetrical Top with One Point Fixed	K1-K5	13	CO1-5
4	The Hamilton Equations of Motion 4.1 Legendre Transformations and the Hamilton Equations of Motion 4.2 Cyclic coordinates and Conservation Theorems 4.3 Routh's Procedure 4.4 Derivation of Hamilton's Equations from a Variational Principle 4.5 The Principle of Least action	K1-K5	13	CO1-5
5	Canonical Transformations 5.1 The Equations of Canonical Transformation - Examples 5.2 The Symplectic Approach to Canonical Transformations 5.3 Poisson Brackets and Other Canonical Invariants	K1-K5	13	CO1-5

BOOK FOR STUDY

H, Goldstein, et al. *Classical Mechanics*. Pearson Education, Third Edition 2002, Seventeenth Impression, 2017.

Chapter 1	Sections 1.1 -1.6
Chapter 2	Sections 2.1 - 2.5
Chapter 4	Sections 4.1, 4.4, 4.6, 4.9, 4.10
Chapter 5	Sections 5.1, 5.7
Chapter 8	Sections 8.1- 8.3, 8.5, 8.6
Chapter 9	Sections 9.1, 9.2, 9.4, 9.5

BOOKS FOR REFERENCE

H.C, Corben and Stehle Philip. *Classical Mechanics*. Robert E. Krieger Publishing Co., 2nd Edition, 1960.

H, Goldstein. *Classical Mechanics*. Addison – Wesley Publishing Company, 1980 Reprint 2001.

T, Greenwood Donald. *Classical Dynamics*. Prentice Hall of India, 1979.

V.M, Starzhinskii. *An Advanced Course of Theoretical Mechanics*. MIR Publishers, 1982.

L, Synge John and Byron Griffith A. *Principles of Mechanics*. McGraw Hill Book Co., 3rd Edition, 1970.

S.G, Venkatachalapathy. *Classical Mechanics*. Margham Publications, 2006.

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PE/ME15												
	Course Title: MECHANICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	2	3	3	2	2	2
CO 2	3	3	3	3	2	2	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS
(Effective from the academic year 2023-2024)

DIFFERENTIAL GEOMETRY

CODE: 23MT/PE/DG15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to understand the concept of curves and surfaces in three dimensions.
- to introduce advanced concepts in differential geometry of space curves and fundamental forms
- to lay the foundation for study of surfaces leading to advanced courses in geometry
- to develop the skill to solve problems in differential geometry
- to visualise geometry of curves and surfaces using computer aided graphics

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the basic concepts in plane curves and space curves	K1
CO2	demonstrate the understanding of different techniques involved in measuring curves	K2
CO3	apply the concepts of plane curves and space curves in solving problems in differential geometry	K3
CO4	analyse the nature of the curves and surfaces through the concepts in differential geometry	K4
CO5	evaluate and interpret the solutions to problems pertaining to plane curves and space curves	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Curves in the Plane and in Space 1.1 Curve, Arc-Length 1.2 Re-parameterization 1.3 Curvature 1.4 Plane Curves 1.5 Space Curves	K1- K5	14	CO1-5

UNIT	CONTENT	CL	Hrs	CO
2	Surfaces in Three Dimensions 2.1 Surface, Smooth Surfaces 2.2 Tangents, Normal and Orientability 2.3 Examples of Surfaces	K1- K5	12	CO1-5
3	The First Fundamental Form 3.1 Lengths of Curves on Surfaces 3.2 Isometries of Surfaces 3.3 Conformal Mappings of Surfaces 3.4 Surface Area	K1- K5	14	CO1-5
4	Curvature of Surfaces 4.1 The Second Fundamental Form 4.2 The Curvatures of Curves on a Surface 4.3 The Normal and Principal Curvatures	K1- K5	12	CO1-5
5	Gaussian Curvature and the Gauss Map 5.1 The Gaussian and Mean Curvatures 5.2 Surfaces of Constant Mean Curvature 5.3 The Gauss Map Geodesics 5.4 Definition and Basic Properties 5.5 Geodesic Equations Gauss's Theorema Egregium 5.6 Gauss's Remarkable Theorem	K1- K5	13	CO1-5

BOOK FOR STUDY

Pressley, Andrew. *Elementary Differential Geometry*. London: Springer – Verlag, 2001, Reprint 2004.

Chapter 1	Sections 1.1 – 1.3
Chapter 2	Sections 2.1 – 2.3
Chapter 4	Sections 4.1 – 4.4
Chapter 5	Sections 5.1 – 5.4
Chapter 6	Sections 6.1 – 6.3
Chapter 7	Sections 7.1, 7.4, 7.6
Chapter 8	Sections 8.1 – 8.2
Chapter 10	Section 10.1

BOOKS FOR REFERENCE

Ethan D. Bloch. *A First Course in Geometric Topology and Differential Geometry*. Boston: Birkhäuser, 1997.

Struik, Dirk J. *Lectures on Classical Differential Geometry*. 2nd Edition, London: Addison Wisely Publishing Co., 1961.

Wardle, K.L. *Differential Geometry*. London: Routledge and Kegan Paul, 1965.

Weatherburn, C.E. *Differential Geometry of Three Dimensions*. London: The Syndics of the Cambridge University Press, 1971.

Willmore, T.J. *An Introduction to Differential Geometry*. London: Oxford University Press, 1972.

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	15	$1 \times 15 = 15$ (2 questions to be set)
D	K4	15	$1 \times 15 = 15$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project/
Presentation using computer aided graphics

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	30	$2 \times 15 = 30$ (4 questions to be set)
D	K4	30	$2 \times 15 = 30$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PE/DG45												
	Course Title: DIFFERENTIAL GEOMETRY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	1	1	3	3	2	2	2
CO 2	3	3	3	3	2	2	1	1	3	3	2	2	2
CO 3	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 4	3	3	3	3	3	2	1	1	3	3	3	3	3
CO 5	3	3	3	3	3	2	1	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

MATHEMATICAL PYTHON

CODE: 23MT/PE/MP15

CREDITS: 5

L T P: 2 0 3

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to demonstrate a strong understanding of python programming fundamentals, including syntax, data structures, and control structures
- to apply python to solve a variety of mathematical problems, both numerically and symbolically, using libraries such as numpy and sympy
- to acquire the skills to create meaningful visualizations of mathematical data and functions using matplotlib
- to gain knowledge and hands-on experience in working with graphs and network analysis using the networkx package in python
- to employ advanced mathematical problem-solving techniques, including optimization, curve fitting, solving differential equations, and mathematical modeling, using Python

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the knowledge of essential Python programming syntax	K1
CO2	demonstrate a comprehensive understanding of the core Python programming fundamentals	K2
CO3	apply advanced mathematical problem-solving techniques, such as optimization, curve fitting, solving differential equations, and mathematical modeling, using Python, demonstrating their ability to transfer and adapt their knowledge to solve complex real-world problems	K3
CO4	critically assess and analyse data visualizations, demonstrating the ability to create meaningful and effective visual representations of mathematical data and functions using Matplotlib	K4
CO5	evaluate the solutions in diverse mathematical contexts	K5
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Python Fundamentals 1.1 Introduction to Python 1.2 Overview of Python and its Significance in Mathematics 1.3 Setting up Python Environment 1.4 Basic Python syntax, Variables, and Data Types 1.5 Input/Output and Basic Arithmetic Operations 1.6 Conditional Statements (if, elif, else) 1.7 Loops (for and while) 1.8 Functions, Parameters, and return Statements. 1.9 Scope and Namespaces 1.10 Data Structures in Python: Lists, Tuples, and Dictionaries 1.11 Iterating through Data Structures 1.12 List Comprehensions and Generator Expressions	K1- K5	14	CO1-5
2	File Handling and Modules 2.1 Reading and Writing Files 2.2 Working with CSV and JSON Data 2.3 Introduction to Modules and Libraries 2.4 Creating and using Custom Modules 2.5 Exception Handling and Debugging: Understanding Exceptions and Errors 2.6 Using try-except Blocks for Error Handling 2.7 Debugging Techniques and Tools	K1- K5	14	CO1-5
3	Mathematical Problem Solving with Python 3.1 Numerical Computations: Working with NumPy for Numerical Computing 3.2 NumPy Arrays, Operations and Functions 3.3 Solving Mathematical Equations using NumPy 3.4 Symbolic Mathematics with SymPy: Introduction to Symbolic Mathematics 3.5 Using SymPy for Algebraic Manipulation 3.6 Solving Equations Symbolically and Symbol Manipulation	K1- K5	12	CO1-5
4	Graph Theory with Python (NetworkX package) 4.1 Construction of Graphs 4.2 Degree and Distance Related Parameters 4.3 In-built Functions for Different Graph Classes 4.4 Computation of Graph Parameters using in-built Functions 4.5 Graph Operations and Graph Connectivity 4.6 Customization of Graphs 4.7 Digraphs 4.8 Matrices and Algorithms of Graphs 4.9 Graph as Models Data Visualization with Matplotlib 4.10 Creating Various Types of Plots (line, scatter, bar, etc.) 4.11 Customizing Plot Appearance 4.12 Visualizing Mathematical Functions and Data	K1- K5	12	CO1-5

UNIT	CONTENT	CL	Hrs	CO
5	Advanced Mathematical Problem Solving 5.1 Optimization Techniques (gradient descent) 5.2 Curve Fitting and Regression Analysis 5.3 Solving Differential Equations using Python 5.4 Simulation of Mathematical Models	K1- K5	13	CO1-5

BOOKS FOR STUDY & REFERENCE

Harsh, Bhasin. *Python for Beginners*. New Age International Publishers, 2018
 Liang, Daniel Y. *Introduction to Programming using Python*. Chennai, Pearson India Education Services Pvt. Ltd., 2017
 Martin, C. Brown. *Python: The Complete Reference*. McGraw Hill Education; Fourth edition, 2018
 Parker, James R. *Python: An Introduction to Programming*. New Delhi, Mercury Learning and Information, 2017
 Saha, Amit. *Doing Math with Python: Use Programming to Explore Algebra, Statistics, Calculus, and More*, San Francisco, No Starch Press, Inc., 2015

WEB RESOURCES

<https://www.w3resource.com/python-exercises/>
<https://www.geeksforgeeks.org/what-is-symbolic-computation-in-sympy/> <https://www.toptal.com/data-science/graph-data-science-python-networkx>
<https://www.geeksforgeeks.org/optimization-techniques-for-gradient-descent/?ref=lbp> <https://machinelearningmastery.com/curve-fitting-with-python/>
<https://www.geeksforgeeks.org/solve-differential-equations-with-odeint-function-of-scipy-module-in-python/>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:
minutes Theory Pattern

Total Marks: 50

Duration: 90

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQ to be set)
B	K2	5	$5 \times 1 = 5$ (5 MCQ to be set)

Practical Pattern

Section	Cognitive Level	Marks	Pattern
C	K3	20	$1 \times 20 = 20$ (2 questions to be set)
D	K4	10	$1 \times 10 = 10$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100

Duration: 3 hours

(Question paper to be prepared jointly by one course teacher and one internal–external examiner)

Theory Pattern

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQ to be set)
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)

Practical Pattern

Section	Cognitive Level	Marks	Pattern
C	K3	40	$2 \times 20 = 40$ (3 questions to be set)
D	K4	20	$2 \times 10 = 20$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23MT/PE/MP15												
	Course Title: MATHEMATICAL PYTHON												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	2	3	3	2	2	2
CO 2	3	3	3	3	2	2	2	2	3	3	2	2	2
CO 3	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

**Postgraduate Elective Course offered by the Department of Mathematics for
M.A. / M.Sc. Degree Programmes**

SYLLABUS

(Effective from the academic year 2023-2024)

ELEMENTS OF DISCRETE MATHEMATICS

CODE: 23MT/PE/ED23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to augment knowledge into mathematical logic and to introduce basic concepts of lattices
- to impart the knowledge of boolean algebra in computer science for its wide applicability in switching theory, demonstrating basic electronic circuits
- to reveal new ways of optimizing real life situations using discrete mathematics

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recognize and understand the principles of discrete mathematics in computer science and related fields.	K1,K2
CO2	model real world problems using concepts of logic, lattices and Boolean algebra	K3
CO3	analyze the methodologies used in solving real life problems	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	Hrs	CO
1	Mathematical Logic 1.1 Introduction 1.2 Propositions 1.3 Compound Proposition 1.4 Propositions and Truth Tables 1.5 Logical Equivalence 1.6 Algebra of Propositions 1.7 Conditional Proposition 1.8 Converse, Contrapositive and Inverse 1.9 Biconditional Statement 1.10 Negation of Compound Statements	K1- K4	9	CO1-3
2	Normal Forms and Predicate Calculus 2.1 Tautologies and Contradictions 2.2 Normal Forms 2.3 Logic in Proof 2.4 Method of Proof 2.5 Fallacies 2.6 Mathematical Induction 2.7 Predicate Calculus	K1- K4	8	CO1-3

UNIT	CONTENT	CL	Hrs	CO
3	Lattices 3.1 Lattice 3.2 Properties of lattices 3.3 Lattices as Algebraic System 3.4 Bounded, Complemented and Distributive lattices	K1- K4	8	CO1-3
4	Boolean Algebra and Logic Circuits 4.1 Boolean Algebra 4.2 Unique Features 4.3 Basic Operations 4.4 Boolean Function 4.5 De-Morgan's Theorem 4.6 Logic Gate 4.7 Sum of Products and Product of Sums Form 4.8 Normal Form	K1- K4	9	CO1-3
5	Project 5.1 Applications of Lattices 5.2 Applications of Boolean algebra 5.3 Applications of Logic Circuits	K1- K4	5	CO1-3

BOOKS FOR STUDY

Lipschutz, Seymour and Lipson, Marc Lars, *Theory and Problems of Discrete Mathematics*. Schaum's Outline Series, Second edition, Eleventh reprint 2002, New Delhi: Tata McGraw-Hill Publishing Company Limited, 1999.

Sarkar, Swapan Kumar, *A Textbook of Discrete Mathematics*. New Delhi: S. Chand & Company Ltd., 2003.

BOOKS FOR REFERENCE

L.Biggs, Norman. *Discrete Mathematics*. 2nd Edition, India: Oxford University Press, 2003.

Ram, Babu. *Discrete Mathematics*, Noida: Pearson - Dorling Kindersley (India) Pvt. Ltd., 2011.

Solai, Raju A et al., *Discrete Mathematical Structure*. Kumbakonam: Anuradha Agencies, 2003.

S, Santha, *Discrete Mathematics with Combinatorics and Graph Theory*. New Delhi: Cengage Learning India, 2010.

WEB RESOURCES

<http://www.mathily.org/dm-rw.html>

<https://www.electrical4u.com/some-common-applications-of-logic-gates/>

https://discrete.openmathbooks.org/dmoi3/sec_intro-intro.html

PATTERN OF ASSESSMENT**Units 1 to 4 to be tested.****Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	20	$1 \times 20 = 20$ (2 questions to be set)
D	K4	20	$1 \times 20 = 20$ (2 questions to be set)

Other Components:**Total Marks: 50**

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	40	$2 \times 20 = 40$ (4 questions to be set)
D	K4	40	$2 \times 20 = 40$ (4 questions to be set)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

**Postgraduate Elective Course offered by the Department of Mathematics for
M.A. / M.Sc. Degree Programmes**

SYLLABUS

(Effective from the academic year 2023-2024)

ELEMENTS OF APPLICABLE MATHEMATICS

CODE: 23MT/PE/AM23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to impart knowledge of the applications of graph theory in various fields
- to acquire the ability to solve problems through or models
- to reveal new ways of optimizing real life situations using applicable mathematics

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	realize and understand the clear perspectives of solving real life problems using graph theory, game theory and decision theory	K1,K2
CO2	apply the concepts of applicable mathematics in related fields	K3
CO3	analyze the methodologies used in solving problems of graph theory, game theory and decision theory	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	Hrs	CO
1	Graph Theory 1.1 Introduction to Graph theory 1.2 Basic Concepts – definition of a graph – degrees – regularity – paths and cycles – matching – coloring 1.3 Personnel Assignment Problem 1.4 Optimal Assignment Problem 1.5 Stereo matching in Autonomous Mobile Robot (AMR) 1.6 Time Table Problem 1.7 Applications in Chemistry and Social Psychology	K1- K4	8	CO1-3
2	Eulerian and Hamiltonian Graphs 2.1 Eulerian Graphs 2.2 Hamiltonian Graphs 2.3 Application to Physics 2.4 Konigsberg Bridge Problem 2.5 Chinese Postman problem 2.6 Travelling Salesman problem 2.7 Hamiltonian's around the World Game 2.8 Knight's Tour in Chessboard	K1- K4	8	CO1-3

UNIT	CONTENT	CL	Hrs	CO
3	Sequencing Problems 3.1 Introduction 3.2 Processing n Jobs through Two Machines 3.3 Processing n Jobs through Three Machines 3.4 Processing n Jobs through k Machines 3.5 Processing 2 Jobs through k Machines	K1- K4	7	CO1-3
4	Game Theory 4.1 Zero-sum game 4.2 Gambling and games 4.3 Financial and stock market decisions 4.4 Predation behavior model 4.5 Prisoner's dilemma 4.6 Military battle strategy 4.7 Politics and social issues	K1- K4	8	CO1-3
5	Decision Theory 5.1 Introduction 5.2 Decision-Making Environment 5.3 Decision under Uncertainty	K1- K4	8	CO1-3

BOOKS FOR STUDY AND REFERENCE

Aldous, Joan M. and Wilson, Robin J. *Graphs and Applications – An Introductory Approach*. New York: Springer International Edition, 2001.

Arumugam S. and Ramachandran S. *Invitation to Graph Theory*. Chennai: Scitech Publications India Pvt. Ltd., Reprint 2013.

Balakrishnan. R and Ranganathan K. *A textbook of graph theory*, New York: Springer-Verlag, 2000.

Bondy, J.A., and Murty, U.S.R. *Graph Theory with Application*. London: The Macmillan Press Ltd., 1976.

Dixit, Avinash K and Barry J., Nalebuff. *Thinking strategically - the competition edge in business, politics, and everyday life*, New York: W. W. Norton & Company, 1993

S, Kalavathy. *Operations Research*, New Delhi : Vikas Publishing House Pvt. Ltd., Fourth Edition 2013, Reprint 2015.

WEB RESOURCES

<https://www.youtube.com/watch?v=t9Lo2fgxWHw>

<https://nptel.ac.in/courses/110106062/>

<https://mathigon.org/course/graph-theory/introduction>

<https://www.jetir.org/papers/JETIR2209384.pdf>

<https://www.britannica.com/topic/prisoners-dilemma>

<https://arxiv.org/pdf/q-bio/0505026v1.pdf>

<https://policonomics.com/battle-of-the-bismarck-sea/>

<https://digitalcommons.georgiasouthern.edu/cgi/viewcontent.cgi?article=1661&context=honors-theses>

<https://www.rand.org/content/dam/rand/pubs/papers/2008/P4609.pdf>

<https://debitcardcasino.ca/how-to/2020/06/09/game-theory-strategy/>

<https://blog.ipleaders.in/game-theory-and-its-sociological-aspect/>

https://www.mdpi.com/journal/economies/special_issues/game-theories

PATTERN OF ASSESSMENT**No Unit should be left out.****Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	6	$3 \times 2 = 6$
B	K2	4	$4 \times 1 = 4$ (4 MCQ to be set)
C	K3	20	$1 \times 20 = 20$ (2 questions to be set)
D	K4	20	$1 \times 20 = 20$ (2 questions to be set)

Other Components:**Total Marks: 50**

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$
B	K2	10	$10 \times 1 = 10$ (10 MCQ to be set)
C	K3	40	$2 \times 20 = 40$ (4 questions to be set)
D	K4	40	$2 \times 20 = 40$ (4 questions to be set)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

**Postgraduate Elective Course offered by the Department of Mathematics for
M.A. / M.Sc. Degree Programmes**

SYLLABUS

(Effective from the academic year 2023-2024)

DATA ANALYSIS USING R

CODE: 23MT/PE/DR23

CREDITS: 3

L T P: 1 0 2

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to acquire the basic concepts of descriptive and inferential statistics
- to provide a fundamental understanding of the r programming language, including its syntax and data structures
- to apply the data visualization techniques and theoretical distributions to real world datasets and perform a statistical analysis using R

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and understand the basics of statistics and the scientific software R	K1, K2
CO2	demonstrate solution to real world problems through statistical concepts using R	K3
CO3	analyse the real-world datasets, solve them using the statistical concepts implemented through R	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	Hrs	CO
1	Basic Statistics – Theory 1.1 Measures of Central Tendency 1.2 Measures of Dispersion 1.3 Graphical Representations 1.4 Normal Distribution 1.5 Correlation 1.6 Regression 1.7 Testing of Hypothesis	K1- K4	8	CO1-4
2	Data Types in R 2.1 Numeric, Integer, Complex, Logical 2.2 Character, Vectors, Matrices & Arrays 2.3 Lists 2.4 Factors 2.5 Strings	K1- K4	9	CO2-4

UNIT	CONTENT	CL	Hrs	CO
3	Graphical Visualizations in R 3.1 Pie Chart 3.2 Scatter Plot 3.3 Line Plot 3.4 Histograms 3.5 Box Plot 3.6 Bar Plot	K1- K4	7	CO2-4
4	Basic Data and Computations 4.1 Data Frames 4.2 Operators: Arithmetic, Comparison, Logic 4.3 Computations on Numeric Data 4.4 Matrix Computations 4.5 Fitting Statistical Models 4.6 Programming Random Simulations	K1- K4	7	CO2-4
5	Statistical Analysis using R 5.1 Measures of Central Tendency 5.2 Measures of Dispersion 5.3 Graphical Representations 5.4 Normal Distribution 5.5 Correlation 5.6 Regression 5.7 Testing of Hypothesis	K1- K4	8	CO2-4

BOOKS FOR STUDY AND REFERENCE

A, Chandrasekaran et al. *A Textbook of Applied Statistics*, Chennai: Dhanam Publications, 2019.

Pillai, R.S.N, and Bagavathi, *Statistics – Theory and Practice*, 7th Revised Edition, New Delhi: S. Chand and Company Limited, 2012.

Pillai, R.S.N, and Bagavathi. *Practical Statistics*, Second edition, New Delhi: S. Chand & Co. Ltd. 2003.

G, Sudhamathy and Venkateswaran, Jothi, *R Programming – An Approach to Data Analytics*. Chennai: MJP Publishers, 2018.

P.R, Vittal, *Mathematical Statistics*, Chennai: Margham Publications Pvt. Ltd., 2002.

WEB RESOURCES

http://onlinestatbook.com/Online_Statistics_Education.pdf

<https://statisticsbyjim.com/basics/normal-distribution/>

www.amstat.org/

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC374386/>

<https://www.edx.org/learn/r-programming/harvard-university-statistics-and-r>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Theory Pattern

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (5 MCQ to be set)
B	K2	6	$3 \times 2 = 6$ (4 questions to be set)

Practical Pattern

Section	Cognitive Level	Marks	Pattern
C	K3	20	$1 \times 20 = 20$ (2 questions to be set)
D	K4	10	$1 \times 10 = 10$ (2 questions to be set)
E	K5	10	$1 \times 10 = 10$ (2 questions to be set)

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

(Question paper to be prepared jointly by one course teacher and one internal–external examiner)

Theory Pattern

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (MCQ to be set)
B	K2	10	$5 \times 2 = 10$ (6 questions to be set)

Practical Pattern

Section	Cognitive Level	Marks	Pattern
C	K3	40	$2 \times 20 = 40$ (3 questions to be set)
D	K4	20	$2 \times 10 = 20$ (4 questions to be set)
E	K5	20	$2 \times 10 = 20$ (4 questions to be set)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086
M.Sc. DEGREE: BRANCH I – MATHEMATICS

SYLLABUS
(Effective from the academic year 2023-2024)

MATHEMATICAL MODELING

CODE: 23MT/PI/MM24

CREDITS: 4

OBJECTIVES OF THE COURSE

- to understand the basic concepts in mathematical modeling
- to introduce various mathematical models to real time situations
- to translate real life problem into a suitable mathematical model
- to solve mathematical model problems using different mathematical tools and techniques
- to draw conclusion to the solution obtained for mathematical model problems

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- translate natural phenomena into mathematical model
- reduce the complexity of a real life problem and represent through abstraction
- solve simple problems through Mathematical techniques

Unit 1

Foundations of Mathematical Modeling

- 1.1 Introduction
- 1.2 Principles of Mathematical Modeling
- 1.3 Methods of Mathematical Modeling
- 1.4 Dimensions and Units
- 1.5 Dimensional Homogeneity
- 1.6 Dimensional Analysis

Unit 2

Exponential Growth and Decay

- 2.1 Introduction
- 2.2 Radioactive Decay
- 2.3 Exponential Models in Money Matters
- 2.4 A nonlinear Model of Population Growth
- 2.5 A coupled Model of Fighting Armies

Unit 3

Traffic Flow Model

- 3.1 Freeway Traffic
- 3.2 Macroscopic Traffic Flow Models
- 3.3 Conservation of Cars
- 3.4 Traffic Density
- 3.5 Microscopic Traffic Flow Model
- 3.6 Linear Car following Model

Unit 4

Higher Order Dynamical System

- 4.1 Introduction to Higher Order Dynamical System
- 4.2 An Economy Model
- 4.3 Controlling an Economy

Genetics

- 4.4 Introduction to Population Genetics
- 4.5 Basics of Genetics
- 4.6 Mutation
- 4.7 Selection

Unit 5

Optimization of Continuous Models

- 5.1 Inventory Problem
- 5.2 Manufacturing Problem
- 5.3 Constrained Continuous Optimization
- 5.4 Managing Renewable Resources

BOOKS FOR STUDY

Dym, Clive L. *Principles of Mathematical Modeling*. second edition, UK: Academic Press, 2004, reprint in India 2012.

Giordano, Frank R., et al. *Mathematical Modeling Principle and Applications*. Brooks/Cole, 2009, Indian reprint 2009.

Sandefur, James. *Elementary Mathematical Modeling*. USA: Brooks/Cole Thomson Learning, 2003.

BOOKS FOR REFERENCE

Gershenfeld, Neil. *The Nature of Mathematical Modeling*. Cambridge University Press, 1999, 6th Reprint 2006.

J. N, Kapur. *Mathematical Modeling*. John Wiley & Sons, 1988.

Rousseau, Christiane and Yvan Sain Aubin. *Mathematics and Technology*. Translator: Chris Hamilton, Springer science and Business media, L.L.C, 2008

Temam, Roger M. and Miranville Alain M. *Mathematical Modeling in Continuum Mechanics*. 2nd Edition, Cambridge University Press, 2005.

WEB RESOURCES

<http://www.sfu.ca/~vdabbagh/Chap1-modeling.pdf>

http://www.maths.bris.ac.uk/~madjl/course_text.pdf

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section A: $5 \times 2 = 10$ (Five questions to be set, selecting one question per unit)

Section B: $5 \times 6 = 30$ (Seven questions to be set, without omitting any unit)

Section C: $3 \times 20 = 60$ (Five questions to be set without omitting any unit)



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

M.S.W. Degree
SOCIAL WORK
(CHOICE BASED CREDIT SYSTEM)

OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF SOCIAL WORK

PROGRAMME DESCRIPTION

The Department of Social Work founded in 1953, offers a curriculum that covers global, national and local concerns and seeks to educate students on relevant, Social Work theories, approaches and responses to diverse challenges and complex human issues. This is done through concurrent theory and practical learning as important components of training, along with training in the specialisations in the profession of Social Work. The specialisations offered include (a) Social Work Practice in Health Settings (b) Development Issues and Social Work Practice (c) Child Rights and Practice with Families. Field instruction lies at the heart of Social Work education. The Department offers additional skill training and inputs on current issues and practices which go beyond the curriculum enhancing the capacities of the students. The departmental mission advocates a strong 'Rights Based Approach' in the curriculum training students with the knowledge, skills and attitude for professional commitment, employment and societal transformation.

The curriculum provides value-based education incorporating values, professional ethics, social responsibility, human rights, justice, advocacy, research, environmental sustainability and social entrepreneurship. Fostering a culture of dialogue for peace building, peace initiatives and responsible citizenship are woven into the programme.

The Learning Outcome Curriculum Framework (LOCF) in Social Work at the post graduate level is framed to provide a learning environment which will shape professionals committed to building a humane and just society. The PEOs are directed towards providing scope for higher education, employment, community and nation building by offering a globally relevant curriculum building core competencies, development of skills, fostering a scientific aptitude for research, influencing innovation and social policy and inculcating in graduates' social responsibility for sustainable development. The POs reflect both disciplinary knowledge, values, attitude, behaviour, skills for practice, and competencies that post graduates in Social Work are required to attain. The PSOs are framed envisioning that advocating a Rights Based Approach for practice, will enable graduates to apply professional learning, strengthen competencies, provide skills to use methods, tools, techniques leading to specialization -based proficiency. Learning outcomes will be assessed by a Continuous Assessment Test, a Field Based Assignment and Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Exhibition / Case Study / Mini Project, as the third component. The learning experiences and assessment procedures will provide every student the opportunity to achieve the intended programme specific learning outcomes.

VISION OF THE DEPARTMENT

To build a body of knowledge relevant to Professional Social Work and shape Social Work professionals committed to development and social change founded on values of Truth, Justice and Peace.

MISSION OF THE DEPARTMENT

- Advocate a strong 'Rights Based Approach' in the curriculum.
- Identify development agendas that complement the profession.
- Share knowledge, views, new ideas and thus grow in professionalism.
- Establish effective working relationships through a wide range of networks, collaborations and field placements particularly with those who stand up for human rights and social justice.
- Facilitate students in finding viable linkages with Social Work agencies and other organizations.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF SOCIAL WORK

PROGRAMME SPECIFIC OUTCOMES (PSO)

On successful completion of the M.S.W. Programme, the students will be able to

PSO 1	Apply professional knowledge, skills, attitude, behaviour, values for promotion of social cohesion, social change, development, empowerment of persons by adopting a Rights Based Approach
PSO 2	Develop critical consciousness and effect social transformation through Social Work methods and intervention for the upliftment of the socially disadvantaged and vulnerable sections of the society
PSO 3	Develop specialised skills for Social Work practice, open avenues for higher education, contribute as Professional Social Workers in various fields and in governmental, non-governmental, quasi-governmental, community-based organisations, international organisations, corporates and establish organisations /social enterprises
PSO 4	Demonstrate competency to undertake research for social development and to influence social policy across specialisations
PSO 5	Demonstrate sensitivity to issues of persons-in-environment, environmental crises, ways to address environmental concerns and promote environmental justice

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
DISTRIBUTION OF CREDITS AND HOURS
Master of Social Work 2023-2024

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	4	4	4	4	4	4	4	16	16
	4	4	4	4	4	4	4	4	16	16
	4	4	4	4			4	4	12	12
	4	9	4	9	4	9	4	9	16	36
Dissertation					7	7			7	7
PE-dept.	3	3	3	3	3	3	3	3	12	12
	3	3			3	3	3	3	9	9
PV			2	2			2	2	4	4
PK			2	2					2	2
PA	1	2	1	2					2	4
PN							2		2	0
Library		1						1	0	2
TOTAL	23	30	24	30	25	30	26	30	98	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

MASTER OF SOCIAL WORK

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
SEMESTER-I									
23SW/PC/SP14	Social Work Profession	4	4	0	0	3	50	50	100
23SW/PC/WI14	Social Work with Individuals	4	4	0	0	3	50	50	100
23SW/PC/WG14	Social Work with Groups	4	4	0	0	3	50	50	100
23SW/PC/FW14	Field Work - I	4	0	0	9	1	50	50	100
23SW/PA/AM11	Alternative Media Skills Workshop	1	0	0	2	0	50	-	100
	Elective I								
	Elective II								
SEMESTER-II									
23SW/PC/CO24	Community Organisation and Social Action	4	4	0	0	3	50	50	100
23SW/PC/SR24	Social Work Research and Statistics	4	4	0	0	3	50	50	100
23SW/PC/MO24	Management of Development Organisations	4	4	0	0	3	50	50	100
23SW/PC/FW24	Field Work - II	4	0	0	9	1	50	50	100
	Elective III								
23SW/PK/PB22	Social Work for Peace Building and Conflict Transformation	2	2	0	0	-	50	-	100
23SW/PA/HI21	Health Information and Communication Workshop	1	0	0	2	-	50	-	100
CD / ET	Value Education								
SEMESTER-III									
Stream A	Specialisation - Social Work Practice in Health Settings								
23SW/PC/MS34	Medical Social Work	4	4	0	0	3	50	50	100
23SW/PC/MH34	Mental Health and Psychiatric Social Work	4	4	0	0	3	50	50	100
Stream B	Specialisation - Development Issues and Social Work Practice								
23SW/PC/DP34	Development Planning and Administration	4	4	0	0	3	50	50	100
23SW/PC/SE34	Social Entrepreneurship	4	4	0	0	3	50	50	100
Stream C	Specialisation - Child Rights and Practice with Families								
23SW/PC/WC34	Social Work with Children	4	4	0	0	3	50	50	100
23SW/PC/FS34	Family Social Work	4	4	0	0	3	50	50	100
23SW/PC/DS37	Dissertation	7	0	0	7	1	50	50	100
23SW/PC/FW34	Field Work - III	4	0	0	9	1	50	50	100
	Elective IV								
	Elective V								
SEMESTER-IV									
23SW/PC/CN44	Counselling - Theory and Practice	4	4	0	0	3	50	50	100
Stream A	Specialisation - Social Work Practice in Health Settings								
23SW/PC/PD44	Social Work with Persons with Disabilities	4	4	0	0	3	50	50	100
23SW/PC/MC44	Mental Health Care Approaches and Practice	4	4	0	0	3	50	50	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

MASTER OF SOCIAL WORK

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
Stream B	Specialisation - Development Issues and Social Work Practice								
23SW/PC/CD44	Community Development - Rural, Urban and Tribal	4	4	0	0	3	50	50	100
23SW/PC/PG44	Participatory Governance and Tools for Development Practice	4	4	0	0	3	50	50	100
Stream C	Specialisation - Child Rights and Practice with Families								
23SW/PC/YD44	Youth Development	4	4	0	0	3	50	50	100
23SW/PC/GR44	Gerontological Social Work	4	4	0	0	3	50	50	100
23SW/PC/FW44	Field Work - IV	4	0	0	9	1	50	50	100
23SW/PN/BF42	Block Field Work	2	0	0	0	-	50	-	100
CD / ET	Value Education								
	Elective VI								
	Elective VII								
Postgraduate Elective Courses Offered to Parent Department									
23SW/PE/SY13	Fundamentals of Sociology	3	3	0	0	3	50	50	100
23SW/PE/PY13	Fundamentals of Psychology	3	3	0	0	3	50	50	100
23SW/PE/HR13	Human Rights and Social Work	3	3	0	0	3	50	50	100
23SW/PE/GS13	Gender and Social Work Practice	3	3	0	0	3	50	50	100
23SW/PE/ES13	Environmental Social Work	3	3	0	0	3	50	50	100
23SW/PE/AB13	Social Work with Addictive Behaviour	3	3	0	0	3	50	50	100
23SW/PE/DM13	Disaster Management	3	3	0	0	3	50	50	100
23SW/PE/CS13	Corporate Social Responsibility	3	3	0	0	3	50	50	100
23SW/PE/SA13	Social Audit	3	3	0	0	3	50	50	100
Postgraduate Elective Course Offered to Other Departments									
23SW/PE/IH23	Indian Constitution and Human Rights	3	3	0	0	-	50	50	100
Independent Elective Courses									
23SW/PI/DR24	Displacement, Migration and Refugee Issues	4	0	0	0	3	0	100	100
23SW/PI/QR24	Qualitative Research	4	0	0	0	3	0	100	100

STELLA MARIS COLLEGE (AUTOOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

SOCIAL WORK PROFESSION

CODE:23SW/PC/SP14

CREDITS: 4

L T P: 4 0 0

TOTAL TEACHING HOURS: 52

OBJECTIVES OF THE COURSE

- to gain knowledge on the evolution of social work and its emergence as a profession
- to comprehend the concepts and the ideologies influencing social work
- to enlighten students with the underlying philosophy of social work, theories and approaches to social work profession and practice
- to acquire knowledge of current trends in social work education and practice
- to appreciate Social Work practice in an international context

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	relate to the concepts and ideologies influencing Social Work, the evolution, growth and development of the Social Work profession	K1
CO2	interpret values, beliefs, ethics and skills for Social Work practice and demonstrate professionalism as a trainee	K2
CO3	apply theories and approaches for practice	K3
CO4	examine the scope of the Social Work Profession and practice in multi-cultural settings	K4
CO5	evaluate Social Work practice in the national and international context and build skills for glocal Social Work Practice	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Social Work Profession, History and Growth 1.1 Social Work Profession: Meaning and Definition; Goals, Functions, Methods, Fields, International and National Social Work Bodies/ Forums 1.2 Basic Concepts: Social welfare, Social Service, Social Services, Social development, Social Change, Social Action, Human Rights, Social Exclusion (marginalization, discrimination, exploitation, oppression), Empowerment 1.3 History and Growth of Social Work: UK, USA., Evolution of Social Work Education, Levels of Training, Domains (core, supportive, elective and inter-disciplinary). Origin and growth in India, Scope, Challenges and current status. Field Work and importance of Supervision, Global Standards for Social Work Education 1.4 Socio-cultural and Religious Foundations influencing Social Work: Constitutional Safeguards, Reform Movements and Indian Social Reformers, Contributions of Hinduism, Buddhism, Jainism, Islam, Christianity and Christian Missions	K1- K4	10	1-5
2	Ideologies Influencing Social Work 2.1 Philanthropy, Humanitarianism, Welfarism, Socialism, Democracy, Marxism 2.2 Human Rights, Social Justice and Equality 2.3 Gandhian, Nehruvian, Dr. Ambedkar and Periyar's Philosophies relevant to Social Work	K1- K4	10	1-5
3	Social Work Philosophy 3.1 Values and Beliefs: Respect for the Person, respect for Differences, Self- Determination and expression, Respect for Democratic Values and Diversity, equality, Dignity of the Human Being, Uniqueness of Individuals, Groups and Community, Individual's Right to Fulfilment and Self- Actualization, Reciprocal Rights and Responsibilities of Individuals and Society, Capacity of Individuals and Communities to Change 3.2 Principles: Acceptance, Individualization, Confidentiality, Client Participation, Non-Judgemental Attitude, Controlled Emotional Involvement 3.3 Code of Ethics: Evolution of Code of Ethics, Declaration of Ethics for Social Workers (SWEF -1997). Ethics in Social Work, Statement of Principles (IFSW & IASSW-2004)	K1 - K6	12	1-5

UNIT	CONTENT	CL	HRS	CO
4	Theoretical Approaches to Social Work Practice 4.1 Social Work Theory: Definition, Need and Importance for Professional Practice. Important Theories that inform practice-Psychosocial, Psychodynamic, Eco-systems, Empowerment theories 4.2 Practice Approaches: Remedial, Rehabilitative, Preventive and Promotive Approaches, Rights Based, Participatory, Indigenous and Advocacy Approaches 4.3 Analysis of Social Work Practice: From Welfare and Development approaches to Rights Based and People Centred approaches	K1 - K6	10	1-5
5	International Social Work 5.1 Definition and Meaning, Global Issues and Need for International Practice, Practice Levels and Sectors; 5.2 Global Agenda; Global Standards 5.3 Role of International Agencies: UN Agencies, INGOs and Human Rights Organisations; International Service- Delivery Programmes; Skills for International Practice; Role and function of International/National Bodies and Forums	K1 - K6	10	1-5

BOOKS FOR STUDY

Misra P.D. and Bina Misra. *Social Work Profession in India*. Lucknow: New Royal Book Company, 2015.

Singh, Ram Shankar. *Professional Social Work: Best Practices and Innovations*. Rajasthan: ABD Publishers, 2017.

BOOKS FOR REFERENCE

Barsky Allan Edward. *Essential Ethics for Social Work Practice*. Oxford University Press, 2022.

Bhattacharya, Sanjay. *Social Work Interventions and Management*. New Delhi: Deep & Deep Publications, 2008.

Cox David, Manohar Pawar. *International Social Work; Issues, Strategies and Programmes*. New Delhi: Vistaar. 2006.

Cox Tory, Terence Fitzgerald, et al. *The Art of Becoming Indispensable: What School Social Workers Need to Know in Their First Three Years of Practice*. Oxford University Press, 2021.

Cree Vivienne. E., (Ed) *Social Work – A Reader*. New York. Routledge, 2011

Dean, Hepworth. *Direct Social Work Practice: Theory And Skills*. Boston: Cengage Publications, 2018.

Francis, Nicholas. *Handbook for Professional Practice and Career Development in Social Work*. Madurai: Francis, 2015.

Healy Lynne M. and Rosemary J. Link. *Handbook of International Social Work: Human Rights, Development, and The Global Perspective*. United Kingdom: Oxford Publications, 2012.

- Healy Lynne Moore and Rebecca Leela Thomas. *International Social Work: Professional Action in an Interdependent World, Third Edition*. Oxford University Press, 2020.
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- Long, Dennis D. *Macro Social Work Practice*. United States: Cengage Learning, 2011.
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- Roy Sanjoy. *Social Work in a Globalizing World – Professional Challenges and Practices*. Jaipur: Rawat Publications, 2018.
- Social Work Profession in India, NASW & Oxford University Press, Encyclopaedia of Social Work*. London: Co-published by the NASW Press and Oxford University Press, 2008.
- Thomas Gracious. *Social Work: The Value-based Profession*. Jaipur: Rawat Publications, 2016.
- Trevithick, Pamela. *Social Work Skills and Knowledge*. Jaipur: Rawat Publications, 2012.
- University Grants Commission, I and II Review Commission on Social Work Education*. New Delhi: University Grants Commission, 1992.

JOURNALS

Indian Journal of Social Work, Tata Institute of Social Sciences, Mumbai, India
 Asia-Pacific Journal of Social Work and Development, National University of Singapore.
 Dept. of Social Work and Psychology, Singapore
 International Social Work, Sage Publications, www.sagepub.com

WEB RESOURCES

isw.sagepub.com/content/51/6/847.citation
<https://epgp.inflibnet.ac.in>
www.unv.org
www.un.org
www.worldbank.org
www.iassw-aiets.org: International Association of Schools of Social Work
www.icsd.info: International Consortium for Social Development
www.icsw.org: International Council on Social Welfare
www.ifsw.org: International Federation of Social Workers

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/SP14												
I	Course Title: SOCIAL WORK PROFESSION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	2	3	3	3	3	3	2	2
CO 2	3	3	3	2	2	2	3	3	3	3	3	2	2
CO 3	3	3	3	2	2	2	3	3	3	3	3	2	2
CO 4	3	3	3	2	2	2	3	3	3	3	3	2	2
CO 5	3	3	3	2	2	2	3	3	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTOOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

SOCIAL WORK WITH INDIVIDUALS

CODE: 23SW/PC/WI14

CREDITS: 4

L T P: 4 0 0

TOTAL TEACHING HOURS: 52

OBJECTIVES OF THE COURSE

- to understand social case work as a method of social work and develop skills in social work practice
- to comprehend theory, models and approaches of social case work
- to apply the tools and techniques of social case work
- to develop competencies and adapt them in direct practice with individuals and families
- to appraise and propose the scope of using the method in various settings

COURSE LEARNING OUTCOMES

On successful completion of this course, students will be able to

COs	DESCRIPTION	CL
CO1	explain the basic concepts, philosophy, principles, skills and values of social case work as a method of social work	K1
CO2	interpret the application of the theories and models in addressing and resolving the issues and problems of individuals and families	K2
CO3	apply the tools and techniques in enhancing practice in social work with individuals	K3
CO4	examine and utilise skills in recording and reflecting on work to grow professionally	K4
CO5	evaluate the scope of social case work in different settings and propose plans for effective practice	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Social Casework 1.1 Historical Development of Social Case Work as a Method of Social Work Practice – UK, USA and India, Concept and Definitions 1.2 Philosophy, Values, Principles, Skills, Components of Social of Case Work 1.3 Indian Philosophical concepts of duty and Karma in Case work 1.4 Case Work Relationship: Empathy, Skills in Building Relationship, Transference and Counter Transference 1.5 Difference between Casework, Counselling and Psychotherapy	K1- K4	12	1 -5

UNIT	CONTENT	CL	HRS	CO
2	The Helping Process 2.1 Phase I- Psychosocial Study, Psychosocial Assessment 2.2 Phase II- Intervention Plan and Goal Setting, Intervention 2.3 Phase III- Termination, Evaluation and Follow up	K1-K6	10	1 -5
3	Introduction to Models and Therapeutic Approaches of Case Work Practice 3.1 Psychoanalytic Approach, Psychosocial, Functional, Client Centred, Cognitive Behaviour Therapy, Transactional Analysis 3.2 Life Model, Task Centred, Family Centred Approach, Systems Approach, Strength Based, Evidence Based Approach. Use of Eclectic Approach in Practice	K1 -K6	12	1-5
4	Tools and Techniques in Working with Individuals 4.1 Observation, Interviews, Home Visits, Collateral Contacts, 4.2 Resource Mobilization, Referrals, Environment Modification, Communication	K1-K6	10	1-5
5	Recording in Case Work 5.1 Uses and Types-Verbatim, Narrative, Condensed, Analytical, Topical, Summary Recording 5.2 Social Work Practice with Individuals in Different Settings and Limitations in Practice 5.3 Role of Casework in Hospital, School, Community, Institutional Setting and Workplace	K1 –K6	8	1-5

BOOKS FOR STUDY

Upadhyay, R. K., *Social Case Work*. Rawat, 2003.
 Vyas, A.A. *New Directions in Social Work- Social Work Competencies - Core Knowledge, Values and Skills*. Delhi: Sage, 1996.

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Banerjee, G.R. *Papers on Social Work*, Mumbai: TISS, 1986
 Bhattacharya, Sanjay. *Social Work, An Integrated Approach*. New Delhi: Deep & Deep, 2004.
 Botcha, Rambabu & Kurian, Aneesh. *Social Case Work, The Indian Perspective*. Bengaluru: Archers & Elevators Publishing House, 2020.
 Datar Sudha, Ruma, Bawikar et al. *Skill Training for Social Workers- A Manual*. New Delhi: Sage, 2010.
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 Hepworth, D.H., Rooney, Rooney, Strom-Gotterfried & J.A. Larsen. *Theory and Skills in Social Work*. Cengage Learning India Pvt Limited, New Delhi: 2010.
 Holosko, Michael J. Dulmus, Catherine C. and Sowers, M. Karen. (Ed.) *Social Work Practice with Individuals and Families – Evidence Informed Assessments and Intervention*. John Wiley and Sons, 2013.
 Mathew, Grace. *An Introduction to Social Casework*. Mumbai TISS, 1992.

Perlman, Helen Harris. *Social Case Work: A Problem Solving Process*. New Delhi: Rawat, 2017.

Roberts, R. Greene, Gilbert J. (Ed.) *Social Workers' Desktop Reference*. New York: Oxford University Press, 2002.

JOURNALS

Families in Society. Journal of Contemporary Social Services <https://us.sagepub.com/en-us/nam>
Journal of Social Work Values & Ethics Open access journal published by White Hat Communications
Social Work. <http://www.oxfordjournals.org>
The Social ION. www.indianjournals.com

WEB RESOURCES

<https://archive.org/details/whatisocialcase00mary>
www.socialworkers.org/practice/CaseManagementStandards2013.pdf
www.routledgesw.com/caseStudiesn
<https://epgp.inflibnet.ac.in/>

PATTERN OF ASSESSMENT

Continuous Assessment: **Total Marks: 50** **Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components: **Total Marks: 50**

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation / Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: **Total Marks: 100** **Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/WI14												
I	Course Title: SOCILA WORK WITH INDIVIDUALS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	3	2	3	3	3	3	3	2	3
CO 2	2	2	2	2	3	2	3	3	3	3	3	2	3
CO 3	3	2	2	2	3	2	3	3	3	3	3	2	3
CO 4	3	2	2	2	3	2	3	3	3	3	2	2	3
CO 5	3	2	2	2	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTOOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

SOCIAL WORK WITH GROUPS

CODE: 23SW/PC/WG14

CREDITS: 4

L T P: 4 0 0

TOTAL TEACHING HOURS: 52

OBJECTIVES OF THE COURSE

- to understand social group work as a method of social work profession and develop skills in social work practice.
- to classify the different types of groups and its influence on the individual, group and community.
- to comprehend and apply the theories and models of group processes and dynamics in social work practice.
- to assess the different phases of social group work.
- to adapt Social Group Work practice in various settings.

COURSE LEARNING OUTCOMES

On successful completion of this course, students will be able to

COs	DESCRIPTION	CL
CO1	define concepts, values and characteristics of social group work as a method of social work	K1
CO2	outline the different types of groups, their needs and their influence on individuals, groups and the community	K2
CO3	apply theories and models in addressing and resolving the problems of groups	K3
CO4	examine and use appropriate skills and techniques while working with groups	K4
CO5	evaluate and build the scope of social group work in various settings and field practice and propose plans for practice	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Group Work 1.1 Historical Development of Social Group Work as a Method, Definition and Meaning of Social Group Work 1.2 Purpose, Objectives of Social Group Work 1.2.1 Values, Skills of Social Group Work 1.3 Principles of Social Group Work 1.4 The Use of Groups in Social Work	K1- K5	10	1-5

UNIT	CONTENT	CL	HRS	CO
2	Types of Groups 2.1 Definition and Characteristics of Groups 2.2 Importance of Groups in Human Life 2.2.1 Primary and Secondary Groups 2.2.2 Formal and Informal Groups 2.2.3 Open and Closed Groups 2.2.4 Voluntary and Involuntary Groups 2.2.5 Reference Groups 2.3 Treatment Groups: Educational, Growth, Remedial, T Groups, Group Psychotherapy, Group Counselling 2.4 Task Groups: Council, Committee and Team 2.5 Developmental Groups: Self-Help Groups, Support Groups	K1- K5	10	1-5
3	Group Processes and Dynamics 3.1 Stages of Group Development: Tuckman (1963) Trecker (1972), Klien (1972), Northern & Kurland (2001) Model 3.2 The Influence of New Comers on Group Processes, Isolation, Rejection in Groups 3.3 Group-Bond, Sub Groups, Clique, Gang, Dyad, Triad, Group Norms 3.4 Group Membership, Group Cohesiveness, Group Pressure, Group Morale 3.5 Leadership, Team Building, Decision Making, Problem Solving, Conflict Management 3.6 Communication in a Group, Role Clarity in a Group, use of Sociometry	K1-K6	12	1-5
4	Phases of Group Work Process 4.1 The Planning Phase: Establishing Group Purpose, Assessing the Potential Membership of the Group, Recruiting Members, Composing the Group, Orienting Members to the Group, Contracting, Preparing the Group Environment 4.2 The Beginning Phase: Introduction, Motivation, Member Feedback, Defining the Purpose, Objectives, Goal Setting, Assessment Process 4.3 The Middle Phase: Preparing for Group Meetings, Structuring the Group Work, Intervention Strategies in Groups-Programme Planning and Implementation – Meaning and Principles of Programme Planning. Monitoring and Evaluating the Group Process 4.4 The Ending Phase: Preparing for Termination; Evaluation and Feedback	K1-K6	12	1-5

UNIT	CONTENT	CL	HRS	CO
5	Group Work Models and Practice in different settings 5.1 Social Goals Model, Remedial Model, Reciprocal Model 5.2 Social Work Practice with Groups in different settings: Hospital, School, Community, Industry and Institutional Setting 5.3 Recording in Group Work: Principles of Recording Importance of Recording, Skills required for Recording in Group Work, Types of Recording in Group Work	K1- K6	8	1-5

BOOKS FOR STUDY

Charles D. Gravin, Lorraine M. Gutierrez, Maeda J Galinsky. *Handbook of Social Work with Groups*: Rawat Publications, 2004
 Siddiqui. H. Y. *Group Work: Theories and Practices*: Rawat, Publications, 2008

BOOKS FOR REFERENCE

Bradler S. and Roman C.P. *Group Work Skills and Strategies for Effective Interventions*. New York: The Howorth Press, 2016
 Corey, Schneider Marianne. Corey, Gerald. *Groups -Processes and Practice*. Brooks/Cole Thomson, 2002
 Johnson & Johnson. *Joining Together: Group Theory and Group Skills*. New Delhi: Premier, 1982
 Konopka, G. *Social Group Work: A Helping Process, Third Edition*. Eaglewood Cliffs: Prentice, 1983
 Shaw, Marlin, E. *Group Dynamics*. New Delhi: Tata McGraw Hill, 2002.
 Toseland, R.W & Rivas, R. *An Introduction to Group Work Practice*. New York: MacMillian, 1984
 Trecker, H.B. *Social Group Work: Principles and Practice*. New Delhi: Pranava Books, 2020.: Association Press, 1972

JOURNALS

The Journal for Specialists in Group Work <https://www.tandfonline.com/loi/usgw20>
 Group Work Journals <https://www.iaswg.org/group-work-journals>

WEB RESOURCES

<http://www.yourarticlelibrary.com/society/social-groups-the-meaning-characteristics-classification-and-other-details>
<https://study.com/academy/lesson/stages-of-group-development-forming-storming-forming-performing-adjourning.html>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23SW/PC/WG14												
I	Course Title: SOCIAL WORK WITH GROUPS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	2	2	2	2	3	3	2	2	2
CO 2	3	2	3	2	3	3	2	2	3	3	3	2	2
CO 3	3	1	2	1	2	2	2	2	3	3	3	2	2
CO 4	2	2	2	2	3	2	2	2	3	3	3	2	2
CO 5	3	2	2	1	2	3	2	2	3	3	2	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTOOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

FIELD WORK - I

CODE:23SW/PC/FW14

CREDITS: 4

OBJECTIVES OF THE COURSE

- to develop self as a professional through acquiring knowledge, skills, attitudes and values appropriate for social work practice
- to enhance understanding and apply learning of socio-economic-cultural –rural realities in the field
- to be oriented to rural life, enhance group living and leadership through planning and organisation of the rural camp
- to analyse agency as a system –agency philosophy, thrust, objectives, structure and management of service/programmes
- to evaluate the social system and its impact on individuals, groups, family, community and understand the role and functioning of organisations- Governmental and Non-Governmental and plan for further Social Work intervention

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	acquire knowledge, attitude, ethics and values for professional practice	K1
CO2	interpret the socio –economic-cultural-rural realities and its impact on individuals, families, groups and communities	K2
CO3	be initiated to apply skills in systematic observation, critical analysis, develop a spirit of inquiry and document field study using tools and techniques and learning through preparation of agency, family and community profile/reports	K3
CO4	analyse ability of self and in teams to plan, organise programmes and contribute as a team member in the agency, community and classroom	K4
CO5	evaluate role of a social worker in an agency and in the community	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Lab sessions Lab sessions on Social Work related themes for participation and exploration of self to internalise values and principles through sessions and reflective practice developed in the process.	K1- K3	25	1-5
2	Observation Visits Observation visits to select social service providing services for an orientation on the organisation, study, application of Social Work methods used, agency programmes and interact with the beneficiaries and the staff.	K1-K3	25	1-5
3	Capacity Building and Training for Rural Camp/Field Work *Orientation to objectives and preparation for Rural Camp *Understand roles and responsibilities *Obtain inputs for effective camp planning *Participate in guided group activities * Input sessions by faculty/experts for personal and professional development * Resource mobilization * Budgeting *Documentation and Report writing	K1-K6	14	1-5
4	Rural Camp *Sensitisation to rural realities and understand issues of those living in the rural areas *Use tools and techniques for understanding various resources and systems in the rural area * Use Alternative Media Training skills to create awareness on social issues and suitably intervene *Visit Governmental and Non- Governmental organisations working in the rural areas to understand the role, functions and intervention of these organisations in rural development *Contribute personally and professionally in a nurturing residential environment and appreciate group living to enhance internal relationships *Acquire skills in planning, managing and implementing day to day activities thereby enhancing leadership and organizational skills	K1-K6	56	1-5
5	Concurrent Field Work *Study the placement agency, its philosophy and goals. *Identify the agency's geographical area(s) of intervention, *Prepare a profile of the community and analyse its problems through need-based strategies, tools and techniques * Study, analyse families through survey and plan suitable intervention in semester II *Study groups in existence in the area in preparation for group formation and intervention in semester II	K1-K6	120	1-5

GUIDELINE FOR ASSESSMENT

Section	Knowledge Level	Marks	Pattern of Assessment
A	K1- K6	25	To plan and fulfil requirements of concurrent Field Work - Lab sessions, Orientation Visits, Rural Camp, Field Work Placement in a select organisation.
B	K1- K6	10	Regular submission of weekly reports and weekly conference with Faculty Supervisor and Field Supervisor. Oral and written evaluation by Faculty and Field Supervisor for fulfilment of requirements for Field Work
C	K1- K6	15	At the end of the semester, individual presentation of work using a Powerpoint presentation, submission of Field Work record and a Consolidated Report for evaluation– to include reports of lab sessions, orientation visits, study of the placement agency, family survey, community survey and analysis, rural camp report and assessment of Personal and Professional Learning

END SEMESTER EXAMINATION - VIVA VOCE

Section	Knowledge Level	Marks	Pattern of Assessment
A	K1- K6	50	Viva Voce Examination – two examiners (Academician & Practitioner)

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23SW/PC/FW14												
I	Course Title: FIELD WORK – I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	2	3	2	2	2	2	3	2	3	2	2
CO 2	2	1	2	3	2	2	2	2	3	2	3	2	2
CO 3	2	1	2	3	2	2	2	2	3	2	3	2	2
CO 4	2	1	2	3	2	2	2	2	3	2	3	2	2
CO 5	2	1	2	3	2	2	2	2	3	2	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTOOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

ALTERNATIVE MEDIA SKILLS WORKSHOP

CODE:23SW/PA/AM11

CREDIT: 1

L T P: 0 0 2

TOTAL TEACHING HOURS:26

OBJECTIVES OF THE COURSE

- to develop in students alternative media skills through an understanding of theory and skills practice sessions
- to integrate alternative media skills in social work practice
- to learn the different forms of folk art
- to learn the preparation and application of print, electronic, social media
- to utilize the skills and formulate programmes in the field

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	display creative expression and potential through presentations	K1
CO2	differentiate use of various forms of alternative media to promote social change	K2
CO3	apply various media skills and techniques for social work practice	K3
CO4	develop leadership and team skills through organising programmes.	K4
CO5	integrate art forms and skills acquired through stage and public performances	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Alternative Media Skills 1.1 Critic of Mainstream Media 1.2 Introduction to Alternative Media Skills 1.3 The Importance of Alternative Media Skills in Social Work Practice	K1-K6	4	1-5
2	Different forms of folk art 2.1 Street Theatre 2.2 Folk Songs 2.3 Folk Dance 2.4 Puppetry	K1-K6	12	1-5

UNIT	CONTENT	CL	HRS	CO
3	Overview and Presentations 3.1 Print Media: News Letter, Posters, Flip Charts 3.2 Electronic Media: Documentary Films and Community Radio 3.3 Human Media: Inter personal Communication and Intra Personal Communication 3.4 Digital and Social Media : Digital Videography, Websites, Digital Audio and e-books, Twitter, Whatsapp, Instagram, facebook, ChatGPT 3.5 Analysing Media Ethics	K1-K6	6	1-5
4	Final performance in the Community exhibiting the skills acquired	K1-K6	2	1-5
5	Documentation and Report submission	K1-K6	2	1-5

PATTERN OF ASSESSMENT

Internal Assessment

GUIDELINE FOR ASSESSMENT

Pattern of Assessment				Marks	Knowledge Level
Participation and Involvement (15 marks)	Performance (15 marks)	Regularity (10 marks)	Report/ Document Submission (10 marks)	50	K1-K6

End-Semester Examination : Not applicable

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

COMMUNITY ORGANISATION AND SOCIAL ACTION

CODE: 23SW/PC/CO24

CREDITS: 4

L T P: 4 0 0

TOTAL TEACHING HOURS: 52

OBJECTIVES OF THE COURSE

- to understand the concept of community, its functioning and problems.
- to impart knowledge in terms of concept and principles of community organisation and social action.
- to understand community organisation and social action as methods of social work practice
- to learn the strategies and approaches in community organisation and social action
- to understand the application of various models of Community Organisation and Social Action

COURSE OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and relate the concepts of Community Organization and Social Action	K1, K2
CO2	apply the principles, values, and various approaches of Community Organisation and Social Action to address the community needs and to link them with the resources	K3
CO3	analyse the social structures and utilize appropriate skills and techniques of Community Organisation and Social Action	K4
CO4	evaluate the impact of the social issues on the social systems	K5
CO5	design appropriate strategies to solve social problems/issues	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Community Organisation 1.1 History of Community Organization 1.2 The Charity Organisation and Federation, Expansion and Professional Development 1.3 Community Organisation in UK and Community Organisation in India 1.4 Concepts and Definitions, Rationale, Philosophy, Principles and Goals of Community Organization as a Problem Solving Method	K1- K3	10	1-5
2	Approaches and Models of Community Organisation 2.1 Relevance of Community Organisation for Community Development 2.2 Distinction between Community Organisation and Community Development 2.3 Approaches to Community Organisation by Murray Ross (1955) Other Approaches to Community Organisation Neighborhood Organizing, Social Work Approach, Political Activists Approach, Community Development Approach 2.4 Models of Community Organisation by Jack Rothman: Locality development, Social planning, Social action	K1- K6	11	1-5
3	Strategies and Process of Community Organisation and Skills of Community Social Worker 3.1 Strategies: Unionization Strategies, Information Collection and Community Meetings, Social Movements, Capability Building, Collaboration and Coordination, Networking, Protests and Demonstrations 3.2 Participatory Rural Appraisal (PRA) as a tool for Community Organisation: Transect Walk, Timeline, Social mapping, Resource mapping, Seasonality study, Wealth ranking, Venn diagram; Participatory Action Research (PAR) 3.3 Processes: Analysis, Study, Assessment, Discussions, Organization, Action, Evaluation, Modification, Continuation 3.4 Skills of Community Social Worker (CSW) - Communication, Training, Consultation, Organizing, Enabling, Facilitating, Public Relations, Mobilizing, Participatory Skills, Liasioning	K1- K6	11	1-5

UNIT	CONTENT	CL	Hrs	CO
4	Social Action as a Method of Social Work 4.1 Concept and Definition, Objectives and Process of Social Action 4.2 Principles and Approaches to Social Action 4.3 Social Action as a Method of Social Work 4.4 Types of Social Action; Elitist and Popular 4.5 Models of Social Action: Conscientization Model by Paulo Freire, Rural Reconstruction Model by Gandhi, Civil Rights Model by Martin Luther King, Radical Model by Saul Alinsky 4.6 Social Action in Relation to Ideology and Consciousness, and Social Movements	K1- K6	13	1-5
5	Social Action in relation to Social Work methods 5.1. Social Action in Relation to Case Work, Group Work, Community Organisation 5.2 Social Action in Relation to Social Welfare Administration, Social Work Research.	K1- K6	7	1-5

BOOKS FOR STUDY

Christopher A.J & Thomas William (2006), *Community Organisation and Social Action*. Mumbai: Himalaya Publication

Chowdry, D.P (1976), *Introduction to Social Work*. New Delhi:

Gangrade, K.D. (1971) *Community Organization in India*. Bombay: Popular Prakasam

Ross M.G (1955), *Community Organisation - Theories, Principles, and Practices*. New York: Harper and Row

Siddiqui, H.Y (Eds) (1984), *Social Work and Social Action*. New Delhi: Harnam 6.

Wharf, Brian & Michael Clague(Eds.) (1997): *Community Organizing: Canadian Experience*, Toronto: Oxford University Press

Ross, Murray G, *Community Organization: Theory and Principles*, Harper and Row, New York, 1985

Homan, M.S. (2011). Theoretical frameworks for community change, pp. 34-69 Kettner, P. M., Moroney, R. M., & Martin, L. L. (2007). *Designing and managing programs: An effectiveness-based approach*. Chapter 3: Understanding social problems

Skim: Bowie, P. (2010). *Getting to scale: The elusive goal* (Magnolia Place Community Initiative). Delgado, M., &Humm-Delgado, D. (2013). *Assets assessments and community social work practice* Chapter 9: Asset assessments and youth

Delgado, M., &Humm-Delgado, D. (2013). *Assets assessments and community social work practice* Chapter 10: Asset assessments and Latino communities. New York: Oxford University Press

BOOKS FOR REFERENCE

Murray G. Ross (1955), *Community Organisation*, Harper and Row Publishers, New York.

Lakshmipathi Raju, (2012) *Community Organization and Social Action*, Regal Publication

Alan Twelvetrees, (2017) *Community Development Social Action and Social Planning* Palgrave Macmillan –

Zander Alvin, (1991) *Effective Social Action by Community Group*, Jossey-bass,

Cox. M. Fred and Erlich L. John (1987), *Strategies of Community Organisation*, F.E. Peacock Publishers, Inc. Illinois.

WEB RESOURCES

<http://Community Organisation: Concepts and Principles – IGNOU>

<http://www.bahaistudies.net/neurelitismlibrary/community-organization.pdf>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation

/Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/CO24												
II	Course Title: COMMUNITY ORGANISATION AND SOCIAL ACTION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	1	2	2	2	2	3	2	3	3	2	2	2
CO 2	3	1	2	1	1	1	2	2	2	2	2	2	2
CO 3	3	2	2	2	2	2	2	2	2	3	2	2	2
CO 4	3	2	2	2	3	1	2	2	2	2	3	2	2
CO 5	3	2	3	2	2	2	2	2	2	2	2	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

SOCIAL WORK RESEARCH AND STATISTICS

CODE: 23SW/PC/SR24

CREDITS: 4

L T P: 4 0 0

TOTAL TEACHING HOURS: 52

OBJECTIVES OF THE COURSE

- to develop a comprehensive understanding of the nature, purpose, and significance of research within the context of social work practice.
- to acquire skills for conducting research, with a focus on selecting and using appropriate sampling methods.
- to gain an understanding of the nature, tools, and process of qualitative research.
- to develop the competence to independently identify and conceptualise social problems and then execute research studies using appropriate tools and methodologies.
- to acquire the ability to analyse and apply suitable statistical techniques within the realm of Social Work Research.

COURSE OUTCOMES

On successful completion of this course, students will be able to

COs	DESCRIPTION	CL
CO1	relate their understanding of research concepts to social work practice	K1
CO2	identify social problems and execute a research study using appropriate research methodology	K2
CO3	construct data collection tools, process data, and present research findings	K3
CO4	interpret collected data and draw meaningful inferences for social change	K4, K5
CO5	formulate hypotheses and apply appropriate statistical techniques in the context of social work research	K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Social Work Research – An Introduction 1.1 Basic Elements of Scientific Method 1.2 Social Work Research – Definition, Objectives, Scope, and Limitations 1.3 Scientific Attitude, Ethics in Social Work Research 1.4 Quantitative and Qualitative Research 1.5 Planning a Research Project: Problem Formulation, Framing Objectives, Defining Concepts, Use of Theorization in Review of Literature, Variables: Definition and Function; Assumptions – Hypotheses, Types of Hypotheses	K1-K4	10	1-5
2	Design of Research 2.1 Definition and Functions 2.2 Types of Designs: Survey, Case Study, Exploratory, Descriptive, Explanatory, Experimental, Evaluative (single case evaluation) Census Study, Ex-Post Facto, Action and Participatory Designs 2.3 Applications and Limitations of Various Designs 2.4 Sampling Methods –Definition. Types of Sampling: Probability Sampling 2.5 Non-Probability Sampling – Purposive, Quota, Cluster, Snowball Simple, Systematic, Stratified, Multi- Stage 2.6 Sampling Error	K1-K4	12	1-5
3	Methods and Tools of Collecting Data 3.1 Observation – Participant, Non-Participant, Process of Observation 3.2 Interview Schedule, Interview Guide 3.3 Questionnaire, Scaling Techniques and Types 3.4 Reliability and Validity of Tools: Concept of Reliability, Factors Affecting Reliability of an Instrument, Methods of Determining Reliability of a Tool; Concept of Validity, Types of Validity 3.5 Data Processing: Manual and Computerised Data Presentation and Analysis, Editing, Coding, Preparation of Master Sheet, Tabulation and Interpretation 3.6 Report Writing, Research Abstracts	K1-K6	10	1-5
4	Overview of Qualitative Research 4.1 Nature of Qualitative Research, Assumptions, Characteristics 4.2 Tools of Data Collection – Key Informant, Focus Group Discussion, Participatory and Rapid Appraisal Techniques 4.3 Process of Qualitative Research; use of computerized software for analysis	K1-K6	8	1-5

UNIT	CONTENT	CL	HRS	CO
5	Application of Statistics in Social Work 5.1 Statistics in Social Work: Normal Distribution, Characteristics of a Normal Curve 5.2 Levels of Measurement – Nominal, Ordinal, Interval and Ratio 5.3 Measures of Central Tendency – Mean, Median, Mode and their uses 5.4 Measures of Dispersion – Range, Quartile Deviation, Mean Deviation, Standard Deviation 5.5 Use of Graphs in Presentation of Data 5.6 Tests of Significance: Need, Merits, and application; Hypothesis Testing, Type I and II Error; Level of Confidence, Degrees of Freedom, Chi Square, and t-Test	K1-K6	12	1-5

BOOKS FOR STUDY

Kumar, Ranjit. *Research Methodology: A Step-by-step Guide for Beginners*. New Delhi: Sage Publications India Pvt Ltd, Third Edition, 2011

Kothari, C. R. *Research Methodology: Methods & Techniques*. New Age International Publishers, Fourth Edition, 2019

BOOKS FOR REFERENCE

Alston, Margaret, W. *Research for Social Workers: An Introduction to Methods*. New Delhi: Routledge Publications, Fourth Edition, 2018

Bajpai S. R. *Methods of Social Survey and Research*, Fifth Edition. Kanpur: Kitab Ghar, 1960

Mikkelsen, Britha,. *Methods for Development Work and Research: A New Guide for Practitioners*, New Delhi: Sage India Publications, Second Edition, 2005

Chawla, D. & Sodhi, N. *Research Methodology: Concepts and Cases*. New Delhi: Vikas Publishing, Second Edition, 2016

Goode, W.J., Hatt, P.K. *Methods in Social Research*. Hyderabad: Asia Law House, 2017

Gupta, S. P. *Statistical Methods*, 43rd Edition. New Delhi: Sultan Chand and Sons, 2012

Jaspal, Singh. *Introduction to Methods of Social Research*, New Delhi: Sterling Publishers Pvt, Ltd, 1991

Laldas, D. K. *Practice of Social Research*. Jaipur: Rawat, 2000

Laldas, D.K. *Designs of Social Research*. Jaipur: Rawat, 2005

Rubin, Allen and Babbie, Earl. *Research Methods for Social Work*. New Delhi: Cengage Learning, Seventh Edition, 2009

JOURNALS

Social Work Research and Global Environmental Change

The British Journal of Social Work, Volume 47, Issue 1, 1 January 2017

Journal of Social Service Research

Research on Social Work Practice

Journal of Social Work Research and Evaluation

Social Work Research

Journal of Evidence-Based Social Work

Advances in Social Work

WEB RESOURCES

<https://sustainabledevelopment.un.org/>

<https://www.indiacelebrating.com/environmental-issues/natural-resources-depletion/>

<https://www.researchgate.net/publication/241748223>

www.moef.gov.in/sites/default/files/introduction-nep2006e.pdf

www.cpcb.nic.in/

<http://www.envfor.nic.in/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group

presentation/Seminars/ Quiz/Problem Solving/Assignment/Exhibition/Case Study/Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/SR24												
II	Course Title: SOCIAL WORK RESEARCH AND STATISTICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	3	3	3	3	3	3	3	3
CO 2	3	3	3	3	2	3	2	2	3	3	3	3	3
CO 3	3	3	3	3	2	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	2	3	3	3	3	2	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

MANAGEMENT OF DEVELOPMENT ORGANISATIONS

CODE: 23SW/PC/MO24

CREDIT 4

L T P: 4 0 0

TOTAL TEACHING HOURS: 52

OBJECTIVES OF THE COURSE

- to understand functions, procedures and policies in establishing and maintaining development organisations
- to analyse the administrative structure of the development organisations
- to acquire skills for management of resources- physical, financial and human and organisation of programmes
- to evaluate the role of development organisations in the field.
- to develop skills to formulate and prepare projects

COURSE OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explain functions, procedures and policies in establishing and maintaining development organisations	K1, K2
CO2	demonstrate skills to manage development organisations	K3
CO3	analyse management functions, acquire skills for utilisation of resources-physical, financial, human and organisation of programs	K4
CO4	evaluate the role of development organisations	K5
CO5	prepare project proposals and use tools for management of development organisations	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HR	CO
1	Introduction to Management 1.1 Management: Meaning, Definition, Nature of management 1.2 Management: Basic Concepts and Principles; Goals of Management; Approaches to Management – Behavioral Approach, Human Relation Approach of Social Work Principles in Management of Welfare Organization 1.3 Management as a profession, Historical perspectives, Henry Fayol, Principles of Scientific Management, F. W. Taylor, Management Vs. Administration, Approach to Management: Human Resource approach, System approach	K1-K4	8	1-5
2	Management Functions 2.1 Management Functions: Concept and Principles of Management Planning, Policy Making, Goal Setting, Organization, Staffing, Coordination, Communication, Supervision and Control, Public Relations and Publicity; Reporting and Evaluation. 2.2 Planning: Meaning Definition, Features of Planning, Planning process, Types of planning, Strategic planning and Management 2.3 Managerial Role, Functions and skills: Managerial Role, levels of management, functions, managerial skills of an effective manager 2.4 Conflict Management: Meaning, types of Conflict, impact of Conflict on organizational performance, Conflict management and strategies	K1-K6	9	1-5
3	Management of Organisation 3.1 Organization of NGOs: Board, Trustee Committees, Executives and their roles and functions Laws related to NGO 3.2 Society Registration Act 1976, Trust Act Of 1912, Cooperative Societies Act 1912, FCRA, FERA and related issues. 3.3 Organisational Management; Mission and Vision; Governance, Delegation, decentralization, coordination, collaboration, authority, responsibility, accountability; Organisational design of Partnerships between private and public spaces, collaborations	K1-K6	9	1-5
4	4.1 Projects and Programmes: Ministry of Social Justice and Empowerment, Central Social Welfare Board, Social Welfare and Women Empowerment Department, Tamil Nadu, Directorate of Social Defence and Adi Dravidar and Tribal Welfare Department	K1-K6	8	1-5

	4.2 Donor Agencies, National and International agencies- Action Aid, CARITAS and World Vision 4.3 Concepts of CSR, its principles, CSR through NPOs Planning of Project Proposals –Types, Steps, Format, Fund Raising and Evaluation of Projects; Project Management.			
5	Tools for Management and Organisation 5.1 Organizational Development. 5.2 Tools for Management and Planning: PERT, CPM, Social Audit	K1-K6	5	1-5

BOOKS FOR STUDY

Jayasankar, J., *Principles of Management*, Chennai: Margham, 2013

BOOKS FOR REFERENCE

Adams, R., Dominelli L., Payne M. (Ed), *Social Work Futures- Crossing Boundaries, Transforming Practice*. New York: Palgrave Macmillan, 2005
 Anand, S., *Encyclopedia of Social Welfare Modern Perspective on Social Welfare*, New Delhi: Domain, 2003
 Chandra, S., *Non- Governmental Organisations -Structure, Relevance and Function*, New Delhi: Kanishka, 2007
 Coulshed, V., Mullender, A., *Management in Social Work*, New York: Palgrave Macmillan, 2006
 Hafford, T., *Management and Organisations in Social Work*, Exeter: Learning Matters, 2006
 Mujawar, W.R., *Management Organisation in Social Work*, New Delhi: Mangalam, 2011
 Parmar, P.M., *Social Work and Social Welfare on India*, Jaipur: Sublime, 2011
 Prasad, L.M., *Organisational Behaviour*, New Delhi: Sultan Chand and Sons, 2004

WEB SOURCES

<https://www.csr.gov.in/> <https://cswb.gov.in/>

JOURNALS

Journal of Global Responsibility
 Journal of Nonprofit Management
 & Leadership International Journal
 of Project Management

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
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C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
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E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation / Seminars / Quiz/ Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
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E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23SW/PC/MO24												
II	Course Title: MANAGEMENT OF DEVELOPMENT ORGANISATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	1	2	2	2	2	3	2	3	3	2	2	2
CO 2	3	1	2	1	1	1	2	2	2	2	2	2	2
CO 3	3	2	2	2	2	2	2	2	2	3	2	2	2
CO 4	3	2	2	2	3	1	2	2	2	2	3	2	2
CO 5	3	2	3	2	2	2	2	2	2	2	2	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

FIELD WORK - II

CODE: 23SW/PC/FW24

CREDITS: 4

OBJECTIVES OF THE COURSE

- to enable students to understand social realities, needs, life and challenges in a slum community
- to apply methods of social work- working with individuals, working with groups, community organisation and social action in the field
- to assess, identify and mobilise resources to fulfil needs of individuals, groups and the community
- to participate in the activities and programmes of the agency, acquire skills in planning, assessment, intervention, evaluation of one's work in relation to the agency
- to develop skills in recording

COURSE OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	demonstrate ability to analyse social situations of individuals, groups, the community of placement and role of organisations in development of communities	K1-K6
CO2	apply the different methods of Social Work in the context of individuals, groups, and communities	K1-K6
CO3	practice Social Work principles, values, attitudes, skills in planning, identifying and mobilising resources	K1-K6
CO4	build skills in recording and evaluation	K1-K6
CO5	identify and utilise one's potential for personal and professional growth	K1-K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	CO
1	Working with Individuals Psychosocial study, Psycho social assessment, Goal setting, Planning Intervention, Intervention, Termination, Evaluation, Follow up <ul style="list-style-type: none"> Working with five clients 	K1- K6	1- 5
2	Working with Groups Identify and form at least two groups, Mobilise /strengthen existing groups and Conduct Group Work to address group needs Conduct Group Work with two groups	K1- K6	1- 5
3	Community Organisation/Community Programme <ul style="list-style-type: none"> Community Organisation: Identify problem/needs of the community, assess the needs, and mobilise community and resources for problem solving, evaluation, modification and continuation of the process Community Programme: Identify an issue/need of the community; Plan and organise a community programme	K1- K6	1- 5
4	Social Action Organise/ Participate in Social Action Strategies	K1-K6	1- 5
5	Engagement with the Agency Engage in Agency related activities, programmes and administration	K1- K6	1-5
TOTAL HOURS: 240			

GUIDELINE FOR ASSESSMENT

INTERNAL ASSESSMENT

Section	Knowledge level	Marks (50)	Pattern of Assessment
A	K1- K6	25	To plan and fulfil requirements of concurrent Field Work – Apply methods of Social Work - Working with Individuals, Working with Groups, Community Organisation/Community Programme, Social Action and Engagement with the Agency
B	K1- K6	10	Regular submission of weekly reports and weekly conference with Faculty Supervisor and Field Supervisor. Oral and written evaluation by Faculty and Field Supervisor for fulfilment of requirements for Field Work

Section	Knowledge level	Marks (50)	Pattern of Assessment
C	K1- K6	15	At the end of the semester, individual presentation of work using a Power Point presentation, submission of Field Work record and a Consolidated Report for evaluation. To include reports of working with individuals, groups, community organisation/community programme, agency related engagement and assessment of Personal and Professional Learning

END SEMESTER EXAMINATION - VIVA VOCE

Section	Knowledge Level	Marks (50)	Pattern of Assessment
A	K1- K6	50	Viva Voce Examination – two examiners (Academician & Practitioner)

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23SW/PC/FW24												
II	Course Title: FIELD WORK – II												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	3	2	3	3	3	3	3	3	3	3
CO 2	3	2	2	3	2	3	3	3	3	3	3	3	3
CO 3	3	2	3	3	2	3	3	3	3	3	3	3	3
CO 4	3	2	3	3	2	3	3	3	3	3	3	3	3
CO 5	3	2	3	3	2	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

SOCIAL WORK FOR PEACE BUILDING AND CONFLICT TRANSFORMATION

CODE: 23SW/PK/PB22

CREDIT: 2

LTP:2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- To introduce students to the concepts of peace building and conflict transformation
- To analyse conflicts and use framework and approaches for conflict transformation
- To apply tools, techniques and methods for peace building to effect change
- To acquire skills for peace building and conflict transformation
- To enable students understand the role of Social Work in Peace Building and Conflict Transformation

COURSE OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	relate to building a culture of peace and non-violence in everyday life	K1
CO2	identify issues that call for peace building and conflict transformation	K2
CO3	apply tools and models in peace building and conflict transformation to effect change	K3
CO4	analyse peace initiatives at global, national and regional level and organise programmes to promote human rights, justice and peace	K4
CO5	integrate acquired skills in peace building and conflict transformation to personal life and Social Work practice	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyze K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Peace: Definition and meaning, Peace as a Global Issue and as the Antithesis of violence; Conscientization and Empowerment for building peace; Peace initiatives promoting Human Rights, Social Justice and Equality	K1-K6	5	1-5
2	Paradigms of Peace: Personal and Societal Peace, Peace Advocacy and Social Change, Inter-Religious Dialogue and Harmony	K1-K6	5	1-5
3	Conflict: Definition and concepts of Conflict, types of	K1-K6	5	1-5

UNIT	CONTENT	CL	HRS	CO
	conflicts, causes, effects, conflict transformation			
4	Tools and Techniques for conflict analysis: Conflict map, Conflict tree, Time line, power triangle, ABC triangle	K1-K6	5	1-5
5	Models, Approaches and Skills for Peace Building and Conflict Transformation: Nested Paradigm of Conflict Foci (Maire Dugan) Integrated Framework of Peace (John Paul Lederach), Short-term, Medium- term Linkages (SMALL) Framework for Peace, Do No Harm Model Skills for peace building; mediation, negotiation, consensus building and appreciative enquiry. Role of Social Work in Peace Building, Institutional Building, Dialogue and Reconciliation.	K1-K6	6	1-5

BOOKS FOR STUDY

United Nations (UN). *Transforming Our World: The 2030 Agenda for Sustainable Development*. 2015

Lombard, A. *Global agenda for Social Work and Social Development: A path towards sustainable social work*. Social Work (Stellenbosch. Online), 51.4. 3- 462. 2015

BOOKS FOR REFERENCE

Barash, David P. and Charles P. Webel. *Peace and Conflict Studies*. Thousand Oaks, CA: Sage Publications. 2002

Chang, Andrew, et al. *Race, Injustice, and Conflict Resolution*. In *Re-Centering: Culture and Knowledge in Conflict Resolution Practice*. Syracuse, NY: Syracuse University Press. 2008

Francis, Diana. *People, Peace, and Power: Conflict Transformation in Action*. London: Pluto Press. 2002

Gilligan, James. *Preventing Violence*. New York: Thames and Hudson. 2001

Morgaine, K. *Conceptualising Social Justice in Social Work: Are social workers 'too bogged down in the trees?'* Journal of Social Justice, 4, 2164-7100. 2014

United Nations (UN). *Transforming Our World: The 2030 Agenda for Sustainable Development*. 2015

Yesufu, A. 'A Peace Paradigm in Social Work' *Socialist Studies/Etudes Socialistes*, 2, 2. 2009

WEB RESOURCES

Lombard, A. *Global Agenda for Social Work and Social Development: A path towards sustainable social work*. Social Work (Stellenbosch. Online), 51.4. 3- 462. 2015

https://emu.edu/cjp/docs/Dugan_Maire_Nested-Model-Original.pdf

Lederach, J.P. *Building peace: Sustainable reconciliation in divided societies*. Washington, D.C.: United States Institute of Peace. 1997

Ibrahim, D., Mason, S., *Mediation and Governance in Fragile Contexts: Small Steps to Peace*. Lynne Rienner Publishers: 2019 <https://css.ethz.ch/en/think-tank/themes/mediation-support-and-peace-promotion/mediation-governance.html>

Goddard, N. (2009). Do No Harm and Peace building: Five Lessons. *GSDRC Applied Knowledge Services*. Cambridge, MA: CDA. <https://gsdrc.org/document-library/do-no-harm-and-peacebuilding-five-lessons/>

JOURNALS

Journal of Peace Building and Development

PATTERN OF ASSESSMENT – Internal Assessment GUIDELINE FOR ASSESSMENT

Pattern of Assessment			Marks	Knowledge level
Assignment 20 marks	Presentation 20 marks	Workshop Report and Participation 10 marks	50	K1-K6

End-Semester Examination: Not applicable

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

HEALTH INFORMATION AND COMMUNICATION WORKSHOP

CODE: 23SW/PA/HI21

CREDIT:1

L T P: 0 0 2

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- To develop in students' knowledge of basic health information and education
- To study the need for communication through health education
- To learn the preparation of health education aids and apply it in the field
- To acquire skills in imparting health education

COURSE OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	demonstrate knowledge of illness conditions, treatment and services to address the conditions	K1
CO2	illustrate role of health education and health worker in health education programmes	K2
CO3	differentiate and relate use of various methods of communication in health education	K3
CO4	apply skills in educating the community through field practice	K4
CO5	develop and display skill of preparation and presentation of low-cost nutritive food	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Health Information 1.1. Concept of Public Health – Epidemiology, Vital Statistics – Birth Rate, Death Rate, IMR, MMR 1.2. Symptoms, Causes, Prevention, Treatment and Control of Major Communicable 1.3. Diseases – Leprosy, Poliomyelitis, TB, Diarrhoea, Malaria, Cholera, Typhoid, Influenza – NIPAH Virus, COVID19 1.4. STD, HIV/AIDS	K1- K6	7	1-5

UNIT	CONTENT	CL	HRS	CO
2	Major Non Communicable Diseases 2.1 Cancer, Diabetes, Hypertension, Asthma, Cardiac Disorder, Mental Disorders 2.2 Alcohol and Drug Dependence 2.3 Basics in First Aid 2.4 Menstrual Health and Hygiene	K1-K6	6	1-5
3	Health Education 3.1 Concept, Objectives, Principles of Health Education; Need in the Indian context 3.2 Models and Methods of Health Education 3.3 Planning, Implementation, Evaluation and Promotion of Health Education Programmes 3.4 Role of Health Educator	K1- K6	2	1-5
4	Communication in Health Education 4.1 Concept of Health Communication as a Process, Principles and Barriers in Communication 4.2 Behaviour Change Communication and Information Education and Communication	K1- K6	2	1-5
5	Use and Preparation of Educational Aids 5.1 Audio Aids – Megaphone 5.2 Visual Aids – Blackboard, Pictures, Cartoons, Photographs, Posters, Charts, Flashcards, Flannel Boards, Materials – Books, Booklets, Pamphlets, Brochure 5.3 Electronic Media - Digital Posters, Documentary, Social Media 5.4 Traditional Media – Street Theatre, Folk Songs, Folk Dance, Drama 5.5 Demonstration of Low-Cost Nutritive Food	K1- K6	9	1-5

BOOKS FOR STUDY

Park, K., *Preventive and Social Medicine*, Jabalpur: Banarasidas, 2015

BOOKS FOR REFERENCE

Gopal, Rukmani. *Health Education for Teachers from a Doctor's Perspective*. Neelkamal Publications Pvt. Ltd. 2011

Nanda, V.K., *Health Education*. New Delhi: Anmol, 1997.

Prakash Ramachandran, L, & Dharmalingam, *Health Education – A New Approach*. New Delhi: Vikas 1993.

Rao, Prakasa MVSS. *Health Education and Health Care*. The Associated Publishers.

2013 Goel, S.L., *Health Care System and Management*. (Vol. 2), New Delhi: Deep & Deep, 2001

JOURNALS

International Journal of Health Education

Journal of Human Nutrition

WEB RESOURCES

https://who.int/topics/health_education/en

www.imedpub.com/scholarly/health-education-journals-articles-ppts-list.php

PATTERN OF ASSESSMENT**Internal Assessment****GUIDELINE FOR ASSESSMENT**

Pattern of Assessment				Marks	Knowledge Level
Participation and Involvement (15 marks)	Performance (15 marks)	Regularity (10 marks)	Report/Document Submission (10 marks)	50	K1-K6

End-Semester Examination: Not applicable

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023 -2024)

MEDICAL SOCIAL WORK

CODE :23SW/PC/MS34

CREDITS : 4

L T P : 4 0 0

TOTAL TEACHING HOURS : 52

OBJECTIVES OF THE COURSE

- to trace the history and development of medical social work and its current status
- to develop a holistic and integrated approach to social work practice in the field of health
- to understand common diseases and associated psychosocial and economic problems
- to provide support to chronically ill patients and caregivers with suitable interventions
- to integrate knowledge of Social Work for practice in the field of health

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	relate to the various dimensions of health and the impact of illness on the patient and his/her family	K1, K2
CO2	develop skills to contribute in a multidisciplinary team to intervene with the patient and his/her family	K3
CO3	examine the scope for community action and linking of resources to facilitate continuity of care	K4
CO4	assess and intervene to ensure support to a chronically ill patient and the family during grief and bereavement	K5
CO5	design programmes to enhance Social Work intervention in the field of health	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Medical Social Work 1.1 Concepts - Health, Hygiene, Disease, Illness, Health Indicators, Determinants of Health 1.2 Medicine through the Ages; Changing Concept of Health; Concept of Patient as a Whole 1.3 Historical Development of Medical Social Work in the West and in India	K1-K4	8	CO1-5

UNIT	CONTENT	CL	Hrs	CO
2	Changing Phase of Health Care 2.1 Sustainable Development Goals and Health 2.2 Levels of Health Care, Models of Health Care- Medical, Health Prevention and Promotion Model, Integrative Model and Developmental Model. Primary health Care- components and principles 2.3 Holistic Approach to Health; Indigenous Systems of Health – Ayurveda, Siddha, Unani, Homeopathy. Alternative Systems of Health – Yoga, Naturopathy 2.4 Concept of Stem Cell Therapy Medical Tourism, Commercialisation of health care	K1-K6	12	CO1-5
3	Organisation and Administration of Medical Social Work in Hospitals 3.1 Multi- Disciplinary Approach and Team Work 3.2 Medical Ethics, Bioethics 3.3 Patient's Rights in Health Care, PNDT Act, MTP Act, COPRA, Organ Transplantation Act, Euthanasia, ESI Scheme, National Health Policy (2017), Health Insurance 3.4 Public Relations in Hospitals	K1-K6	10	CO1-5
4	Clinical Manifestations and Psycho- Socio and Economic Problems 4.1 Major Communicable Diseases – Tuberculosis, STD/ HIV/AIDS, Malaria, Dengue, Cholera, Typhoid, Leprosy, Leptospirosis, Influenza 4.2 Major Non-Communicable Diseases – Asthma, Diabetes, Hypertension, Kidney Disorders, Cardiac Disorders, Gynecological disorders, Cancer 4.3 Problems of Individuals and Family during Hospitalisation 4.4 Problems of Patients Undergoing Surgery 4.5 Palliative Care, Bereavement Counselling	K1-K6	12	CO1-5
5	Medical Social Work Practice in Different Settings 5.1 Hospitals, Out-Patient Departments, Emergency / Crisis Intervention and Care, Special Clinics. Convalescent Care, Acute Health Care Settings, Restorative Health Care Settings, Long Term Health Care, Community Health care, Public Health services 5.2 Application of Social Work Methods in the Field of Health 5.3 Discharge Planning 5.4 Documentation and Record Keeping in Health Care 5.5 Role, Functions and Skills of Medical Social Workers. 5.6 Challenges of Medical Social Workers in the field. Role of the Social Worker in extending health services to the community	K1-K6	10	CO1-5

BOOKS FOR STUDY

Park, K. *Park's Textbook of Preventive and Social Medicine*. Jabalpur: Banarasidas Bhanot, 2023

BOOKS FOR REFERENCE

Anderson R & Bury M. (Eds). *Living with Chronic Illness- The Experience of Patients and Their Families*. London: Un-win Hyman, 1988

Bajpai, P.K. (Ed). *Social Work Perspectives in Health*. New Delhi: Rawat, 1997

Dhaar, G.M. I Robboni. *Foundation of Community Medicine*. New Delhi: Elsevier, 2006.

Goldstein, D. *Expanding Horizons in Medical Social Work*. Chicago: University of Chicago, 1955.

Patel, P.K. *Health Status and Programmes in India*. New Delhi: New Century, 2015

Pathak, S.H. *Medical Social Work in India*. New Delhi: DSSW, 1995.

Pokarno, K.L. *Social Beliefs, Cultural Practices in Health and Disease*. New Delhi: Rawat, 1995

Reisch M. & Gambill E. *Social Work in the 21st Century*. New Delhi: Pine Forge Press, 1997.

Singh G P & Sharma S. *Multiple Choices in Preventive & Social Medicine*. New Delhi: Elsevier, 2008

WEB SOURCES

www.planningcommission.nic.in/reports/genrep
<https://sustainabledevelopment.un.org/>
<https://www.nhp.gov.in/nhpfiles/nationalhealthpolicy2017>
https://www.nhp.gov.in/health-programmes_pg

JOURNALS

The British Medical Journal

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	2×2 = 4 Answer all in 50 words each
B	K2	6	2×3=6 Answer all in 75 words each
C	K3	8	1×8 = 8 Answer 1 out of 2 questions in 300 words
D	K4	12	1×12 =12 Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	1×20 = 20 Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components: Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	8	4×2 = 8 Answer all in 50 words each
B	K2	12	4×3 =12 Answer all in 75 words each
C	K3	16	2 x8 =16 Answer 2 out of 4 questions in 300 words each
D	K4	24	2 x12 = 24 Answer 2 out of 4 questions in 400 words each
E	K5	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words
	K6	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/MS34												
III	Course Title: MEDICAL SOCIAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	3	2	3	3	3	3	3	3	3	3	3
CO 2	3	1	3	2	3	3	3	3	3	3	3	3	3
CO 3	3	1	3	2	3	3	3	3	3	3	3	3	3
CO 4	3	1	3	2	3	3	3	3	3	3	3	3	3
CO 5	3	2	3	2	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

MENTAL HEALTH AND PSYCHIATRIC SOCIAL WORK

CODE: 23SW/PC/MH34

CREDITS:4

L T P:4 0 0

TOTAL TEACHING HOURS:52

OBJECTIVES OF THE COURSE

- to learn the basic concepts of mental illness and mental health
- to understand the history of psychiatric social work in the context of changing trends in mental health care
- to acquire knowledge of mental disorders and their management
- to equip the students with skills to assess and identify mental disorders using diagnostic criteria
- to develop knowledge, skills and attitude in Psychiatric Social Work approaches for management of mental disorders in health settings

COURSE LEARNING OUTCOMES

On successful completion of this course, students will be able to

COs	DESCRIPTION	CL
CO1	remember the basic concepts of mental health and mental illness	K1
CO2	relate the context of practice of mental health and role of Psychiatric Social Work in a multidisciplinary team	K2
CO3	acquire skills to identify and assess major mental disorders using diagnostic criteria and tools of assessment	K3
CO4	demonstrate knowledge of the mental disorders and application of appropriate management techniques	K4
CO5	develop competencies in evaluating and utilising knowledge, skills and attitude to draw an intervention plan in the treatment of mental disorders through practice of Psychiatric Social Work approaches	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Concept of Mental Health and Mental Illness 1.1 Mental illness and Mental health: Definition and concept -Models of Mental Illness, Status of Mental Health – Global and National Perspectives 1.2 Changing Perspectives from Illness to Well-Being 1.3 Indian View of Mental Health and Well Being 1.4 Psychiatric Social Work: Definition, History and Scope 1.5 Challenges and limitations in Psychiatric Social Work Practice	K1 - K4	8	1-4

UNIT	CONTENT	CL	Hrs	CO
2	Mental, Behavioural or Neurodevelopmental Disorders Overview 2.1 Classification of Mental Disorders – ICD 11, ICF, DSM (Overview) 2.2 Neurodevelopmental disorders 2.3 Schizophrenia or other primary psychotic disorders, Catatonia 2.4 Mood disorders 2.5 Anxiety or fear-related disorders, Obsessive-compulsive or related disorders 2.6 Disorders specifically associated with stress, Dissociative disorders	K1-K4	12	1-4
3	3.1 Feeding or eating disorders, Elimination disorders 3.2 Disorders of bodily distress or bodily experience 3.3 Disorders due to substance use or addictive behaviours 3.4 Impulse control disorders, Disruptive behaviour or dissocial disorders 3.5 Personality disorders and related traits 3.6 Paraphilic disorders, Factitious disorders 3.7 Neurocognitive disorders	K1 – K4	12	1-4
4	Psychiatric Assessment and Mental Health Laws 4.1 History Taking and Mental Status Examination 4.2 Assessment of Family as a System 4.3 Use of Mental Health Scales and computer assisted tools in Assessment and Intervention of individuals and families. 4.4 Legislations with regard to the Mentally Ill – Mental Health Care Act 2017, Narcotics Drugs and Psychotropic Substances Act 1985	K1 -K6	10	1-5
5	Psychiatric Social Work in the Management of Mental Disorders 5.1 Mental Health Institution as a Social System, Psychosocial aspects of hospitalisation, Multidisciplinary approach, Role of Psychiatric Social Worker in a multidisciplinary team in inpatient and outpatient settings, General Hospital Psychiatry 5.2 Psychiatric Social work approaches with Individuals and Groups: Client Centred Approach, Strengths Based Approach, Cognitive Behaviour Therapy; Mindfulness Approach; Life Model; Task Centred Approach, Resilience Theory, Recovery Model, Social Skills Training, Play therapy 5.3 Family as partners in care – Psychoeducation, Family therapy; Integration of spirituality and religion in the care of patients 5.4 Group Therapeutic Approaches - Group therapy for patients and Caregivers, Self-help groups, Therapeutic Communities	K1-K6	10	1-5

BOOKS FOR STUDY

- WHO. *ICD-11 Classification of Mental and Behavioural Disorders*. 2018
- Francis, Abraham P. (Ed.) *Social Work in Mental Health – Contexts & Theories for Practice*. Sage, 2014.
- Sekar, K. Parthasarathy, R. Muralidhar, D. Chandrasekhar Rao. *Handbook of Psychiatric Social Work*. NIMHANS, 2007.

BOOKS FOR REFERENCE

- Francis, Abraham P. (Ed.) *Social Work in Mental Health – Areas of Practice, Challenges & Way Forward*. Sage, 2014.
- Herman, Helen. Saxena, Shekhar. Moodie, Rob. (Eds.) *Promoting Mental Health – Concepts Emerging Evidence – Practice*, WHO, 2005.
- Hewitt, David, Pritchard, Jacki, Ryan, Tony. *Good Practice in Adult Mental Health*. Jessica Kingsley Publishers, 2004
- Mane P. & Gandevia K. (Eds.) *Mental Health in India Issues and Concerns*. Tata Institute of Social Sciences, 1993.
- Pritchard, Colin. *Mental Health Social Work*. Routledge, 2006.
- Roberts, Albert R. & Greene, Gilbert J. *Social Workers' Desk Reference*. Oxford University University, 2001.
- Schwitzer, Alan M. *Diagnosis and Treatment Planning Skills for Mental Health Professionals*. Sage, 2012.
- Trenowith, Steve. *Psychosocial Assessment in Mental Health*. Sage, 2017.
- Verma, Ratna. *Psychiatric Social Work in India*. Sage, 1991.

JOURNALS

- Social Work in Health & Social Work
- International Journal of Mental Health Systems
- Indian Journal of Social Work
- Indian Journal of Psychiatry
- Mental Health Weekly. <https://onlinelibrary.wiley.com>
- Psychiatry Today. [http://www.imh.org.rs/en/publications/psychiatry today/](http://www.imh.org.rs/en/publications/psychiatry%20today/)

WEB RESOURCES

- nursingplanet.com/pn
- <http://www.casw-acts.ca/en/role-social-work-mental-health>
- <http://www.communitycare.co.uk/mental-health/>
- http://www.who.int/features/factfiles/mental_health/mental_health_facts/en
- http://www.medicinenet.com/mental_health_psychology/article.htm
- World Health Organisation. *The International Classification of Functioning, Health*. Geneva: 2002. <https://www.who.int/classifications/icf/en/>
- [www.psychologytoday.com/us/blog/five broad models of mental illness](http://www.psychologytoday.com/us/blog/five-broad-models-of-mental-illness)
- www.mdpi.com/2077-1444/2/4/549/pdf
- <https://nlist.inflibnet.ac.in>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23SW/PC/MH34												
III	Course Title: MENTAL HEALTH AND PSYCHIATRIC SOCIAL WORK												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	2	3	3	3	3	3	2	3
CO 2	3	2	3	2	2	2	3	3	3	3	3	2	3
CO 3	3	3	3	3	2	2	2	2	3	3	3	2	3
CO 4	3	2	3	2	2	3	2	3	3	3	3	2	3
CO 5	3	3	2	2	2	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 86

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

DEVELOPMENT PLANNING AND ADMINISTRATION

CODE: 23SW/PC/DP34

CREDITS:4

L T P:4 0 0

TOTAL TEACHING HOURS:52

OBJECTIVES OF THE COURSE

- To learn the concepts related to planning and development administration
- To develop an in-depth knowledge on various methods, strategies, and theories of development and development initiatives
- To acquire knowledge on the rural, urban and tribal policies
- To appreciate the role and process of social policies and its approaches for development
- To enable the utilization of the various government programmes and schemes aimed at ameliorating the life of the target communities

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explain the concepts related to planning and administration for development	K1, K2
CO2	apply the knowledge and skills gained to address the human rights issues at the local and global levels	K3
CO3	analyze the social policy, processes and approaches adopted towards promoting development	K4
CO4	evaluating the rural ,urban and tribal administration for addressing problems of various communities	K5
CO5	evaluate the various programmes and choose appropriate programmes and schemes to improve the life of the target communities	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyze K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
	Planning and Development 1.1 Introduction to Planning: Concept, Types of Planning, Planning Process and Importance of Planning for Development. Participatory Planning, factors promoting and hindering participation. PRA Tools 1.2 Development: introduction to development –urban, rural, tribal; Concepts of Social Development and Sustainable Development 1.3 Indicators: Human Development Index, Physical Quality of Life Index, Human Poverty Index, Multidimensional Poverty Index 1.4 Development paradigm: From conventional to people centered development	K1-K4	12	1-5
2	Development Strategies, Models and Theories of Development 2.1 Development Strategies with reference to balanced & unbalanced approach to development 2.2 Models of Development with specific reference to Nehru, Gandhi and PURA Model 2.3 Theories of Development (Amartya Sen) 2.4 Sustainable Development Goals, Concept and objectives	K1-K4	10	1-5
3	An Overview of Rural, Urban and Tribal Administration 3.1 Overview of Rural, Urban and Tribal Administration, Scheduled Caste and Scheduled Tribe Subplan 3.2 Policies of rural, urban and tribal development, Implications of 73 rd and 74 th Amendment Act. 3.3 Development planning in India: Local Self Governance; Structures and levels of administration and planning. 3.4 Application of Social Work Methods in Development Practice.	K1-K6	10	1-5
4	Concept of Social Policy, Process, Approaches and Structures 4.1 Concept: introduction to social policy 4.2 Process involved in policy formulation and structures. 4.3 Approaches specific reference to unified sectoral and integrated approach 4.4 NITI Aayog 4.5 Budgeting	K1-K6	10	1-5

UNIT	CONTENT	CL	Hrs	CO
5	<p>Government Programmes for Development</p> <p>5.1 Rural Community Development Programmes: National Bank for Agriculture and Rural Development(NABARD), Mahatma Gandhi National Rural Employment Guarentee Act (MNREGA), National Rural Livelihood Mission (NRLM), Rashtriya Krishi Vikas Yojana (RKVY) scheme RKVY, Vazhundhu Kaatuvom, National Rural Health Mission (NRHM), Pradhan Mantri Awas Yojana (Gramin) (PMAY) JAL Jeevan Mission, Swachh Bharat Grameen, Pradhan Mantri Gram Sadak Yogana</p> <p>5.2 Urban Community Development Programmes: Rashtriya Swasthya Bima Yojana (RSBY), Rajiv Awas Yojana (RAY), Jawaharlal Nehru National Urban Renewal Mission(JNNURM), Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT), Accelerated Urban Water Supply Programme (AUWSP), Atal <i>Mission</i> for Rejuvenation and Urban Transformation (AMRUT) Hriday. Swach Bharat Urban</p> <p>5.3 Tribal Community Development Programmes: The National Scheduled Tribes Finance and Development Corporation (NSTFDC), Scheduled Tribe Finance Development Corporation (STFDC), Integrated Rural Development programme (ITDP), Tribal Cooperative Marketing Development Federation (TRIFED), PM Vandhan Yojana, Eklavya Model Residential School</p>	K1-K6	10	1-5

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Dubhashi P.R, *Rural Development, Administration in India*, Bombay: Popular Press 1994

Fernandes Walter. *Development, displacement and rehabilitation*, New Delhi: ISI, 1989

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- Jain L.C. *Grass without Roots: Rural Development under Government Auspices*, New Delhi: Rawat, 1985
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- Kapila Uma, *India's Economic Development since 1947*, New Delhi: Academic Foundation, 2007
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- Puri V.K. & Misra S.K. *Indian Economy* New Delhi: Himalaya ,1988
- Sharma, Kampa Prasad, *Participation Planning at the Grass Roots*, New Delhi: Sterling 1993
- Sudarsen V. *The uprooted displacement resettlement development*, New Delhi: Gian 1991
- Schenk-Sandbergen Loes., *Women and Seasonal Labour Migration*, New Delhi: Sage, 1995.

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International Journal of Public Administration
World development Perspectives
Development ion Practice
Public Administration and Development
Development Policy Review
World Development
Journal of Development Studies
Journal Policy modeling
Journal of Rural Studies

WEB RESOURCES

<http://planningcommission.nic.in/plans/stateplan/shdr.php>

<http://www.historydiscussion.net/economics/economic-policies-and-the-planning-process-of-india/686>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/DP34												
III	Course Title: DEVELOPMENT PLANNING AND ADMINISTRATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	3	2	2	3	3	2	3	2	2
CO 2	3	3	3	3	2	3	2	3	3	3	3	2	3
CO 3	3	3	2	2	2	2	3	2	3	3	3	2	2
CO 4	3	2	2	2	3	3	2	2	3	3	3	2	3
CO 5	2	2	3	2	3	2	2	3	3	2	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

SOCIAL ENTREPRENEURSHIP

CODE: 23SW/PC/SE34

CREDITS: 4

L T P: 4 0 0

TOTAL TEACHING HOURS: 52

OBJECTIVES OF THE COURSE

- to gain knowledge on the basic concepts of entrepreneurship and social entrepreneurship
- to enlighten students on the models of social entrepreneurship
- to understand social enterprises and its impact on effecting change
- to appreciate the contributions of social entrepreneurs in promoting entrepreneurial initiatives
- to promote entrepreneurial skills and strategies to respond to social issues

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	recall the contribution of social entrepreneurship in transforming society	K1
CO2	demonstrate entrepreneurial knowledge and skills to craft innovative responses to social problems	K2
CO3	apply social entrepreneurship to both profit and non-profit firms to create social value	K3
CO4	analyse and use strategies of social entrepreneurship to build viable social enterprises	K4
CO5	assess the factors causing social and environmental problems and propose solution	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyze K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HOURS	CO
1	Introduction to Social Entrepreneurship 1.1 Social Entrepreneurship: Meaning of Entrepreneurship. Concept, Definition, Importance, Nature and Characteristics of Social Entrepreneurship. Historical development, Relevance of Social Entrepreneurship, Ethical Consideration. Social Entrepreneurship and Commercial Enterprises. Meaning and types of Social Enterprise. 1.2 Social Entrepreneur: Concept and definition, types, Skills and Competencies, Characteristics, and role of Social Entrepreneurs. Difference between business and social entrepreneur 1.3 Entrepreneurial Process – The Timmons Model of Entrepreneurship Process; Constitution of enterprises, Enterprise Plan and Regulatory Mechanism	K1- K4	10	1-5
2	Models of Social Entrepreneurship (Overview) 2.1 Models of Social Enterprises, Entrepreneur Support Model, Market Intermediary Model, Employment Model, Market Linkage Model, Fee-for-Service Model, Low-Income Client as Market, Service Subsidization Model, Cooperative Model and Organisational Support Model	K1- K4	11	1-5
3	Institutional Support for Social Entrepreneurship – Role and Functions 3.1 National Small Industries Corporation (NSIC), Small Industries Development Bank of India (SIDBI), National Bank for Agriculture and Rural Development (NABARD), National Scheduled Caste Finance and Development Corporation (NSFDC), District Industries Centre (DIC), Small Industries Development Organisation (SIDO), State Financial Corporation (SFCS), Entrepreneurship Development Programme (EDP), Bharatiya Yuva Shakti Trust (BYST), Micro, Small & Medium Enterprises (MSME), Small Scale Industries (SSI), Entrepreneurship Development Institute (EDI), National Institute of Small Industries and Extension Training (NISIET)	K1- K6	11	1-5

UNIT	CONTENT	CL	HOURS	CO
4	Strategies for Social Entrepreneurship 4.1 Problem Identification, Stakeholder Mapping, Data Collection – Survey, Interview, Focus Group Discussion 4.2 Social Innovation, Partnerships and Collaborations, Ethical Considerations, Adaptability and Learning, Resilience 4.3 Concept and importance of Social Marketing, Social Advertising, Networking and Social Audit	K1- K6	11	1-5
5	Social Entrepreneurship (Case Studies) 5.1 Amul Experience, Grameen Bank, SEWA, SELCO, Aravind Eye Hospital, Bill Drayton's Ashoka Foundation 5.2 Issues and Concerns in Social Entrepreneurship	K1- K6	9	1-5

BOOKS FOR STUDY

Bornstein D & Susan Davis. *Social Entrepreneurship: What Everyone Needs to Know*. Oxford University Press, 2010

Banks Ken. *Social Entrepreneurship and Social Innovation: Concepts and Models for a Sustainable Future*. Routledge, 2019

BOOKS FOR REFERENCE

Burns, Paul, *Corporate Entrepreneurship; Building an Entrepreneurial Organization*, Palgrave, 2005

Gupta C.B., *Entrepreneurship and Small Business Management*, Sultan Chand, New Delhi, 2000

Indu Varshney, *Women Entrepreneurship and Economic Development*, Kunal Books - New Delhi, 2017

Jegadeesan G, *Entrepreneurship and Rural Development in India*, The ICFAI University Press, 2008

Kanitkar, Ajit, *Grassroots Entrepreneurship; Entrepreneurs and Micro-Enterprises in Rural India*, Wiley Eastern, 1996

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Kayser, Oliver. *Scaling Social Impact: New Thinking*. Wiley, 2019

Kuratko F. Donald, *Entrepreneurship: Theory, Process, Practice*. Cengage, 2016

Nicholls, Alex. *Social Entrepreneurship, New Models of Sustainable Social Change*. Oxford: Oxford University Press, 2011

Paramasivan C. *Social Entrepreneurship*. New Delhi, UBS Publishers Distributors Pvt Ltd. 2016

Praszkier, Ryszard, and Andrzu Nowak. *Social Entrepreneurship: Theory and Practice*. Cambridge University Press, 2012

Ridley-Duff, R. J. and Bull, M. *Understanding Social Enterprise: Theory and Practice*. London: Sage, 2011

Verma S B, *Entrepreneurship and Employment*, Deep & Deep, 2005

JOURNAL

International Journal of Social entrepreneurship and Innovation

Journal of Innovation for Inclusive Development

Journal of Social Entrepreneurship

Social Enterprise Journal

Journal of business Ethics

WEB RESOURCES

<https://nrlm.gov.in/>

<https://www.startupindia.gov.in/>

<https://nif.org.in/>

<https://www.msde.gov.in/>

<https://www.nimsme.org/>

skoll.org

ashoka.org

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/SE34												
III	Course Title: SOCIAL ENTREPRENEURSHIP												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	2	2	3	2	2	3	2	2	2	2	2
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 3	2	2	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	2	2	2	3	3	3	3	3	3	3	2	3
CO 5	3	2	3	2	3	3	3	3	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

SOCIAL WORK WITH CHILDREN

CODE: 23SW/PC/WC34

CREDITS:4

L T P:4 0 0

TOTAL TEACHING HOURS:52

OBJECTIVES OF THE COURSE

- to comprehend the situation of children in the global and indian context
- to understand the international conventions, policies and legal provisions for the rights of children
- to acquire knowledge of the schemes, services, programmes and skills to work for the rights of children in india
- to equip the students with appropriate knowledge and skills of the different approaches and models of working with children
- to integrate Social Work methods and practice in working with children.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the situation of children in the global and Indian scenario and relate the changing context of working with children	K1, K2
CO2	apply the core principles, concepts to the rights and issues in different sectors related to children	K3
CO3	examine the current social policies for children and initiate professional working environment in the field of child rights	K4
CO4	recommend suitable social research studies in working with children	K5
CO5	create and design appropriate capacity building programmes and frameworks to work with children.	K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Understanding Children in India 1.1 Demographic Profile of Children in India 1.2 Situational Analysis of the Rights of Children in India – Survival, Health, Nutrition, Education and with Specific Reference to the Girl Child 1.3 Constitutional Safeguards Assuring the Rights of Children in India 1.4 UNCRC, Sustainable Development Goals. 1.5 Changing Context of Work with Children – Charity to Rights Approach	K1-K4	10	1-5
2	Overview of Problems of Children 2.1 Children in Special Circumstances 2.1.1 Children in Conflict with Law 2.1.2 Children in Need of Care and Protection: Street Children – Definition, Causes, Effects, Services and Prevention 2.1.3 Child Labour, Child Beggary, Child Abuse-Physical, Emotional, Sexual, Neglect and online Abuse and Child Trafficking 2.1.4 Child Prostitution – Definition, Nature/Characteristics, Causes, Effects, Services, Prevention 2.2 Children in Need of Special Care 2.2.1 Differently Abled (Physically and Mentally Challenged), Emotionally Disturbed, Learning Disability 2.2.2 Children Living with HIV/AIDS, Children of Prisoners 2.2.3 Problems of Children in Disaster Situations and Conflicts 2.3 Intersectionality – Factors leading to Vulnerability of children in Tamil Nadu	K1-K6	10	1-5

UNIT	CONTENT	CL	Hrs	CO
3	An Overview of Legislations for Children 3.1 Pre- conception and Pre-natal Diagnostic Techniques Act, 1994 3.2 The Rights of Persons with Disability Act, 2016 3.3 Child Labour (Prohibition and Regulation) Act, 1986 3.4 The Juvenile Justice (Care and Protection of Children) Act, 2015 3.5 The Commissions for Protection of Child Rights Act, 2005 3.6 The Prohibition of Child Marriage Act, 2006 3.7 The Right of Children to Free and Compulsory Education, Act, 2009 3.8 The Protection of Children from Sexual Offences Act, 2012 (POCSO)	K1-K6	8	1-5
4	Child Protection Services 4.1 Mechanisms 4.1.1 National Commission for Protection of Child Rights/ State Commission for Protection of Child Rights Act 4.1.2 District Child Protection Unit, Child Welfare Committee, Juvenile Justice Board, District Social Welfare Officer -DSW (Child Marriage Prohibition Officer) 4.1.3 Village-level Child Protection Committee-VLCPC, Neighbourhood Child Protection Committee- NCPC -Urban 4.2 Structure and Function of Government Programmes 4.2.1 Programmes: Child Survival, ICDS Programme, School Health Programme, Health and Nutrition Programmes Samagraha Shiksha Abhiyan, Integrated Child Protection Scheme 4.2.2 Beti Bachao Beti Padhao, Dr. Muthulakshmi Reddy Maternity Benefit Scheme 4.2.3 National Policy for Children 2013, Optional Protocols 4.2.4 Tamil Nadu State Policy for Children 2021. 4.3 Initiatives by GOs, NGOs and INGOs in Promotion of Child Rights 4.3.1 Ministry of Women and Child Development, National Institute of Public Cooperation for Child Development (NIPCCD) 4.3.2 UNICEF, CRY, Action Aid, Christian Children's Fund of Canada Childline 1098, ICCW, WHO, Plan International, BBA (Bachpan Bachao Andolan)	K1-K6	14	1-5

UNIT	CONTENT	CL	Hrs	CO
5	Social Work Approaches with Children 5.1 Approaches to Working with Children – Institutional Settings, SOS Children’s Villages 5.2 Non-Institutional Settings: Adoption –In Country and Inter-Country Adoption, Sponsorship and Foster Care 5.3 Multi-Disciplinary Approach – Sustainable/Developmental Approach 5.4 Participatory Approach, Preventive Model, Rehabilitative Models, Convergence Approach 5.5 Child-centric Approach 5.6 Rights Based Approach in Working with Children, Networking and Advocacy for Child Rights 5.7 Skills and Role of Social Work with Children in Special Circumstances, Sexually Exploited and Oppressed Children. Children in Need of Special Care and in Disasters and Conflict Situations 5.8 Research, Training and Documentation on Child Issues and Rights, Child Budgeting	K1-K6	10	1-5

BOOKS FOR STUDY

Bhatia, Vinita. *Social Laws & Child Rights*. New Delhi: Alfa, 2011.
 Devi, Laxmi. *Child and Family Welfare*. New Dehi: Anmol, 1998.
 Fernandez. B., Alex. *Social Work for Women and Children*. New Delhi: Pacific Books International, 2014.
 Kennoson, Peter. *Children as Victims*. Learning Matters, 2008.

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Bajpai, Asha. *Child Rights In India: Law, Policy and Practice*. India: Oxford, 2006.
 Brotherton Graham Cronin Mark. *Working with Vulnerable Children, Young people and Families*. UK: Routledge, 2013
 Sarada, D., Rajini. N. *Child Rights and Young Lives: Theoretical Issues & Empirical Studies*. India: Discovery, 2009
 Tandon, R.K. & Sudarshan, K.N. *Directory & Handbook on Children*. New Delhi: Ashish, 1998.
 Theis, Joachim. *Promoting Rights- Based Approaches, Experiences and Ideas from Asia and the Pacific*. Sweden: Save The Children, 2004.
 Wal, S. *International Encyclopedia of Child Development Priorities for 21 Century. Vol. I- V*. New Delhi: Sarup and Sons, 1999.
 Webb Boyd Nancy. *Social Work Practice with Children*. New York: The Guilford Press, 2003

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Journal of Family Social Work, <http://www.tandfonline.com/>
 Child & Family Social Work, <http://www.wiley.com/WileyCDA/>
 Journal of Social Work Practice, <http://www.tandfonline.com/>

WEB RESOURCES

<http://www.wcd.nic.in/act>
<http://nipccd.nic.in/>
childlineindia.org.in/CP-CR-Downloads/ICPS.pdf

PATTERN OF ASSESSMENT**Continuous Assessment Test:****Total Marks: 50****Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:**Total Marks: 50**

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
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C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
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E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/WC34												
III	Course Title: SOCIAL WORK WITH CHILDREN												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	3	2	3	3	3	3	2	2	2
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CO 3	3	2	2	3	2	2	2	2	3	3	3	2	2
CO 4	3	2	3	2	2	2	3	3	2	3	2	2	2
CO 5	2	3	2	2	3	3	2	3	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

FAMILY SOCIAL WORK

CODE: 23SW/PC/FS34

CREDITS: 4

L T P: 4 0 0

TOTAL TEACHING HOURS: 52

COURSE OBJECTIVES

- to understand the concepts of marriage and family as a social institution, its emerging types and current challenges
- to comprehend the changing types of relationships and its influences on the family structure
- to equip the students on theoretical framework and appropriate skills to work with families
- to explore the role of government programmes, ngos in family development
- to analyse the significance of family life education and its importance in Family Social Work.

COURSE OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and relate conceptual understanding of marriage, family and emerging family patterns	K1, K2
CO2	apply knowledge, skills, theoretical approaches, approaches in government programmes to family social work practice	K3
CO3	analyse the knowledge on family life and family life education, policies/programmes for Family Social Work practice	K4
CO4	assess families using the tools of family assessment to facilitate appropriate interventions	K5
CO5	formulate programmes to enhance Social Work intervention in family settings	K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyze K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Families in Society 1.1 Family: as a social institution, characteristics, types, family ecology, family life cycle, norms, family dynamics, family myths 1.2 Understanding the Family – Global and Indian perspectives, structure and functions, National Family Health Survey 1.3 Emerging family patterns - single parent families, female headed households, dual earner families, reconstituted families, surrogate families	K1- K2	8	1-5
2	Marriage and Family Life 2.1 Marriage: Definition and meaning, Forms, Functions, Changing Situations in Marital Relationships, Types of relationships: Live-In Relationships; Gay, Lesbian and Bisexual, Transgender and Queer Relationships, 2.2. Challenges in Marriage and Family Life: Marital Discord, Dowry as a social issue, Domestic Violence, Separation and Divorce Impact of poverty, Migration, Industrialisation, Urbanisation, globalization, displacement, war and conflicts. 2.3 Equity and Equality in Family: Role and functions of members; Role of Patriarchy, Caste, Religion in family, reproductive rights, decision making.	K1- K2	10	1-5
3	Theoretical Applications for Family Social Work: 3.1 Family Systems Theory; Communication theory 3.2 Family Assessment: Steps in needs assessment and goal setting; Intervention stages and process 3.3 Tools for family assessment – narratives, genograms, eco-maps and timelines, resource assessment, guidelines for family study. 3.4 Family Interventions: Structural Family Therapy, Strengths-based approach; Family Counselling	K3	10	1-5
4	Role of Government and NGOs in Family Development 4.1 Overview of Legislations on Family and Marriage, Family Courts Act 1984; Mediation and Conciliation, Lok Adalats , Domestic Violence Act, 2005 4.2 Ministry of Health and Family Welfare: RCH Programme under NRHM, All India Post- Partum Programme, Janani Suraksha Yojana (JSY), Socio Economic and Welfare Programmes of the Central and State Social Welfare Board, One Stop Centres, 181, All Women's Police Station 4.3 Role of NGOs, Self Help and Support Groups, crisis intervention: Shelter homes, short stay home, Family Counselling Centres.	K4	12	1-5

UNIT	CONTENT	CL	HRS	CO
5	Family life Education 5.1 Family Life Education: Definition, meaning and purpose, principles, plans, procedures, positive parenting techniques, parents as role models 5.2 Family Life Education for Children, Adolescents, and Adults; Challenges in Family Life Education, content and context of programmes 5.3. Sex and sexuality education, reproductive health and family planning methods; advantages and disadvantages	K5- K6	10	5

BOOKS FOR STUDY

- Cocker, C. *Advanced Social Work with Children and Families*. Exeter: Learning Matters, 2011.
- Dean, H. *Direct Social Work Practice: Theory and Skills*. Boston: Cengage Publications, 2018.

BOOKS FOR REFERENCE

- Ambrosino, R. Hefferman, J. and Shuttlesworth, G. *Social Work and Social Welfare Introduction*, ed. 5, New York: Brooks /Cole Thomson Learning, 2005.
- Bhatlavande, P. Gangakhedkar, R. *On the Horizon of Adulthood*, India: UNICEF, 2001. Brooks / Cole Thompson Learning, 2005.
- Brown, H. C. *Social Work with Lesbians and Gay Men*. London: Sage Publications, 2011
- Compton, Beulah R. Galaway, B. Cournoyer, Barry R. *Social Work Processes*, ed 7, New York
- Holosko, Michael J. *Social Work Practice with Individuals and Families*. New York: John Wiley & Sons, 2013.
- Indira T Rani, *Adjustment of Senior Citizens*, New Delhi: Discovery, 2010.
- Mckie Linda, *Understanding Families*, London: Sage, 2012.
- Nagarajan N. *Adolescence and Family Life Education*. New Delhi: Shipra Publications. 2010.
- Saleebey, Dennis, *The Strengths Perspective in Social Work Practice*. ed 4, New York: Pearson Education, 2006.
- Suneetha K, *Social Support for the Elderly*, New Delhi: Sonali, 2010.
- Timonen Virpi, *Ageing Societies*, New York: Tata McGraw Hill, 2008.

JOURNALS

- Indian Journal of Social Work, Tata Institute of Social Sciences, Mumbai, India
- Asia-Pacific Journal of Social Work and Development, National University of Singapore. Dept. of Social Work and Psychology, Singapore

WEB RESOURCES

- <https://www.cswb.gov.in/>
- <https://www.researchgate.net/publication/272895506> The Family and Family Structure _ Cl assification _Redefined _for _the _Current _Times
- <https://www.researchgate.net/publication/277955266> Social Work Theory and Applicatio n _to _Practice _The _Students'_ Perspectives
- <https://www.genopro.com/genogram/family-systems-theory/>
- <http://www.durham-lscb.org.uk/wp-content/uploads/sites/29/2017/04/Guidance-for-Genograms-Ecomaps.pdf>
- http://niilmuniversity.in/coursepack/humanities/Insight_to_Family_Education.pdf

PATTERN OF ASSESSMENT**Continuous Assessment Test:****Total Marks: 50****Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:**Total Marks: 50**

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/FS34												
III	Course Title: FAMILY SOCIAL WORK												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	1	2	2	3	2	3	3	2	2	2	2	2
CO 2	3	2	2	2	3	2	3	3	2	3	2	3	2
CO 3	3	2	2	3	2	2	3	3	2	2	3	2	2
CO 4	3	3	2	3	2	3	3	3	2	2	3	2	2
CO 5	3	2	3	2	3	2	3	3	2	2	2	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

DEPARTMENT OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

DISSERTATION

CODE: 23SW/PC/DS37

CREDITS: 7

L T P: 0 0 7

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to impart knowledge on ethics and principles of social work research
- to gain knowledge on research methodology and research designs
- to comprehend the various components of conducting social work research
- to understand the applications of research tools and techniques
- to enable the students to appreciate the importance of offering workable solutions and submit a scientific research report

COURSE LEARNING OUTCOMES

On successful completion of the course the students will be able to

COs	DESCRIPTION	CL
CO1	demonstrate the knowledge and skills in identifying a social problem and developing a research methodology	K1-K6
CO2	distinguish and use appropriate sampling techniques and construct tools to collect data	K1-K6
CO3	demonstrate competency in processing and analysing the data collected	K1-K6
CO4	organize the research findings and suggest suitable recommendations through scientific report writing	K1-K6
CO5	design and present research proposal and compile research reports	K1-K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Conceptualisation of Research problem and Geographical Context to Conduct the Research 1.1 Identification and selection of the research problem and context 1.2 Collecting secondary sources of data related to the research problem 1.3 Conceptualising a research design, concepts, variables 1.4 Research questions and hypothesis	K1-K6	10	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Research Proposal 2.1 Finalizing the universe of study, research design and sampling procedures 2.2 Selection of research tools for data collection 2.3 Research Proposal Presentation	K1-K6	10	1-5
3	Construction of Research Tools for Data Collection and Field Testing 3.1 Formulation of research tools for data collection 3.2 Pretest 3.3 Finalisation of research methodology	K1-K6	12	1-5
4	Data Collection and data processing 4.1 Data collection 4.2 Processing of data 4.3 Preparation of analysis design	K1-K6	13	1-5
5	Data Analysis and Report Writing 5.1 Analysis of data 5.2 Preparation of final research report and submission	K1-K6	20	1-5

BOOKS FOR REFERENCE

Kumar, Ranjit. *Research Methodology: A Step-by-step Guide for Beginners*. New Delhi: Sage Publications India Pvt Ltd, Third Edition, 2011

Rubin, Allen and Babbie, Earl. *Research Methods for Social Work*. New Delhi: Cengage Learning, Seventh Edition, 2009

GUIDELINES

Page Limit: The Dissertation can have minimum 50 to 100 pages typed in Times New Roman font style, font size 12, with 1½ line spacing in A4 Size Paper

Each dissertation should have the following on the cover page:

<p>Logo of the College</p> <p>Title of the Dissertation</p> <p>Dissertation submitted to</p> <p>in partial fulfillment of the requirement for the Degree of Master of Social Work</p> <p>by</p> <p><i>Name of the Student</i></p> <p><i>Department No.</i></p> <p><i>Department of Social Work</i></p> <p><i>Month and Year</i></p>

THE DISSERTATION INCLUDES

- Contents Page
- Certificate of the Research Guide and Head of the Department and Acknowledgement by the Candidate
- Chapter I
 - Introduction to the Study
 - Review of related literature
 - Research Methodology
- Chapter II – Analysis and Interpretation of the Data
- Chapter III
 - Summary of the Study
 - Major Findings
 - Suggestions and Conclusion
- Bibliography/References: MLA Format recent version
- Appendix will include the tool of data collection and other secondary information

SUBMISSION OF THESIS

Each student shall submit two copies of the dissertation to the Head of the Department on the date specified by the Controller of Examinations. One copy of the dissertation will remain in the College

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Pattern	Marks	Knowledge Level
Formulating a research problem (5) Review of Literature (5) Conceptualising a research design, concepts, variables, research questions and hypothesis (5)	15	K1-K6
Research Proposal (5) Selecting a sample and constructing an instrument (5) Collection of data (10)	20	K1-K6
Analysis and Interpretation of data (5) Research report (5) Regularity and Punctuality (5)	15	K1-K6

END SEMESTER EXAMINATION

Viva Voce

Total Marks- 50

Pattern	Marks	Knowledge Level
Formulating a research problem and review of literature (5) Research methodology (5) Analysis and Interpretation of data (5) Suggestions and recommendation (5) Presentation of report (5)	25	K1-K6
Viva Voce	25	K1-K6

The dissertation will be evaluated by the Research Guide and an External Examiner. Each Examiner will evaluate the dissertation for a maximum of 50 marks each. The External Examiner will conduct the Viva Voce. An aggregate of the two marks will be the final marks awarded for the dissertation out of a total of 100 marks.

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/DS37												
III	Course Title: DISSERTATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	3	2	2	3	3	2	2	2	3	3	3
CO 2	3	3	2	2	3	2	2	3	2	3	2	2	2
CO 3	2	2	3	2	3	3	2	3	3	1	2	2	2
CO 4	2	3	2	2	2	3	2	2	3	2	2	2	2
CO 5	3	3	2	2	2	3	2	2	2	2	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

FIELD WORK III

CODE: 23SW/PC/FW34

CREDITS:4

OBJECTIVES OF THE COURSE

- to enable students to understand the agency, its role, functions, programmes/activities, gain insights into addressing needs and problems of the individuals, families, and communities within the scope of the agency and fields of specialisation
- to identify and mobilize resources and network with stakeholders to fulfil the needs of people in agencies and communities
- to develop competence in applying appropriate social work methods and undertake mini research addressing the diverse needs and problems according to specialisation
- to instil values, principles, and attitudes that are integral to social work practice to work effectively with agencies, communities and related stakeholders
- to equip students with the knowledge and skills necessary for planning, implementing, evaluating and documenting Social Work interventions in becoming a professional social worker

COURSE LEARNING OUTCOMES

On successful completion of the course the students will be able to

COs	DESCRIPTION	CL
CO1	demonstrate the ability to critically analyse the social situations of individuals, groups and communities	K1-K6
CO2	distinguish the role of organisations in the fields and specialisations of social work through application of appropriate social work methods	K1-K6
CO3	demonstrate competency in planning, identifying, mobilising resources and networking to organise programmes and meet needs of different target groups	K1-K6
CO4	identify and facilitate solutions of individual, group and community problems through the application of social work values, principles, skills, approaches, and utilise one's potential for personal and professional growth	K1-K6
CO5	undertake mini research according to the needs/issues identified in the field and demonstrate skills in recording and evaluating their work	K1-K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	CO
1	Understand the Mission, Roles and functions of Agencies, Communities they serve, Needs Assessment (Specialisation Specific) and Resource Mobilisation <ul style="list-style-type: none"> • Learn and document agency profile • Understand the agency's role with target groups in the community; Explore the relationship between the agencies and the target groups/communities they serve • Identify the needs of individuals, groups, or communities utilizing appropriate assessment tools and mobilise resources to address identified need • Network with stakeholders to fulfil needs of people in agencies and communities 	K1-K6	1-5
2	Needs Assessment and Research <ul style="list-style-type: none"> • Identify issues and conduct mini research (specialization specific) and suggest measures to solve problems with support agencies • Conduct needs assessments using tools such as Surveys, Interviews, Focus Group Discussions, PRA • Design and develop interventions/projects with clear goals, objectives, strategies and implementation plans 	K1-K6	1-5
3	Application of Methods (According to Specialisation) <ul style="list-style-type: none"> • Practice methods of Social Work - Case Work, Group Work, Community Organisation and Social Action • Organise and conduct skill training and community programmes addressing identified needs • Utilise administrative skills in programme planning and management • Engage in social action on behalf of clients or communities 	K1-K6	1-5
4	Personal and Professional Growth <ul style="list-style-type: none"> • Use of Theories to practice when working with Individuals, Groups and Communities • Upholding Social Work Values, Principles, and Ethics during interventions • Reflective Learning: Maintaining journals and logs to document personal and professional growth during field work experiences and enhance ability of students to translate learning to working environment 	K1-K6	1-5
5	Documentation and Presentation: <ul style="list-style-type: none"> • Document field work experiences using various recording methods • Prepare concurrent field work reports and consolidated report using appropriate presentations to present learning effectively • Share field work outcomes through presentations 	K1-K6	1-5
Total Hours: 240 hours per semester			

CONCURRENT FIELD WORK

Apply the knowledge, approaches and skills according to the special requirements of each field of specialisation and setting of placement

Child Rights and Practice with Families

Social Work Practice in Health Settings

Development Issues and Social Work Practice

GUIDELINE FOR ASSESSMENT

INTERNAL ASSESSMENT

Section	Knowledge level	Marks (50)	Pattern of Assessment
A	K1-K6	25	To plan and fulfil requirements of concurrent Field Work – Agency Profile, Use of assessment tools, Mapping Resources, Methods of Intervention
B	K1-K6	10	Regular submission of weekly reports and weekly conference with Faculty Supervisor and Field Supervisor. Oral and written evaluation by Faculty and Field Supervisor for fulfilment of requirements for Field Work
C	K1-K6	15	At the end of the semester, individual presentation of work using a Powerpoint Presentation, submission of Field Work record and a Consolidated Report for evaluation – to include reports of Agency Profile, Case Work, Group Work, Community Organisation/Programme, Social Action, Skill Training Programme, Mini Research, assessment of Personal and Professional Learning

END SEMESTER EXAMINATION - VIVA VOCE

Section	Knowledge level	Marks (50)	Pattern of Assessment
A	K1-K6	50	Viva Voce Examination – two examiners (Academician & Practitioner)

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23SW/PC/FW34												
III	Course Title: FIELD WORK – III												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	3	2	3	2	3	3	3	3	3
CO 2	3	3	2	2	2	2	3	3	3	3	3	3	3
CO 3	3	3	2	3	2	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	2	2	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

COUNSELLING - THEORY AND PRACTICE

CODE:23SW/PC/CN44

CREDITS:4

L T P:4 0 0

TOTAL TEACHING HOURS: 52

OBJECTIVES OF THE COURSE

- to develop in students the basic knowledge and requisites of counselling
- to identify and develop counselling skills through an understanding of theory and skills
- to integrate counselling skills in social work practice
- to understand the application of counselling in different settings
- to learn the different theoretical approaches to counselling and develop a holistic approach to counselling

COURSE LEARNING OUTCOMES

On successful completion of this course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the basic definitions and concepts of counselling	K1
CO2	infer the needs, goals of counselling and the requisites for recording in counselling	K2
CO3	demonstrate knowledge, skill and application of Skilled Helper Model in counselling	K3
CO4	analyse the different approaches in counselling and integrate it in the practice of Social Work	K4
CO5	evaluate the the type of counselling required in different settings and evolve plans to reach out to different groups	K5, K6

UNIT	CONTENT	CL	Hrs	CO
1	Concept and Foundation of Counselling 1.1 Evolution of Counselling, Definition, Elements and Characteristics of Counselling, Counselling Ethics 1.2 Profile of the Counsellor and the Client, the Counselling Relationship 1.3 Difference between Counselling and Psychotherapy	K1 –K6	8	CO1-5

UNIT	CONTENT	CL	Hrs	CO
2	Counselling - Expectations and Goals 2.1 Achievement of Positive Mental Health, Resolution of Problems, Improving Personal Effectiveness, Change, Decision Making, Modification of Behaviour 2.2 Burn out and Stress Management 2.3 Recording in Counselling: Importance of Recording, Skills required for Recording, Types of Recording in Counselling	K1 – K6	6	CO1-5
3	Egan Model of Counselling – the Skilled Helper Approach 3.1 Stage – 1 Reviewing the Current Scenario 3.2 Stage – 2 Developing the Preferred Scenario 3.3 Stage-3 Getting There 3.4 Practical Sessions	K1 –K6	18	CO 1-6
4	Different Approaches and Types of Counselling 4.1 Client centred Approach, Cognitive Behavioural Approach 4.2 Gestalt Counselling, Transactional Analysis, 4.3 Solution focused Counselling, Crisis Intervention 4.4 An Overview of Alternate Approaches: Yoga, Meditation, Storytelling, Art Therapy, Psychodrama, Medical Clowning, Laughter Therapy, Movement Therapy, Neuro- linguistic Programming 4.5 Directive Counselling, Non-Directive Counselling 4.6 Individual Counselling, Group Counselling, Community Counselling 4.7 Integrative and Eclectic Approach to Counselling	K1 –K6	10	CO1-6
5	Counselling in Different Settings 5.1 Family Counselling/Marital Counselling, School Counselling, Career Counselling 5.2 Counselling Persons with Disabilities, Counselling at Workplace 5.3 Counselling in Disaster situations, Grief Counselling. 5.4 Counselling Clients with Suicidal Ideation, De-addiction Counselling 5.5 Gerontological Counselling 5.6 Counselling sexual minorities	K1 – K6	10	CO 1-6

BOOKS FOR STUDY

Egan Gerard. *The Skilled Helper. A Problem Management Approach to Helping*. California: Brooks: Cole, 1994.

Jones Nelson, Richard. *Theory and Practice of Counselling and Psychotherapy*, 6 Edition. New Delhi: Sage, 2015.

BOOKS FOR REFERENCE

Colin, Feltham. *Brief Counselling*, New Delhi: Tata McGraw Hill , 2010.
Corey, Gerald. *Theory and Practice of Group Counselling*. 6th Edition. USA: 2004.
Dalaganjan Naik. *Fundamentals of Guidance and Counselling*. Delhi: Adhyayan , 2004.
Eugene, Kennedy. *Crisis Counselling*. Dublin: Gill & Macmillan, 1981.
Gibson.L.Robert & Mitchell. *Introduction to Counselling and Guidance*.
New Delhi: Prentice Hall, 2008.
Tolbert, E.L. *An Introduction to Guidance*. Boston: Little Brown, 1982.
Rao S. Narayana. *Counselling Psychology*. New Delhi:Tata Mc GrawHill, 1981.
Reeves, Andrew. *Counselling and Psychotherapy*. New Delhi: SAGE, 2013.
Sharma Ramnath and Sharma Rachana.*Guidance and Counseling in India*. New Delhi:
Atlantic, 2004
Thomas, Edwin J. *Designing Interventions for the Helping Professions*. New Delhi: Sage,
1984.
William, Worden , J. *Grief Counseling & Grief Therapy*. London: Tavistock, 1986.

JOURNALS

International Journal of Psychology and Counselling
British Journal of Psychotherapy
Psychiatry, Psychotherapy and Clinical Psychology <http://recipe.by/Counsellor>. <http://cassonnigeria.org/index.html>
Psychotherapy Letter. <http://www.wiley.com>
Counselling Psychology Quarterly. <http://www.tandfonline.com>

WEB RESOURCES

<http://www.slideshare.net/praveensureshpai/counseling-process>
<http://www.counselling-directory.org.uk/counselling.html>
<https://nlist.inflibnet.ac.in>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	8	4×2 = 8 Answer all in 50 words each
B	K2	12	4×3 =12 Answer all in 75 words each
C	K3	16	2 x8 =16 Answer 2 out of 4 questions in 300 words each
D	K4	24	2 x12 = 24 Answer 2 out of 4 questions in 400 words each
E	K5	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words
	K6	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/CN44												
IV	Course Title: COUNSELLING THEORY AND PRACTICE												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	1	1	3	3	3	3	2	3
CO 2	2	3	2	2	3	1	2	3	3	3	3	2	3
CO 3	3	3	3	2	2	2	3	3	3	3	3	3	3
CO 4	3	2	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	2	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023 -2024)

SOCIAL WORK WITH PERSONS WITH DISABILITIES

CODE : 23SW/PC/PD44

CREDITS : 4

L T P : 4 0 0

TOTAL TEACHING HOURS : 52

OBJECTIVES OF THE COURSE

- to develop understanding of disability concepts, types, causes, prevention, rehabilitation and organisations working in the field
- to examine the social construct of disability and identify areas of social work intervention and practice
- to analyse needs and challenges faced by persons with disabilities in their systemic and structural contexts
- to intervene using a rights and strengths based approach
- to study legislation, efforts in policy formulation and the role of society in including persons with disabilities

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explain concepts, types of disability, causes, prevention, rehabilitation, organisations working in the field, legislation and policy formulation related to disability	K1, K2
CO2	apply a rights and strengths based approach for working with persons with disabilities	K3
CO3	examine challenges faced by persons with disabilities, assist and intervene suitably	K4
CO4	evaluate processes, procedures, services and contribute as a Social Worker in a multidisciplinary team	K5
CO5	integrate acquired skills for creating awareness to the general public, persons with disabilities, their caregivers, families through networking and services	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Concepts, overview of types, causes, prevention, rehabilitation of persons with disability 1.1 Concepts: impairment, disability, rehabilitation, handicap 1.2 Types of disability, Causes, Prevention, Rehabilitation- Blindness, Low Vision, Leprosy Cured, Locomotor disability, Dwarfism, Intellectual Disability, Mental Illness, Cerebral Palsy, Specific Learning Disability, Hearing Impairment, types of disability, causes, prevention, rehabilitation - Muscular dystrophy, acid attack victims, Parkinsons, Multiple Sclerosis, Thalassemia, Haemophilia, Sickle Cell, Autism Spectrum Disorder, Chronic Neurological conditions, Multiple Disabilities	K1-K4	10	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Issues and Concerns of Persons with Disabilities 2.1 The social construct of disability. Magnitude, disability-attitude, stigma and discrimination towards persons with disability 2.2 Education, Employment, Marriage, Parenting 2.3 Access to barrier free services 2.4 Political participation 2.5 Case studies- violation of human rights of persons with disability 2.6 Disability and Poverty	K1-K6	10	1-5
3	Intervention and Approaches to working with Persons with Disabilities 3.1 Intervention: Rehabilitation- Medical, Educational, Psychological, Social, Adjustment, Vocational , Prevention and Promotion 3.2 The Medical Model, the Social Model of Disability and the Medicalisation of Impairment. Rights of persons with disabilities 3.3 Community Based Rehabilitation- concept, matrix 3.4 Counselling, Self- Help Groups, Support Groups, Forums	K1-K6	12	1-5
4	Policy and Programmes 4.1 Sustainable Development Goals and Disability, Biwako Millenium Framework 4.2 Rights of Persons with Disability Act 2016, Rehabilitation Council of India Act(1992), National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act (1999) 4.3 Disability Schemes, Certification processes and procedures	K1-K6	10	1-5
5	Institutions- Role, Structure and Functions 5.1 Ministry of Social Justice and Empowerment, Government of India, State Commissionerate for the Differently Abled, Rehabilitation Council of India, National Institute of Mental Health and Neuro Sciences 5.2 National Institute for the Visually Handicapped, National Institute for the Orthopaedically Handicapped, Ali Yavar Jung National Institute for the Hearing Handicapped, National Institute for the Mentally Handicapped and National Institute for Empowerment of Persons with Multiple Disabilities 5.3 Role of a Social Worker in the field of disability and as a vital part of the multidisciplinary team	K1-K6	10	1-5

BOOKS FOR STUDY

Park, K. *Park's Textbook of Preventive and Social Medicine*. Jabalpur: Banarasidas Bhanot, 2023

Heller, T. Harris, S. *Disability Through the Life Course- Disability Key Issues and Future Directions*. New Delhi: Sage, 2012

Quinn Peggy, *Understanding Disability*. New Delhi: Sage, 1999

BOOKS FOR REFERENCE

- Albrecht Donna G, *Raising a Child with Physical Disability*. New York: John Wiley 1997
- Bhattacharya S. *Social Work: Psychosocial Health Aspects*. New Delhi: Deep & Deep, 2008
- Ed. Campling, J. *Anti Discriminatory Practice-Practical Social Work*. London: MacMillan, 1997
- Ed. Rana, N. *Children with Special Needs*. Hyderabad: Neelkamal, 2013
- Goodley, D. *Disability Studies*, New Delhi: Sage, 2011
- Oliver, M., Sapey, B. *Social Work with Disabled People*. New York: Palgrave Macmillan, 2006
- Prasad, J., Prakash, R. *Education of Handicapped Children- Problems and Solutions*. New Delhi: Kanishka, 2012
- Rehabilitation Council of India. Ed. Theresia Kutty. *Community Work for Vocational Training and Employment of Persons with Mental Retardation*. New Delhi: Kanishka, 2012

WEB SOURCES

- https://www.researchgate.net/profile/Bill_Hughes4/publication/248912416_
- <https://sustainabledevelopment.un.org/>

JOURNALS

Journal of Social Work in Disability and Rehabilitation

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	2×2 = 4 Answer all in 50 words each
B	K2	6	2×3=6 Answer all in 75 words each
C	K3	8	1×8 = 8 Answer 1 out of 2 questions in 300 words
D	K4	12	1×12 =12 Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	1×20 = 20 Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components: Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	8	4×2 = 8 Answer all in 50 words each
B	K2	12	4×3 =12 Answer all in 75 words each
C	K3	16	2 x8 =16 Answer 2 out of 4 questions in 300 words each
D	K4	24	2 x12 = 24 Answer 2 out of 4 questions in 400 words each
E	K5	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words
	K6	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/PD44												
IV	Course Title: SOCIAL WORK WITH PERSONS WITH DISABILITIES												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	3	3	3	3	3	3	3	3	3
CO 2	3	2	3	2	3	3	3	3	3	3	3	3	3
CO 3	3	2	3	2	3	3	3	3	3	3	3	3	3
CO 4	2	2	2	3	3	3	3	3	3	3	3	3	3
CO 5	3	2	2	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

MENTAL HEALTH CARE APPROACHES AND PRACTICE

CODE: 23SW/PC/MC44

CREDITS:4

L T P:4 0 0

TOTAL TEACHING HOURS:52

OBJECTIVES OF THE COURSE

- to understand the vulnerability of different populations and issues that arise from mental disorders
- to become aware of the policies and programmes for mental health care
- to gain knowledge of the approaches to mental health care in different settings
- to appreciate the roles of international, national, state and not for profit organisations in mental health care
- to acquire knowledge, skills and attitudes relevant for practice of mental health care in diverse settings

COURSE LEARNING OUTCOMES

On successful completion of this course, students will be able to

COs	DESCRIPTION	CL
CO1	define and identify the issues that arise due to mental illness	K1
CO2	relate to measures to redress mental health issues	K2
CO3	gain knowledge and a critical understanding of the functioning and application of policies and programmes	K3
CO4	critically analyse and distinguish application of Social Work approaches to mental health care according to diverse settings	K4
CO5	evaluate the role of organisations in mental health care, training, research and design training programmes and undertake research	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Vulnerability and Mental Health Issues 1.1 Mental Health issues - Stigma; discrimination, marginalisation, homelessness, violation of rights of persons with mental disorders 1.2 Vulnerability and Vulnerable populations –Disabled, persons seeking alms, prisoners, children in difficult circumstances, sexual minorities, war, refugee, disaster, displaced, migratory populations 1.3 Measures to address vulnerability and issues in mental health. Role of mental health social worker	K1 –K3	10	1-2

UNIT	CONTENT	CL	Hrs	CO
2	Global and National Mental Health Care Perspectives 2.1 Mental Health Care – concept. Mental Health and Sustainable Development Goals, WHO Comprehensive Mental Health Action Plan 2013 – 2030 2.2 National Mental Health Policy and Programmes – National Health Policy - Mental Health Aspects, National Mental Health Policy 2014, National Mental Health Programme, District Mental Health Programme, National Health Mission. 2.3 Analysis of the Implementation of the Policies and Programmes	K1-K4	8	1-3
3	Social Work Approaches to Mental Health Care 3.1 Psychosocial Rehabilitation – Concept, definition, goals and principles of psychosocial rehabilitation, process of psychosocial rehabilitation 3.2 Levels of Care – Primary, Secondary and tertiary, Integrated Care Approach, Assertive Community Treatment, Preventive and Promotive approaches 3.3 Manuals on Mental Health Care, (Problem Management Plus, Suicide Prevention, Sustainable mental health care after emergencies) 3.4. Legislative and Rights Based Approaches to mental health care, networking, lobbying and advocacy	K1-K5	12	1-4
4	Mental Health Care Settings 4.1 Child and Adolescent Mental Health, Gender and Mental Health, Addictive behaviours and Mental Health, Geriatric Mental Health, Family Psychiatry, Community Mental Health and Outreach Services 4.2 Mental Health Care in Non Institutional Settings: Rehabilitation Settings- Daycare, Half way homes, group homes, Sheltered workshops and Foster care. Community Based Care, Mental Health at Workplace, School Mental Health, Emergency Settings, Disaster Mental Health 4.3 Role of Social Work in mental health care settings. Care of caregivers.	K1-K5	12	1-4
5	Organisations in Mental Health Care, Training, Research and Evaluation of Mental Health Care 5.1 Role of Organisations in Mental Health Care - Governmental – State and National Institutions, Private Institutions, Non- governmental organisations - Models of Mental Health Care – Schizophrenia Research Foundation (SCARF, India), BANYAN, Bapu Trust, International Organisations, Support groups for mental health - National Alliance on Mental Illness, Movement for Global Mental Health, self-help groups 5.2 Training, Research and Evaluation in Mental Health Care – Training of personnel in delivery of mental health services – Psychiatric Social Workers, Caregivers, Community health workers, Volunteers. Online training courses 5.3 Role of research in Mental Health Care, Evidence Based Approach 5.4 Evaluation in Mental Health Care	K1-K6	10	1-5

BOOKS FOR STUDY

Francis, Abraham P. (Ed.) *Social Work in Mental Health – Areas of Practice, Challenges & Way Forward*. New Delhi: Sage, 2014.
Sekar, K. Parthasarathy, R. Muralidhar, D. Chandrasekhar Rao. *Handbook of Psychiatric Social Work*. Bangalore: NIMHANS, 2007.

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Bogg, Daisy. *Values and Ethics in Mental health Practice*. UK: Learning Matters. 2010
Collins, Eve, Drake, Mandy and Deacon Maureen. *The Physical Care of People with Mental Health Problems – A Guide for Best Practices*. Sage, 2013
Francis, Abraham P. (Ed.) *Social Work in Mental Health – Contexts & Theories for Practice*. New Delhi: Sage, 2014.
Heller, Nina Rovinelli, Gitterman, Alex. (Eds.) *Mental Health and Social Problems*. London: Routledge. 2010.
Herman, Helen. Saxena, Shekhar. Moodie, Rob. (Eds.) *Promoting Mental Health – Concepts Emerging Evidence – Practice*. Geneva: WHO, 2005.
Palmer, Sharon Duca (Ed.) *Social Work in Mental Health and Substance Abuse*. Canada: Apple Academic Press, 2011.
Palmer, Sharon Duca (Ed.) *Social Work and Community Practice*. Canada: Apple Academic Press, 2011.
Pritchard, Colin. *Mental Health Social Work*. London: Routledge, 2006
Ranganathan, Shanthi. *Treatment of Alcoholism. The Community Approach*. Chennai: TTR Clinical Foundation
Roberts, Albert R. and Yeager, Kenneth R. *Foundations of Evidence – Based Social Work Practice*. New York: Oxford University Press, 2006
Webber, Martin. *Evidence Based Policy and Practice in Mental Health Social Work*. UK: Learning Matters. 2008

JOURNALS

Indian Journal of Psychiatry
Mental Health Weekly. <https://onlinelibrary.wiley.com>
Psychiatry Today. [http://www.imh.org.rs/en/publications/psychiatry today/](http://www.imh.org.rs/en/publications/psychiatry%20today/)
Psychiatric Rehabilitation Journal. <http://www.bu.edu/cpr/prj/>

WEB RESOURCES

<https://www.who.int/classifications/icf/en/>
www.nami.org, www.niepmid.tn.nic.in
www.nimhans.kar.in
www.scarfindia.org
www.thebanyan.org
https://www.who.int/mental_health
<https://nlist.inflibnet.ac.in>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:**Total Marks: 50**

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/MC44												
IV	Course Title: MENTAL HEALTH CARE APPROACHES AND PRACTICE												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	2	1	1	1	3	3	3	2	2	1	3
CO 2	3	3	2	2	3	1	2	3	3	2	2	1	3
CO 3	3	3	3	3	3	1	3	3	3	3	2	2	3
CO 4	3	3	3	2	2	2	2	3	3	2	3	3	2
CO 5	3	3	3	2	2	1	2	2	2	3	2	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

COMMUNITY DEVELOPMENT – RURAL, URBAN AND TRIBAL

CODE: 23SW/PC/CD44

CREDITS:4

L T P:4 0 0

TOTAL TEACHING HOURS : 52

OBJECTIVES OF THE COURSE

- to trace the history of rural, urban and tribal development
- to learn the concepts related to rural, urban. tribal development
- to develop an in-depth knowledge on various methods, strategies, and theories of development and development initiatives
- to acquire knowledge on the rural, urban and tribal policies
- to appreciate the government programmes and policies for rural, urban and tribal development

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explain the concepts related to rural, urban and tribal development	K1,K2
CO2	demonstrate an in-depth knowledge on the methods, strategies and theories related to rural, urban and tribal development	K3
CO3	examine the theories and approaches to address the issues of rural, urban and tribal development	K4
CO4	evaluate the various government programmes and policies for uplifting the target communities	K5
CO5	integrate the various programmes and schemes to address the needs and issues of rural, urban and tribal communities.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyze K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Development Practices 1.1 Concept of Community and Development 1.2 Nature and Characteristics of rural, urban and tribal Communities 1.3 Historical review of rural, tribal and urban community development in India 1.4 Indicators of Development and Development Issues	K1- K2	10	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Theories, Indicators, Objectives and Approaches of Rural Community Development 2.1 Theories of Rural Development: Lewis' Model of Economic Development with Unlimited Supplies of Labour. Human Capital Model of Development, Gandhian Model of Rural Development 2.2 Indicators of Rural Development: Education, Employment, Infrastructure creation 2.3 Objectives of Rural Development: 2.4 Approaches to Rural Development: Multi-purpose Approach, Sectoral Approach. Target Group Approach, Area Development Approach, Basic Need Approach, Employment oriented integrated approach, Participatory Approach	K1- K4	11	1-5
3	Theories, Indicators, Objectives and Approaches of T.C.D. 3.1 Theories of Tribal Development: Constitutional Provisions of India(Art:46, 275(1), 335,244-1&2,330,332,234-D Indicators of Tribal Development: Assimilation, Integration, Scheduling of Tribes and Area 3.2 Objectives of Tribal Development 3.3 Approaches to Tribal Development: Isolationist approach, Political Approach, Administrative Approach, Anthropological Approach, Tribal sub-plan as an Approach, Environmental Approach, and Nehurian approach	K1- K6	10	1-5
4	Theories, Indicators, Objectives and Approaches of U. C.D 4.1 Theories of Urban Development: Modernization Theory, Migration Theory, Urban Bias theory, Dependency Theory, Con-centric zone Theory 4.2 Indicators of Urban Development: Economic growth and efficiency, Ecological and infrastructural construction, Environmental protection, Social and welfare progress 4.3 Objectives of Urban Development: 4.4 Approaches to Urban Development: Stakeholder partnerships, Formulation of city development strategies, Inter-local cooperation, Cities as ecosystems, City leaders as economic managers	K1- K6	11	1-5
5	Development Policies and Programmes an Overview 5.1 Areas for Social Development: Poverty Eradication, Employment and Decent work, Economic Development, Health and Sustainable Development, Trade & Technology, Science and Education 5.2 Rural Development Policies and Programmes 5.3 Tribal Development Policies and Programmes 5.4 Urban Development Policies and Programmes 5.5 Need and importance of Social Work intervention; Social Research and Documentation; Role and Contribution of NGOs in Influencing the Policy Planning and Development	K1- K6	9	1-5

BOOKS FOR STUDY

<http://www.bahaistudies.net/neurelism/library/community-organization.pdf> Pawar Manohar, *Social and Community Development Practice*, Sage Publications, 2014 Bhatia Kunal, *Social Work and Community Development*, Sonali publications New Delhi, 2012
Ledwith Margaret, *Community Development*, Rawat publications, 2005

BOOKS FOR REFERENCE

Arya R P, *Training for Social Work and Rural Development*, Manglam, 2007 Jain, Rashmi, *Communicating Rural Development*, Rawat Publications, 2003 Narayan, Sachindra, *The Dynamics of Tribal Development, Issues and Challenges*, Gyan Publications, 2002
Prasad B.K., *Rural Development: Concept, Approach and Strategy*, Sarup & Sons, 2003 Rajbir Singh, *Rural Development Administration*, Anmol Publications, 2004 Sahu B. K., *Rural Development in India*, Anmol Publications, 2003
Sharma A.N., *Tribal Development in Andaman Islands*, Sarup & Sons, 2003

JOURNAL

Journal of Education for sustainable development, Sage Publications, ISSN :0973- 4082

WEB RESOURCES

<http://guide2socialwork.com/social-action/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation / Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	8	4×2 = 8 Answer all in 50 words each
B	K2	12	4×3 =12 Answer all in 75 words each
C	K3	16	2 x8 =16 Answer 2 out of 4 questions in 300 words each
D	K4	24	2 x12 = 24 Answer 2 out of 4 questions in 400 words each
E	K5	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words
	K6	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/CD44												
IV	Course Title: COMMUNITY DEVELOPMENT-RURAL, URBAN AND TRIBAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	3	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	3	3	3	3	3	3	2	2
CO 3	3	3	2	3	3	3	3	2	3	3	3	3	2
CO 4	3	3	2	3	3	3	3	3	3	2	3	3	2
CO 5	3	2	3	3	3	3	3	3	2	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

PARTICIPATORY GOVERNANCE AND TOOLS FOR DEVELOPMENT PRACTICE

CODE: 23SW/PC/PG44

CREDITS:4

L T P: 4 0 0

TOTAL TEACHING HOURS: 52

OBJECTIVES OF THE COURSE

- to gain a comprehensive understanding of the concept and principles underpinning participatory governance
- to impart knowledge on local self-governance – the frameworks, protocols and methods for development with case studies and best practices
- to understand the role of participatory governance in promoting social equity and social justice.
- to acquire skills in utilizing a variety of participatory tools and techniques commonly employed in governance and development initiatives.
- to develop the ability to assess and evaluate the impact and outcomes of participatory governance and development projects

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	relate the concept of participatory governance to practice	K1
CO2	demonstrate knowledge and skills in utilising participatory tools and techniques, and facilitate participatory processes	K2
CO3	apply knowledge and skills required of a development professional and be an effective facilitator of participatory development	K3
CO4	analyse the role of institutions – Government and Not for profit Organisations and apply innovative solutions for challenges in governance	K4
CO5	critically evaluate and explore strategies to promote participation and create the environment in which participatory processes take place	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Participatory Governance 1.1 Participatory Governance: Meaning, concept and importance of Governance, Participatory Governance and its features, principles of participatory governance. Globalization and Participatory Governance, Dimensions of governance, Good Governance and characteristics of good governance, The role of public servants in Governance 1.2 Governance in India: Issues and Challenges, Role of Non-profit Organisations in Participatory Governance. 1.3 Significant Commissions and Committees (overview): History of Governance - Balwant Rai Mehta Committee, The Ashok Mehta Committee 73 rd Amendment, 74 th Constitutional Amendment	K1-K5	12	1-5
2	Decentralisation and Decentralised Governance 2.1 Urban Local Bodies: Composition, Function of Urban Local Bodies, Financial Resources of Urban Local Bodies. Municipal Governance, Municipal council, Executive committee, Executive Powers of Municipal Council, Council committees, Ward Committees, the powers and functions of Ward Committee, Area Ward Sabha, Functioning of the Ward Committee, Allocation of Funds 2.2 Rural Local Bodies: Panchayati Raj Institutions, Importance of Panchayati Raj, Three-tier Structure of Panchayati Raj, Functions of Gram Panchayat, Panchayat Samiti, Zila Parishad, Sources of Income of Panchayats; Gram Panchayat, Panchayat Samiti, Zila Parishad, Role of Sarpanch/Panchayat, Gram Sabha – role and functions, Role of Panchayat Secretary 2.3 Issues in Decentralized Governance	K1-K5	12	1-5
3	Approaches/Strategies of Participation for Development 3.1 Concept of Participation, Development, Current Issues and Challenges to Development 3.2 Community Participation, Types and benefits of Participation, Significance of people's participation in development 3.3 Participation at Policy Levels, Typology of Participation in Policy-making 3.4 Rights based Approach: Meaning, definition, principles, right to development, features of the rights-based approach to development. National and International Human Rights Framework 3.5 Role of Panchayati Raj Institutions in Development Programmes	K1-K6	12	1-5

UNIT	CONTENT	CL	HRS	CO
4	Tools and Techniques for Assessing Development 4.1 Participatory Methods and Techniques: Definition and process of Social Assessment, designing a Social Assessment, Logical Framework Approach, Appreciative Inquiry 4.2 Stakeholder Analysis: need and importance, process and methods. Social Audit, Project Matrix: Elements of the Project Matrix 4.3 Participatory Monitoring and Evaluation: Key principles and stages in participatory monitoring and evaluation, the Monitoring and Evaluation Cycle; Concept of Evaluation in the development context; purpose, process, organization and evaluation report	K1-K6	12	1-5
5	Role of Development Practitioners in Supporting and Advocating for Participatory Governance 5.1 Techniques required for a Social Worker: Use of tools and techniques; facilitation process; ethics for facilitators; qualities of good facilitators and project evaluators, factors creating participatory environment, discussion techniques. 5.2 Skills – Advocacy, lobbying, networking, negotiation, dialogue, social action	K1- K6	4	1-5

BOOKS FOR STUDY

Prasad P. *Participatory Governance in India: An Analysis of Contemporary Debates*. Oxford University Press. 2016
 MYRADA. *A Review Workshop on Participatory Learning Methods*, Bangalore; PRA-PALM Series No 4 Report on the Workshop, 2000

BOOKS FOR REFERENCE

Anechiarico F & Jacobs J. B. *The Pursuit of Absolute Integrity: How Corruption Control Makes Government Ineffective*. University of Chicago Press, 1996
 Chambers Robert. *Participatory Rural Appraisal (PRA); Challenges, Potentials and Paradigms; in World Development*; Vol. 22, No 10, 1994
 Chambers Robert; *Rural Development: Putting the Last First*, Routledge: London, 1983
 DANIDA, Handbook on Logical Framework Approach, LFA, for Project Preparation Vol 1 and 2; Copenhagen, 1990
 Freire Paulo, *The Pedagogy of the Oppressed*, Herder and Herder, New York, 1970
 McCracken, Narayan, *Participation and Social Assessment – Tools and Techniques*, The International Bank for Reconstruction; World Bank; Washington. 1998
 Mikkelsen Britha, *Methods for Development Work and Research: A New Guide for Practitioners*, Sage Publications; New Delhi, 2005
 Slocum, Wichhart, Rocheleau, Slayter, *Power, Process and Participation: Tools for Change*, Intermediate Technology Publications, London, 1995
 UNDP. *Human Rights and Human Development*. Human Development Report, 2000

JOURNALS

Journal of Public Administration Research and Theory

World Development

Development in Practice

Public Administration Review

Journal of Development Studies

Development Policy Review

Community Development Journal

Participation: Journal of Audience and Reception Studies

WEB RESOURCES

<http://www.capacity.org/> is a platform for exchange and access to information on capacity development.

<http://www.worldbank.org/oed/ie> is a World Bank Operations Evaluation Department resource on impact evaluation.

undp.org

worldbank.org

idrc.org

gsdrc.org

participatorymethods.org

devex.com opengovpartnership.org

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
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Other Components:

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Two components will be conducted for 50 marks (25 marks each) – of which 1 field based assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation / Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	8	4×2 = 8 Answer all in 50 words each
B	K2	12	4×3 =12 Answer all in 75 words each
C	K3	16	2 x8 =16 Answer 2 out of 4 questions in 300 words each
D	K4	24	2 x12 = 24 Answer 2 out of 4 questions in 400 words each
E	K5	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words
	K6	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/PG44												
IV	Course Title: PARTICIPATORY GOVERNANACE AND TOOLS FOR DEVELOPMENT PRACTICE												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	2	2	2	2	3	3	3	3	3
CO 2	2	2	2	2	2	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	2	3	3	3
CO 4	3	2	2	3	3	3	3	3	3	2	3	3	3
CO 5	3	3	2	3	3	3	3	3	3	3	2	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

YOUTH DEVELOPMENT

CODE: 23SW/PC/YD44

CREDITS:4

LTP:4 0 0

TOTAL TEACHING HOURS:52

OBJECTIVES OF THE COURSE

- to acquire knowledge of youth development, the need and importance of working with youth
- to develop the ability to understand the issues confronting youth in the changing socio-economic, political and cultural scenario
- to gain an understanding of different governmental/nongovernmental policies and programmes for youth
- to understand the different methods of working with youth groups
- to equip with skills to work with youth and youth groups in order to mobilise youth towards Social Action and change.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define and explain basic concepts relevant to youth and youth development	K1, K2
CO2	relate the acquired knowledge and skills to address the needs and problems of youth	K3
CO3	examine and categorise the approaches, policies, schemes and programmes for youth and youth development	K4
CO4	evaluate and recommend different capacity programmes, researches in the field of youth development	K5
CO5	develop strategies to initiate youth in the process of social change	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction 1.1 Youth: Concept - Youth as age category, as transitional stage, as social construct 1.2 Youth Development: Concept, Definition, Aims and Objectives, Youth Development Index based on Human Development Index dimensions 1.3 Demographic Profile of the Youth in Rural, Tribal and Urban India, Status of Youth – Global Situation. National Youth Policy – 2014	K1-K4	10	1-5

UNIT	CONTENT	CL	Hrs	CO
2	<p>2.1 Needs of Youth</p> <p>2.1.1 Physical, Intellectual, Emotional, Social and Religious Needs of Youth, Socialization of Youth</p> <p>2.1.2 Influence of Family, Peer, Neighbourhood, Reference groups, Religion and Media</p> <p>2.2 Impact of Westernisation, Modernisation, Urbanisation and Globalisation Socio-Economic, Political and Cultural Challenges faced by Youth, Youth and Poverty</p> <p>2.3 Specific Problems of Youth</p> <p>2.3.1 Behavioural Problems: Substance Abuse, Sexually Transmitted Diseases, HIV/AIDS, Sexual Problems, Eating Disorders and Obesity.</p> <p>2.3.2 Emotional Problems: Identity Crisis, Alienation, Low Self-esteem and Suicide, Career Conflict, Conflicts in Selecting a Partner</p> <p>2.3.3 Youth and Terrorism</p>	K1-K6	12	1-5
3	<p>Approaches and Models of Youth Work</p> <p>3.1 Nature and definition of Youth Work. Approaches to Youth Work – Relief based approach, Welfare based approach, Development based approach and Policy Development based approach.</p> <p>3.2 Models of Youth work – Treatment model, Reform model, Advocacy model, Conscientization model.</p>	K1-K6	12	1-5
4	<p>Youth and Social Development</p> <p>4.1 Involvement of Youth in Social Development</p> <p>4.1.1 Initiating Youth in Politics, Youth in Conflict Situations Social Entrepreneurship - Meaning, Definition, Competencies and Characteristics of an Entrepreneur, Youth for Leadership, Ministry of Skill Development and Entrepreneurship, Green Skill Development Programme</p> <p>4.2 Welfare Programmes for Rural/Urban Youth</p> <p>4.2.1 National Programmes - NCC, NSS, Scouts and Guides, Sports, Youth Festivals, Career Counselling.</p> <p>4.3 Youth Organisations and Movements in India</p> <p>4.3.1 Ministry of Youth Affairs and Sports- National Programme for Youth & Adolescent Development (NPYAD) of Government of India Rajiv Gandhi National Institute for Youth Development</p> <p>4.3.2 Nehru Yuva Kendra Sangathan, Vishwa Yuva Kendra Students Federation of India, National Students Union of India, Democratic Youth Federation of India, All India Catholic Universities Federation</p>	K1-K6	12	1-5
5	<p>Training and Application of Social Work Methods in Working with Youth and Youth Groups</p> <p>5.1 Training, Capacity Building, Research, Networking, Volunteering, Peer Counselling and Advocacy</p> <p>5.2 Designing and Implementing Community Based Youth Development Programmes / Projects</p>	K1-K6	6	1-5

BOOKS FOR STUDY

Channana, Geetaj & others, *Children, Youth and Development*. Routledge, 2017
Kehily, M.J. ed, *Understanding youth: Perspectives, Identities and Practices. Youth: Perspectives and Practice*. London: Sage Publications Ltd, 2007

BOOKS FOR REFERENCE

Dugan, Laird. *Approaches to Training and Development*. Jaipur: Rawat, 2007
Kuriakose P.T Vishwa. *Youth Work in India: Scope and Strategy*
New Delhi: VishwaYuva Kendra, 1985.
Landis H. Paul, *Adolescence and Youth: The Process of Maturing*. New Delhi: Sarup Book Publishers Pvt. Ltd., 2011
Ruhela. S.P. *Sociology of the Youth Culture in India*. Delhi: Indian, 2001. Verma.M.L, *Youth and Revolutionary Upsurge*. New Delhi: Sarup Book Publishers Pvt. Ltd., 2010

JOURNALS

Journal of Youth Development <https://jyd.pitt.edu/ojs/jyd>
Academic Journals <http://www.youthpolicy.org/academic-journals/> Youth & Society
<http://www.youthpolicy.org/academic-journals/>

WEB RESOURCES

http://www.rgniyd.gov.in/sites/default/files/pdfs/scheme/nyp_2014.pdf <https://yas.nic.in/> <http://www.rgniyd.gov.in/gsdp-envis.gov.in>
www.msde.gov.in/nationalskilldevelopmentcorporation.html

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation / Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	8	4×2 = 8 Answer all in 50 words each
B	K2	12	4×3 =12 Answer all in 75 words each
C	K3	16	2 x8 =16 Answer 2 out of 4 questions in 300 words each
D	K4	24	2 x12 = 24 Answer 2 out of 4 questions in 400 words each
E	K5	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words
	K6	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/YD44												
IV	Course Title: YOUTH DEVELOPMENT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	3	2	3	3	3	3	2	2	2
CO 2	3	2	2	2	3	2	2	2	3	2	2	2	2
CO 3	3	2	2	3	2	2	2	2	3	2	2	2	2
CO 4	3	2	3	2	2	2	3	3	3	2	3	2	2
CO 5	2	3	2	2	3	3	2	3	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

GERONTOLOGICAL SOCIAL WORK

CODE: 23SW/PC/GR44

CREDITS: 4

L T P: 4 0 0

TEACHING HOURS: 52

OBJECTIVES OF THE COURSE

- to enable students to understand the socio-economic, physical and psychological aspects of ageing and challenges faced by older adults
- to gain knowledge on various policies, legislations and programmes available for older adults
- to gain an understanding on the theoretical perspectives and approaches
- to explore the role of ngos and ingos in the field of gerontological social work
- to acquire necessary skills in Gerontological Social Work

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	KL
CO1	define and understand the concepts of ageing, challenges and issues related to ageing	K1,K2
CO2	apply the knowledge on health care, policies, legislations and programmes for older adults	K3
CO3	analyse the changing trends and developments in the field of Gerontological Social Work and outline appropriate Social Work interventions	K4
CO4	appraise the existing policies, programmes and services for the elderly and address the issues in a professional manner	K5
CO5	design awareness and sensitisation programmes in the field of Gerontological Social Work	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Concepts and Issues in Ageing 1.1 Ageing: Definition, meaning, characteristics, ageing differentials, demography of ageing, projections, generation gap; longevity of life; Geriatrics and Gerontology meaning, definitions, role in Social Work 1.2 Challenges of Older Adults: social identity and stigma, neglect, abuse, violence, isolation, destitution, financial exploitation, insecurity, loss of dignity 1.3 Situational analysis with respect to age, gender, roles, place of residence, cultural and socio-economic factors, urban/rural life, companion status, Empty-nest syndrome, beliefs and attitudes, impact of urbanization and migration on ageing	K1-K6	10	1-5

UNIT	CONTENT	CL	HRS	CO
2	Health Care for Older Adults 2.1 Diseases and Disabilities: Neurological, Musculoskeletal, Vision and Hearing impairments, Respiratory, Gastrointestinal complaints, Injuries, Malnutrition, dietary and nutritional requirements, Insomnia, specific challenges of health in older women. 2.2 Mental disorders: Depression, Anxiety disorders, Dementia, Delirium Preventive measures and cure of diseases, disabilities and disorders; Awareness and access to geriatric treatment and gerontological health care	K2-K3	10	1-2
3	Policies, Legislations and Programmes: 3.1 Constitutional Provisions for Older Persons; Policies of Ministries/ Departments/ Inter-Ministerial Committee and Nodal Agency (Ministry of Social Justice and Empowerment); National Policy for Older Persons 1999; Maintenance and Welfare of Parents and Senior Citizen Act, 2007; National Council for Senior Citizens; Nation Policy on Senior Citizens 2011,2020 3.2 International Protocols: UN Principles for Older Persons – Independence, Participation, Care, Self-fulfilment, Dignity; The Madrid International Plan of Action on Ageing and the Political Declaration 2002, WHO Policy Framework on Active Ageing 2002; International Day of Older Persons 3.3 Elder Rights and Entitlements: Integrated Programme for Older Persons (IPOP), Indira Gandhi National Old Age Pension Scheme (IGNOAPS), National Programme for the Health Care of Elderly, Insurance schemes, Antyodaya Scheme, Annapurna Scheme, Reverse Mortgages, Retirement schemes	K1-K4	11	1-3
4	Social Work Practice with Older Adults 4.1 Theoretical Foundations and applications for working with older persons: Life course perspective, Age stratification, Social constructionist, Social exchange, Feminist theories 4.2 Role of Social Worker in Empowering Older Persons; Principles guiding Social Work with senior citizens; Fighting isolation, poverty and neglect, Care giving roles in family - parents, spouses, children, in-laws, grandchildren and other caregivers; bereavement, Adaptation and stress management for caregivers Needs assessments for older persons, identifying special needs, building intergenerational relationships, life transition needs – living arrangements, monetary needs, employment and livelihood support, second careers, social relations, retirement, social security, recreation and leisure time, active ageing, creative art programmes, spiritual discourses, physical aids	K1-K6	10	1-6

UNIT	CONTENT	CL	HRS	CO
5	Role of INGOs and NGOs 5.1 Institutional, Non-institutional and Community services: Role and contributions of INGOs and NGOs: Little Sisters of the Poor Home for the Aged, HelpAge International, Dignity Foundation, 5.2 Other Services: Assisted living centres/ homes; Active Senior Living: Day care, mobile medicare, Helplines, magazines, Identity Cards (AdvantAge Card), Apps and digital inclusion for older adults 5.3 Counselling Services: Support groups for older persons, coping with loss of partner and other crisis events, grief counselling and preparation for death. Advocacy for Older Adults - Pension Parisha	K1-K6	11	1-6

BOOKS FOR STUDY

Desai, Murali, and Siva Raju S. *Gerontological Social Work in India, Some Issues and Perspectives*. B R Publishers, 2000.

Kulkarni, PM. *Demographic Transition in India*. CSRD SSS Jawaharlal Nehru University, 2014.

BOOKS FOR REFERENCE

Central Statistics Office. National Sample Survey Organization, Ministry of Statistics and Programme Implementation, Government of India. New Delhi. 2006.

Central Statistics Office. *Situation Analysis of the Elderly in India*, Ministry of Statistics and Programme Implementation, Government of India; New Delhi 2011.

Ministry of Health and Family Welfare. Director General of Health Services MOHFW, Government of India; National Programme for Health Care of the Elderly (NPHCE): Operational Guidelines New Delhi. 2011.

Nancy Hooyman. Colette V. Browne. Ruth Ray DA & Virginia Richardson.

Feminist Gerontology and the Life Course, Gerontology & Geriatrics Education, 2002

National Sample and Survey Office *Morbidity, Health Care and the Condition of the Aged*. NSSO (64th round). 2004.

Premi, Mahendra K. Population of India 2011. B.R. Publishing, 2012. Vert. B. Aging. Ivy Publishing. 2011

JOURNALS

Journal of Family Social Work, Taylor and Francis
 Child and Family Social Work, Wiley
 Families in Society, Sage

WEB RESOURCES

<https://pdfs.semanticscholar.org/2984/2fbb6581263b58639af7cafde623899f7218.pdf>

<https://www.apadivisions.org/division-20/publications/newsletters/adultdevelopment/2017/10/women-aging>

<https://journals.sagepub.com/doi/pdf/10.1177/0886109908323998>

<http://www.health.bih.nic.in/Docs/Guidelines-NPHCE.pdf>

<http://www.indiacurrentaffairs.org/>

<http://www.socialjustice.nic.in/ipop.php?pageid=4>

http://www.mospi.nic.in/mospi_new/upload/elderly_in_india.pdf

<https://www.helpageindia.org/wp-content/uploads/2018/01/Preliminary-Study-Effectiveness-Maintenance.pdf>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks:50

Two components will be conducted for 50 marks (25 marks each) – of which 1 fieldbased Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation

/Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/GR44												
IV	Course Title: GERONTOLOGICAL SOCIAL WORK												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	2	2	2	2	2	2	2	3	3	3	2
CO 2	2	2	2	2	3	2	2	2	2	3	3	3	2
CO 3	2	3	2	2	2	2	2	2	2	3	3	3	3
CO 4	2	3	3	2	2	3	2	2	3	3	3	3	2
CO 5	2	2	3	2	2	2	2	2	2	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

FIELD WORK IV

CODE: 23SW/PC/FW44

CREDITS:4

OBJECTIVES OF THE COURSE

- to enable students to understand the agency, its role, functions, programmes/activities, gain insights into addressing needs and problems of the individuals, families, and communities within the scope of the agency and fields of specialisation
- to identify and mobilize resources and network with stakeholders to fulfil the needs of people in agencies and communities
- to develop competence in applying appropriate social work methods and undertake mini research addressing the diverse needs and problems according to specialisation
- to instil values, principles, and attitudes that are integral to social work practice to work effectively with agencies, communities and related stakeholders
- to equip students with the knowledge and skills necessary for planning, implementing, evaluating and documenting Social Work interventions in becoming a professional social worker

COURSE LEARNING OUTCOMES

On successful completion of the course the students will be able to

COs	DESCRIPTION	CL
CO1	demonstrate the ability to critically analyse the social situations of individuals, groups and communities	K1-K6
CO2	distinguish the role of organisations in the fields and specialisations of social work through application of appropriate social work methods	K1-K6
CO3	demonstrate competency in planning, identifying, mobilising resources and networking to organise programmes and meet needs of different target groups	K1-K6
CO4	identify and facilitate solutions of individual, group and community problems through the application of social work values, principles, skills, approaches, and utilise one's potential for personal and professional growth	K1-K6
CO5	undertake mini research according to the needs/issues identified in the field and demonstrate skills in recording and evaluating their work	K1-K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	CO
1	Understand the Mission, Roles and functions of Agencies, Communities they serve, Needs Assessment (Specialisation Specific) and Resource Mobilisation <ul style="list-style-type: none"> • Learn and document agency profile • Understand the agency's role with target groups in the community; Explore the relationship between the agencies and the target groups/communities they serve • Identify the needs of individuals, groups, or communities utilizing appropriate assessment tools and mobilise resources to address identified need • Network with stakeholders to fulfil needs of people in agencies and communities 	K1-K6	CO 1-5
2	Needs Assessment and Research <ul style="list-style-type: none"> • Identify issues and conduct mini research (specialization specific) and suggest measures to solve problems with support agencies • Conduct needs assessments using tools such as Surveys, Interviews, Focus Group Discussions, PRA • Design and develop interventions/projects with clear goals, objectives, strategies and implementation plans 	K1-K6	CO 1-5
3	Application of Methods (According to Specialisation) <ul style="list-style-type: none"> • Practice methods of Social Work - Case Work, Group Work, Community Organisation and Social Action • Organise and conduct skill training and community programmes addressing identified needs • Utilise administrative skills in programme planning and management • Engage in social action on behalf of clients or communities 	K1-K6	CO 1-5
4	Personal and Professional Growth <ul style="list-style-type: none"> • Use of Theories to practice when working with Individuals, Groups and Communities • Upholding Social Work Values, Principles, and Ethics during interventions • Reflective Learning: Maintaining journals and logs to document personal and professional growth during field work experiences and enhance ability of students to translate learning to working environment 	K1-K6	CO 1-5
5	Documentation and Presentation: <ul style="list-style-type: none"> • Document field work experiences using various recording methods • Prepare concurrent field work reports and consolidated report using appropriate presentations to present learning effectively • Share field work outcomes through presentations 	K1-K6	CO 1-5
Total Hours: 240 hours per semester			

CONCURRENT FIELD WORK

Apply the knowledge, approaches and skills according to the special requirements of each field of specialisation and setting of placement

Child Rights and Practice with Families

Social Work Practice in Health Settings

Development Issues and Social Work Practice

GUIDELINE FOR ASSESSMENT**INTERNAL ASSESSMENT**

Section	Knowledge level	Marks (50)	Pattern of Assessment
A	K1-K6	25	To plan and fulfil requirements of concurrent Field Work – Agency Profile, Use of assessment tools, Mapping Resources, Methods of Intervention
B	K1-K6	10	Regular submission of weekly reports and weekly conference with Faculty Supervisor and Field Supervisor. Oral and written evaluation by Faculty and Field Supervisor for fulfilment of requirements for Field Work
C	K1-K6	15	At the end of the semester, individual presentation of work using a Powerpoint Presentation, submission of Field Work record and a Consolidated Report for evaluation – to include reports of Agency Profile, Case Work, Group Work, Community Organisation/Programme, Social Action, Skill Training Programme, Mini Research, assessment of Personal and Professional Learning

END SEMESTER EXAMINATION - VIVA VOCE

Section	Knowledge level	Marks (50)	Pattern of Assessment
A	K1-K6	50	Viva Voce Examination – two examiners (Academician & Practitioner)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PC/FW44												
IV	Course Title: FIELD WORK - IV												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	3	3	2	2	2	3	2	3	3	2	3
CO 2	3	2	3	2	2	2	3	3	3	2	3	2	3
CO 3	3	2	3	2	2	2	2	3	3	2	3	2	2
CO 4	3	2	3	2	2	2	3	2	3	2	3	2	2
CO 5	2	3	2	3	2	2	3	2	2	3	2	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

BLOCK FIELD WORK

CODE: 23SW/PN/BF42

CREDITS: 2

OBJECTIVES OF THE COURSE

- to enable the student to analyze and understand the administrative structure of the organization, its role and functions, programmes/activities in addressing needs of individuals, families and communities in the contexts of the fields of specialization
- to develop competence in analyzing the social realities, needs and problems of individuals, groups and communities (rural/tribal) and utilize the appropriate social work methods and approaches to address the needs and problems of the target groups.
- to identify, mobilize resources, network and advocate with various stakeholders to further the rights of needy individuals and communities
- to engage in various roles of professional social work through application of values, principles, skills and attitudes
- to explore opportunities for further development of professional knowledge and skills

COURSE LEARNING OUTCOMES

On successful completion of the course the students will be able to

COs	DESCRIPTION	CL
CO1	demonstrate ability to critically analyze the social situations of individuals, groups and communities in accordance with different specialisation settings	K1-K6
CO2	utilize competency in identifying and applying the different methods and approaches of social work	K1-K6
CO3	identify and facilitate solutions of individual, group and community problems through the application of social work values, principles, ethics and skills	K1-K6
CO4	demonstrate competency in planning, identifying, mobilizing resources, networking, recording and evaluating work according to the needs of different target groups	K1-K6
CO5	identify and utilize one's potential for personal and professional growth as a social worker at the global level	K1-K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	CO
1	Understand the Administrative structure, roles and functions of the organization <ul style="list-style-type: none"> • Prepare the organogram of the organization. • Explore the agency's role in meeting the needs of individuals, groups and target groups in the community • Engage in roles of a social worker through involvement in agency activities 	K1-K6	1-5
2	Needs assessment of the target group <ul style="list-style-type: none"> • Identify issues of individuals, groups and communities • Conduct needs assessments using tools such as scales, Surveys, Interviews, Focus Group Discussions, PRA • Identify resources to link and bring in desirable changes for the individuals, groups and community • Design and develop interventions/projects with clear goals, objectives, strategies and implementation plans 	K1-K6	1-5
3	Application of Methods (According to Specialization) <ul style="list-style-type: none"> • Practice methods of Social Work - Case Work, Group Work, Community Organisation • Organize and conduct skill training and community programmes addressing identified needs • Utilize administrative skills in programme planning and management • Engage in advocacy, networking with stakeholders on behalf of clients or communities 	K1-K6	1-5
4	Personal and Professional Growth <ul style="list-style-type: none"> • Upholding Social Work Values, Principles, and Ethics during practice • Reflective Learning: Maintaining journals and logs to document personal and professional growth during field workexperience • Enhance ability of students to translate learning to working environment 	K1-K6	1-5
5	Documentation and Presentation <ul style="list-style-type: none"> • Prepare field work reports and consolidated report using appropriate presentations to present learning effectively • Share field work outcomes and explore opportunities for career advancement 	K1-K6	1-5
Duration - 45 days			

BLOCK FIELD WORK

Apply the knowledge, approaches and skills according to the special requirements of each field of specialization and setting of placement

- Child Rights and Practice with Families
- Social Work in Health Settings
- Development Issues and Social Work Practice

PATTERN OF ASSESSMENT

INTERNAL ASSESSMENT

Section	Knowledge level	Marks (100)	Pattern of Assessment
A	K1-K6	50	To plan and fulfill requirements of block Field Work – according to agency work - Agency Profile, Use of assessment tools, Mapping Resources, Social Work Methods of Intervention
B	K1-K6	25	Regular submission of weekly reports to Faculty Supervisor and Field Supervisor. Online mode of conference with faculty Supervisor for fulfillment of requirements for Field Work <ul style="list-style-type: none">• Written evaluation by field supervisor/agency of tasks accomplished in Block Field Work• Certifying the performance of the student during the placement.• Submission of completed record of work and consolidated report for evaluation to agency and faculty supervisor
C	K1-K6	25	<ul style="list-style-type: none">• Evaluation by faculty supervisor on submission of reports

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23SW/PN/BF42												
IV	Course Title: BLOCK PLACEMENT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	3	2	3	3	3	3	3	3	3
CO 2	3	2	3	2	2	2	3	3	3	3	2	2	3
CO 3	3	2	3	2	3	2	3	3	3	3	3	3	3
CO 4	3	3	2	2	2	3	2	3	3	2	3	2	2
CO 5	3	2	3	3	3	3	2	2	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTOOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

FUNDAMENTALS OF SOCIOLOGY

CODE: 23SW/PE/SY13

CREDITS: 3

LTP: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to gain knowledge on various sociological concepts relevant to social work practice.
- to sensitize students on the various socio-economic and political systems prevalent in the society.
- to examine the existing social structures, social inequalities prevalent in the society and work towards social inclusion
- to develop analytical skills on the evolution of social movements, social processes and social change.
- to critically examine the existing characteristics of the Indian economy and its impact on the Indian Society.

COURSE LEARNING OUTCOMES

On successful completion of the course students will be able to

COs	DESCRIPTION	CL
CO1	define the various sociological concepts relevant to social work practice	K1
CO2	explain the various sociological structures and its influence on society	K2
CO3	identify the existing social inequalities and forms of social stratification in the indian society	K3
CO4	analyse the various social processes for social change and examine its influence in various social settings	K4
CO5	evaluate functioning of social structures and plan for social change	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Society 1.1 Elements of Society: Internal Strength of Society – Unity in Diversity, Democracy, Groups, Types of Groups, Associations and Institutions, Socialization, Social Processes 1.2 Culture-Concept, Material and Non- Material Culture, Cultural Lag Application to the Indian Setting. 1.3 Social Structural Approaches to the Study of Society: An Introduction to Structural/Functionalist Perspective, Conflict Perspective	K1-K5	8	1-5

UNIT	CONTENT	CL	HRS	CO
2	Social Inequality and Exclusion 2.1 Meaning of Social Inequality and its Forms: Social Differentiation, Social Stratification, Social Hierarchy and Social Exclusion and Inclusion 2.2 Institutional Basis of Social Inequality 2.3 Theoretical Perspective: Social Inequality or Social Stratification: Weberian and Functionalist Perspectives	K1-K6	9	1-5
3	Social Stratification 3.1 Understanding the Concept of Caste: Hierarchy and Differences in Caste Inequality and Exploitation, Dominant Caste 3.2 Historical Evolution of Caste System – Critical Analysis 3.3 Class-and Related Processes, Class as Power	K1-K6	7	1-5
4	Social Movements and Social Change 4.1 Definition of social movement causes and types, specific reference to civil rights movement, backward class movement and labour movement. 4.2 Concept, Theories, Agents of Social Change, Factors and Processes of Social Change 4.3 Urbanization, Industrialization, Modernization, Westernization, Sanskritization and Secularization - Analysis of Their Impact on Indian Society 4.4 Social Control and Agents of Social Control 4.5 Social Organization and Disorganization	K1-K6	7	1-5
5	Development 5.1 Characteristics of Indian Economy, India as the Developing Economy 5.2 Amartya Sen's Concepts of Development 5.3 Globalization, Liberalization, and Privatization - its Impact on the Indian Society	K1-K6	8	1-5

BOOKS FOR STUDY

Bilton Tony, Kevin Bonnet, Pipjones, Tony Lawson, David Skinner, Michelle Stanworth, Webster Andrew. *Introductory Sociology*. New York: Palgrave Macmillan, 2016.
 Ferrante Joan. *Sociology a Global Perspective*. Wadsworth, Cengage Learning, 2011.
 Kuper Adam and Jessica Kuper. *The Social Science Encyclopedia*. Routledge Taylor & Francis Group, 2009.

BOOKS FOR REFERENCE

Ahuja, Ram. *Indian Social System*. New Delhi: Rawat, 1993.
 Anderson, Parker. *Society- its Organization & Operation*. East West, 1966.
 Anthuvan, Victor Louis M. *Global Debt Crisis-A Perspective for the Third Millennium*. New Delhi: CBCI and Labour Commission, 1999.
 Basu, Amrita, Kohli, Atul. *Community Conflicts and the State in India*. New Delhi: Oxford University Press, 1998.
 Channa, Subhatra. *Understanding Society, Culture and Change*, New Delhi: Blaze, 1993

Chris Yuill. *Sociology for Social Work*. New Delhi: Sage, 2011
 Conklin, John E. *Sociology- An Introduction*. New York: Macmillan, 1984
 Dalva A.K, *Environmental Impact of Large Reservoir Projects on Human Settlements*, New Delhi: Ashish, 1993.
 Datt, Rudder, Sundaram. *Indian Economy*. 39th edition, Delhi: S.Chand, 1998
 Horton, Hunt. *Sociology*. 5th Edition, International student edition, Tokyo: McGraw Hill, 1980.
 Karpagam M. *Environmental Economic- A Text book*, New Delhi:
 Sterling. Lena, Dominelli. *Sociology for Social Work*. Palgrave, 1977
 Mac Iver, Page C.H. *Society: An Introduction Analysis*. Madras: Macmillan, 1990.

JOURNAL

Social Change – Quarterly

WEB RESOURCES

<http://www.amazon.co.uk/Sociology-Social-Work-An-Introduction/dp/1848606516>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	2×2 = 4 Answer all in 50 words each
B	K2	6	2×3=6 Answer all in 75 words each
C	K3	8	1×8 = 8 Answer 1 out of 2 questions in 300 words
D	K4	12	1×12 =12 Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	1×20 = 20 Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	8	4×2 = 8 Answer all in 50 words each
B	K2	12	4×3 =12 Answer all in 75 words each
C	K3	16	2 x 8 =16 Answer 2 out of 4 questions in 300 words each
D	K4	24	2 x 12 = 24 Answer 2 out of 4 questions in 400 words each
E	K5	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words
	K6	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PE/SY13												
	Course Title: FUNDAMENTALS OF SOCIOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	1	2	2	2	1	3	3	2	2	2	2	2
CO 2	3	2	2	2	2	2	3	3	2	2	2	2	2
CO 3	3	2	2	3	2	2	3	2	2	3	2	3	2
CO 4	3	3	3	2	3	2	3	3	3	3	2	3	3
CO 5	3	3	2	3	3	2	2	3	3	2	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTOOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

FUNDAMENTALS OF PSYCHOLOGY

CODE:23SW/PE/PY13

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to comprehend concepts of psychology relevant for social work study and practice
- to understand human growth and development in the life span using the systems approach
- to analyse the scope of personality theories in the psycho social context
- to assess nature of psychological processes for study of human behaviour
- to appraise the impact of life events on an individual during the lifespan and understand the concept of mental health

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall concepts of psychology relevant for social work practice	K1
CO2	explain aspects of human growth and development across the life-span and the role of various systems in influencing human behaviour	K2
CO3	identify utilisation of theories and factors contributing to development of personality in the psycho social context	K3
CO4	analyse nature of psychological processes, influence of life events on behaviour and the importance of mental health	K4
CO5	integrate perspectives of psychology for social work practice	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Psychology 1.1 Definition of Psychology. Schools of Psychology: Structural, Functional, Behaviourist 1.2 Fields of Psychology- General, Developmental, Abnormal, Social, Counselling, Clinical, Educational, Industrial, Community Psychology 1.3 Relevance of Psychology for Social Work Practice	K1-K4	5	1-5

UNIT	CONTENT	CL	HRS	CO
2	Human Growth and Development 2.1 Life Span Perspective (Conception to Old Age) Using the Systems Approach: Needs, Tasks, Challenges, and Hazards in the Life Span 2.2 Role of Various Systems – Family, Significant Others, Neighbours, Peers, School, Community, Society in Influencing Behaviour 2.3 Biological, Psychological and Environmental Determinism	K1-K6	8	1-5
3	Personality 3.1 Definition. Personality Traits and Dimensions to describe Personality 3.2 Theories Related to Structure and Development of Personality. Psychoanalytic (Freud), Cognitive Development (Piaget), Psychosocial Development (Erickson), Moral Development (Kohlberg), Social Learning (Bandura), Humanistic (Rogers) 3.3 Factors influencing and affecting Personality Development	K1-K6	10	1-5
4	Psychological Processes for Understanding Behaviour 4.1 Sensation, Perception and Learning (Classic and Operant Learning Theories) 4.2 Motivation- Motivation Process, Human Needs, Maslow's theory- Hierarchy of Needs 4.3 Emotions- Common Emotions 4.4 Attitude- Attitude Formation, Attitude Change, Prejudice and Discrimination 4.5 Intelligence, Commonly Used Tests for Measurement of Intelligence (Binet-Kamat, Weschler Scales), Overview of Mental Retardation- Definition, Causes, Rehabilitation, Prevention	K1-K6	10	1-5
5	Life Events During the Lifespan and their Impact on Behaviour 5.1 Life Events, Stress, Stressors, Conflicts, Frustrations and Coping 5.2 Concept of Mental Health, Common Mental Disorders (Overview)	K1-K6	6	1-5

BOOKS FOR STUDY

Mangal, S K., *General Psychology*. New Delhi: Sterling, 2010

Vankhede, A N., *Handbook of Psychology*. New Delhi: Wisdom Press, 2012

BOOKS FOR REFERENCE

Ambrosino, R., Ambrosino, R., Heffernan, J, Shuttlesworth G, *Social Work and Social Welfare- An Introduction*. Ed.5, USA: Brooks Cole Thomson Learning, 2005.

Aldgate, Jane, Jones, David, Rose Wendy and Jeffray Carole, Editor. *The Developing World of the Child*. UK, USA: Jessica Kingsley Publishers, 2006.

Chambe, S.P. *Developmental Psychology*. Hyderabad: Neelkamal, 2011.

Chaubé S.P, Chaubé. A, *Essentials of General Psychology (An Analytical Study for the Fundamentals for UG and PG Classes)*. Hyderabad: Neelkamal, 2011.

Compton, Beulah. Galaway, Cournoyer, *Social Work Processes*. Ed 7, USA: Brooks Cole Learning, 2005.

Corner Ronald, J. *Abnormal Psychology*. New Delhi: Wisdom Press, 2012.

Engler, Barbara, *Personality Theories-An Introduction*. Ed 3, Boston: Brooks Cole Learning, 1991.

Hurlock, Elizabeth, *Developmental Psychology-A Life Span Approach*. Ed 5, New Delhi: Tata McGraw Hill, 1995.

Robinson, L. *Psychology for Social Workers*. Oxon: Routledge, 1995.

Spect, Riva. Craig, G. J., *Human Development-A Social Work Perspective*. New Jersey: Prentice Hall, 1982.

Zimbardo, Philip. *Psychology*. New Jersey: Pearson, 2012.

JOURNALS

International Journal of Psychology
 Journal of Applied Psychology
 Journal of Personality and Social Psychology
 Child and Adolescent Social Work Journal
 Indian Journal of Social Work

WEB RESOURCES

<https://studylib.net/doc/25592954/introduction-to-psychology-seventh-edition>
<https://open.umn.edu/opentextbooks/textbooks/introductiontopsychology>

PATTERN OF ASSESSMENT

Continuous Assessment: **Total Marks: 50** **Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1	4	2×2 = 4 Answer all in 50 words each
B	K2	6	2×3=6 Answer all in 75 words each
C	K3	8	1×8 = 8 Answer 1 out of 2 questions in 300 words
D	K4	12	1×12 =12 Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	1×20 = 20 Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory
 The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	8	4×2 = 8 Answer all in 50 words each
B	K2	12	4×3 =12 Answer all in 75 words each
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	K6	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PE/PY13												
	Course Title: FUNDAMENTALS OF PSYCHOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	3	2	2	1	1	2	2	2	2	1	3
CO 2	3	2	3	3	3	2	2	3	3	3	3	2	2
CO 3	3	3	2	3	2	2	2	2	3	3	3	2	2
CO 4	3	2	3	2	2	2	2	2	2	3	3	2	2
CO 5	3	3	3	2	1	2	2	3	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-24)

HUMAN RIGHTS AND SOCIAL WORK

CODE: 23SW/PE/HR13

CREDITS: 3

L T P 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to understand the concepts and the evolution of human rights
- to develop an in-depth knowledge of the indian constitution and the indian legal system in relation to human rights
- to enable students to acquire skills for promoting human rights at the local and the global level
- to orient students on the role of law enforcement mechanisms
- to orient students on strategies to work towards promoting human rights in society for the socially disadvantaged groups in society

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explain the concepts and the evolution of human rights.	K1, K2
CO2	apply the knowledge and skills gained to address the human rights issues at the local and global levels	K3
CO3	analyze the social policy, laws and strategies adopted to work for promoting human rights	K4
CO4	evaluating the laws promoting the human rights of socially marginalized groups	K5
CO5	evolve effective skills and strategies to advocate for human rights	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyze K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Human Rights 1.1 Concepts of Human Rights 1.2 Categories of Human Rights 1.3 Foundation of Human Rights 1.4 Evolution of Human Rights 1.5 International Human Rights Law and its Application	K1-K4	6	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Indian Constitution and Human Rights 2.1 Indian Constitution: Preamble, Fundamental Rights, Directive Principles 2.2 Human Rights Protection and Enforcement 2.3 Writ Jurisdiction and Public Interest Litigation 2.4 The Indian Legal System, Indian Penal Code, Criminal Procedure Code and Civil Procedure Code 2.5 The Relationship between Human Rights and Democracy, Sustainable Development, Equality, Sovereignty, Secularism, Non-Discrimination, Economic and Political Systems Human Rights in Relation to Illegal Detention	K1-K6	8	1-5
3	Globalization and Poverty 3.1 Globalization and its Impact on the Poor 3.2 Business Corporations and Human Rights Standards, Science, Technology and Human Rights 3.3 TRIPS, WTO and SEZ	K1-K5	7	1-5
4	Social Policy, Law and Strategies 4.1 Definition, Approaches to Social Policy, Overview of Social Policies in India 4.2 Consumer Protection Act 2019, Local Governance(73 rd and 74 th Constitutional Amendment) Right to Information Act 2005, Protection of Human Rights Act 1993 4.3 Human Rights Struggles and the Human Rights Movement in India 4.4 Overview of Statutory Commissions: SHRC, NHRC, Overview of Statutory Commissions: SC, ST and Transgenders	K1-K6	8	1-5
5	Human Rights and Social Work Activism 5.1 Sectoral Rights: Rights of Children, Women, Marginalized Groups, Coastal Communities, Domestic Workers 5.2 Minority, Unorganized Labourers, Urban Poor 5.3 Transgender Persons and Rights of the Displaced, Disabled and Elderly Human Rights and Social Work Activism 5.4 Strategies and Skills for Human Rights Advocacy	K1-K6	10	1-5

BOOKS FOR STUDY

Ashwani Peetush and Jay Drydyk. Human Rights India and West. New Delhi: Oxford University Press, 2015

Patel. V. T. Human Rights Developments in South Asia. New Delhi: Authorspress, 2003

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- Chandra, U. Human Rights, India. Allahabad Law Agency, 2000. Eugene Karneka. Human Rights. London: Edward, 1978.
- Grenne, Lorraine. Social Policy for Social Work. New Delhi: Rawat Publications, 2016
- Jean-Marc Coicaud, Michael W. Doyle and Anne- Marie Gardener. The Globalization of Human Rights. Rawat Publications, 2003
- Krishna V.R. Iyer. Human Rights and Inhuman Wrongs. United Kingdom: B.R., 2001
- Kumar Arvind. Encyclopedia of Human Rights, Violence and Non Violence, Vol.1.Human Rights and Social Movements. New Delhi: Anmol, 2001
- Nandita Dutta and Sumitra Jha. Women's Human Rights. New Delhi: Pacific Books International, 2014
- ParmarLalit. Human Rights. New Delhi: Anmol, 1998
- Samit Kar. Globalization, One World, Many Voices. Rawat Publication, 2005
- Sharma R.S. Human Rights Development. New Delhi: Common Wealth, 1997
- Subramaniam S. International Challenges, Vol 1 and Vol 2. Mumbai: Manas, 1997
- Waghmare B.S. Human Rights: Problem and Prospects. New Delhi: Kalinga, 2001
- Laxmikanth M. *Indian Polity: For Civil Services Examinations*. 7th ed. Tata McGraw Hill Education Private Limited 2010

JOURNALS

The International Journal of Human R International Journal of Human Rights ISSN 1364 - 2987

WEB RESOURCES

www.troniefoundation.org www.humanrights.com/ www.youthforhumanrights.org
www.humanrights.gov www.amnesty.org
<http://www.ohchr.org/EN/Issues/Pages/WhatareHumanRights.aspx> <http://nhrc.nic.in/>
<http://www.ipc.in/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

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D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
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	K6	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PE/HR13												
	Course Title: HUMAN RIGHTS AND SOCIAL WORK												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	2	2	3	3	3	3	3	2	2
CO 2	3	3	3	2	2	3	3	3	3	3	3	2	3
CO 3	3	3	3	2	3	3	3	3	3	3	3	3	3
CO 4	3	3	2	2	3	3	3	2	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

GENDER AND SOCIAL WORK PRACTICE

CODE: 23SW/PE/GS13

CREDITS:3

LTP:3 0 0

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- to gain a deeper understanding of gender as a social construct, gender relations and gender issues in society
- to understand the protective measures, policies and programmes for women
- to obtain knowledge in feminist social work practice and skills in applying frameworks for gender analysis
- to impart knowledge on the global perspectives in women's development
- to equip students with capacity building skills necessary to work on gender issues

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define and restate basic concepts relevant to Gender and Development	K1, K2
CO2	relate to the Global and Indian perspective on rights of Gender	K3
CO3	analyse and appraise Protective Measures, Policies and Programmes for Women in India	K4
CO4	critique Gender Frameworks and utilize appropriate frameworks for Social Work Practice	K5
CO5	plan capacity building programmes for women at different levels	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Gender Concepts 1.1. Sex and Gender, Gender as a Social Construct, Gender Identity; Gender Relations, Men and Masculinity; Gender Division of Labour, Gender Roles and Responsibilities, Gender Stratification, Gender Stereotyping, Productive Work, Reproductive Work, Differential Access and Control Over Resources 1.2. Practical and Strategic Gender Interests; Equity and Equality; Gender Mainstreaming; Gender Sensitization 1.3. Patriarchal and Ideological Constructs That Govern Status of Women; Status of Women in India; Sex Ratio in India, Women in Difficult Circumstances, Feminization of Poverty; Discrimination Against the Girl Child	K1-K4	8	1-5
2	Feminism and Empowerment of Women 2.1 Feminism: Concept, Meaning and Definition; Types of Feminism – Liberal, Social, Radical and Post-Modern Feminism 2.2 Women's Movements: Pre and Post-Independence Perspectives in India, Landmarks of Women's Movement in India, 2.3 Women Empowerment: Concept, Meaning and Definition, Types of Empowerment, Gender Development Indicators - GDI, GEM, GAD, GGP, GEI Changing perspectives from welfare to rights-based approach	K1-K6	10	1-5
3	Protective Measures, Policies and Programmes for Women in India 3.1 Constitutional and Legal Provisions; Rights of Women with Reference to Entitlements, Political Participation, Education, Employment, Health, Inheritance, Marriage, Adoption, Divorce, Maintenance 3.2 Protective Laws: Hindu Succession Act- 1956 with Amendment in 2005; Prohibition of Child Marriage Act- 2006, Protection of Women From Domestic Violence Act – 2005; Sexual Harassment of Women at Workplace Act- 2013 3.3 Special Initiatives: National and State Commissions for Women; Ministry for Women and Child Development; National Plan of Action for the Girl Child (1991-2000); National Policy for the Empowerment of Women-2001; Reservation for Women in Local Self Government; Gender Budgeting	K1-K6	8	1-5

UNIT	CONTENT	CL	Hrs	CO
4	Global Perspectives in Women's Development 4.1 Convention on Elimination of All Forms of Discrimination against Women; and Girls (CEDAW) 1982 – Implementation in India; Global Impact of CEDAW. 4.2 Role of UN-WOMEN; UN Timeline in Women's Progress; INGOs and NGOs in Women's Development 4.3 Policy Approaches for Women; UN Agenda on Post Development and Sustainable Development Goals; Women as Agents of Peace and Security	K1-K6	6	1-5
5	Feminist Social Work and Frameworks for Practice 5.1 Feminist Social Work Practice: Meaning, Concept and Definition, Feminist Perspectives in Social Work Practice; Women's Agenda for Social Work; Principles in Women Centred Practice 5.2 Gender Analysis: Meaning and Goals, Appropriate Usages; Types - Gender Planning Framework, Empowerment Framework, Harvard Framework, Social Relations Framework 5.3 Education, Training and Agency for women; Capacity Building; Women's Participation; Micro Finance and Self-Help Groups (SHGs), Other Support Groups for Women's Wellbeing	K1-K6	9	1-5

BOOKS FOR STUDY

Pangannavar, Arjun yallappa. *Self - Help Groups (SHGs) And Women Empowerment*. New Delhi: New Century Publications, 2017.

Vanka, Sita. *Gender And Management : International Perspectives*. Jaipur : Rawat publications, 2017.

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Bal, Gurpreet. *Contemporary Gender Issues*. Jaipur: Rawat Publishers , 2016.

Chaudhary, Reena. *Sexual Harassment* . New Delhi: Deep & Deep Publications, 2011.

Cronin, Aidan A. *Gender Issues in Water and Sanitation Programmes*. New Delhi : Sage publications , 2015.

Evans Kathy M, Introduction to Feminist Therapy, New Delhi: Sage, London, 2011.

Kumar, Chattopadhyay Sujit. *Gender Socialization And The Making Of Gender In The Indian Context*. Delhi: Sage Publications , 2018.

Furr Allen. L. *Women, Violence And Social Stigma : A Sociology Of Burn Attacks*. Jaipur: Rawat publications, 2018.

Marchbank, Jennifer. *Introduction To Gender*. New York : Routledge, 2014.

Pangannavar, Arjun yallappa. *Self - Help Groups (Shgs) And Women Empowerment*. New Delhi: New Century Publications, 2017.

Varshney, Indu. *Women Entrepreneurship And Economic Development*. New Delhi: Kunal Books , 2017.

Visvanathan Nalini, *The Women, Gender and Development Reader*, Canada: Fernwood Pub, 2011.

JOURNALS

Indian Journal of Gender Studies, Sage Publications

Journal of Gender Studies, Taylor and Francis

International Journal of Gender and Women's Studies, Metropolitan College of New York, USA

WEB RESOURCES

www.unwomen.org

www.un.org/womenwatch/daw/cedaw

www.ncw.nic.in

www.wcd.nic.in/wdcact.pdf

www.censusindia.gov.in

PATTERN OF ASSESSMENT

Continuous Assessment Test: Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PE/GS13												
	Course Title: GENDER AND SOCIAL WORK PRACTICE												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	3	2	3	3	3	3	3	2	2
CO 2	3	2	2	3	2	2	2	3	2	3	2	3	2
CO 3	3	2	2	2	2	2	2	2	2	2	3	3	3
CO 4	3	2	2	2	2	3	3	2	3	3	2	2	2
CO 5	2	3	3	2	2	3	2	2	3	2	2	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023 -2024)

ENVIRONMENTAL SOCIAL WORK

CODE : 23SW/PE/ES13

CREDITS : 3

L T P : 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to understand concepts, theory, values for incorporating study of the environment in social work education and practice
- to enhance abilities to work towards ensuring sustainable environments and sustainable living
- to adopt a renewed stance to change by valuing the environment and ensuring ecological justice
- to direct efforts to conserve the environment through adoption of sustainable practices
- to develop skills to create awareness, mobilise and initiate community action with regard to the environment

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	develop consciousness on the environment and its related issues for Social Work practice	K1, K2
CO2	acquire skills to address environment related social problems	K3
CO3	analyse environmental crises and appreciate people's movements for environmental conservation	K4
CO4	support, promote viable processes and products and initiate community action with regard to the environment	K5
CO5	develop commitment to environment protection, sustainability and ecological justice	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Concepts and Perspectives on the Environment 1.1 Environment, Ecology -Concept, Philosophy and approaches – Biocentrism and Anthropocentrism 1.2 Environmental Impact: Global Warming, Climate Change, Pollution, Waste disposal and Sanitation, Over-Population, Ground Water Depletion, Deforestation, Ozone Layer Depletion, Loss of Bio- diversity. 1.3 Environmental Impact Assessment: Definition, process, stakeholders 1.4 Overview of perspectives on the Environment – Gandhian thought on Environment; Eco-Spirituality Eco- centric perspective- Environment in the person theory for Social Work education and practice	K1-K6	9	1-5
2	Green Social Work 2.1 Definition, Rationale, Scope of Social Work Practice in environment conservation 2.2 Natural Resources, Renewable and Non-Renewable Resources, Resources depletion. Environmental calamities: natural and man made 2.3 Industrialisation, Globalisation and Urbanisation and their impact on the environment. Displacement, relocation and rehabilitation issues due to construction of dams and infrastructure 2.4 Environment Justice and Social Justice 2.5 Role of a Social Worker in creating awareness, intervening, networking with organisations, advocacy, research, policy formulation and social action for change	K1-K6	9	1-5
3	Environmental Conservation and Sustainable Practices 3.1 Environment Conservation -definition and importance for sustainable development 3.2 Sustainable practices: Solar energy, Promotion of alternate energy resources, Tree Planting, Composting Waste, Seed Banks, Organic Farming, Water Conservation through restoration of water bodies, Rain Harvesting, Sacred Grove Conservation, Waste Segregation and Recycling	K1-K6	8	1-5
4	Environmental Consciousness and Commitment 4.1 Environment Consciousness- Concept, Environmental education for schools, Colleges, public 4.2 Overview of Environmental Audit, Energy Audit 4.3 Overview of Social-Ecological movements in India- Chipko Movement, Silent Valley, Narmada Bachao Andolan, Kudankulam Movement, Pallikarnai Marsh Reserve, Ban on Plastic	K1-K6	7	1-5

UNIT	CONTENT	CL	Hrs	CO
5	Environmental Conventions, Protocols, Policies for a Safe and Sustainable Environment 5.1 Sustainable living, Sustainable Development Goals for Protecting the Environment, 5.2 United Nations Framework Convention on Climate Change (UNFCCC), Paris Agreement 5.3 National Environment Policy (2006) 5.4 Role and Function of the Ministry of Environment, Forest and Climate Change, Central Pollution Control Board (CPCB), Tamil Nadu Pollution Control Board	K1-K6	6	1-5

BOOKS FOR STUDY

Dominelli, L. *Green Social Work- From Environment Crisis to Environmental Justice*. Jaipur: Rawat, 2018
 Gupta, S. *Environment and Social Issues*: New Delhi: Swarup & Sons, 2000
 Kumar, A. *Environmental Challenges of the 21 Century*. New Delhi: APH, 2003
 Ed. Singh, R.B. *Natural Hazards and Disaster Management- Vulnerability and Mitigation*. Jaipur: Rawat, 2015

BOOKS FOR REFERENCE

Chakrabarti, P.G. Ed. *Global Sustainable Development – Assessing Progress of Regions and Countries*. New Delhi: Oxford University, 2015
 Ghosh, M.K. *Sustainable Development -Environment, Energy and Water Resources*. Ed1. New Delhi: Ane Books, 2015
 Kapila, R., Kapila, Uma. Ed. *Indian Agriculture in the Changing Environment*. Ghaziabad: Academic Foundation, 2002
 Padke, V.S., Banerjee, S. *Urbanisation, Development and Environment*. New Delhi: Rawat
 Prasad, A. Ed. *Environment, Development and Society in Contemporary India- An Introduction*. Delhi: Macmillan India, 2008
 Sinha, P. *Disaster Mitigation, Preparedness, Recovery and Response*. New Delhi: SBS, 2006
 Sinha, P. *Disaster Vulnerabilities and Risks- Trends, Concepts, Classification and Approaches*. New Delhi: SBS, 2006
 Siva, Vandana. *Talking Environment*. New Delhi: Oxford University Press, 2013
 UNESCO. *Global Education Monitoring Report: Education for People and Planet- Creating Sustainable Futures for All*. UNESCO, 2016

WEB RESOURCES

<https://sustainabledevelopment.un.org/>
<https://www.indiacelebrating.com/environmental-issues/natural-resources-depletion/>
<https://www.researchgate.net/publication/241748223>
www.moef.gov.in/sites/default/files/introduction-nep2006e.pdf
www.cpcb.nic.in/
<https://www.envfor.nic.in/>

JOURNALS

Social Work Research and Global Environmental Change
 The British Journal of Social Work, Volume 47, Issue 1, 1 January 2017
 Journal of Social Service Research 28(2):47-68 · April 2002

PATTERN OF ASSESSMENT**Continuous Assessment Test: Total Marks: 50****Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1	4	2×2 = 4 Answer all in 50 words each
B	K2	6	2×3=6 Answer all in 75 words each
C	K3	8	1×8 = 8 Answer 1 out of 2 questions in 300 words
D	K4	12	1×12 =12 Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	1×20 = 20 Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:**Total Marks: 50**

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	8	4×2 = 8 Answer all in 50 words each
B	K2	12	4×3 =12 Answer all in 75 words each
C	K3	16	2 x 8 =16 Answer 2 out of 4 questions in 300 words each
D	K4	24	2 x12 = 24 Answer 2 out of 4 questions in 400 words each
E	K5	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words
	K6	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PE/ES13												
	Course Title: ENVIRONMENTAL SOCIAL WORK												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	1	3	3	3	3	3	3	3	2	3
CO 2	3	2	3	1	3	3	3	3	3	3	3	2	3
CO 3	3	2	3	1	3	3	3	3	3	3	3	2	3
CO 4	3	2	3	1	3	3	3	3	3	3	3	2	3
CO 5	3	2	3	1	3	3	3	3	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

SOCIAL WORK WITH ADDICTIVE BEHAVIOUR

CODE: 23SW/PE/AB13

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to enable the students to understand the various perspectives of addictive behaviours
- to learn the impact of addictive behaviours on individuals, families and societies
- to develop skills in students to envisage, plan and work out social work intervention strategies in working with persons with addictive behaviour
- to appraise and recommend the appropriate methods of rehabilitation, after care, relapse prevention, activities of daily living (rescheduling) with specific reference to addiction
- to learn the application of preventive strategies

COURSE LEARNING OUTCOMES

On successful completion of this course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the basic concepts and perspectives of addictive behaviours	K1
CO2	discuss issues related to addiction and its impact on different systems	K2
CO3	demonstrate skills in planning Social Work intervention strategies to address different types of addictive behaviours	K3
CO4	compare different psychosocial interventions for recovery from addictive behaviours	K4
CO5	critique the policies and strategies to redress addictive behaviours and design appropriate preventive interventions for different target groups	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Addictive Behaviours 1.1 Concept and nature of addictive behaviours. Global and National Scenario 1.2 Common addictions – substances of abuse – alcohol, drugs, technology addiction, pathological gambling, race driving 1.3 Drug Dependence: Concept of drugs, Use and abuse of drugs. Legal and illegal drugs (NDPS Act) Kinds of drugs – classification, Meaning of substance abuse, tolerance, withdrawal state, drug dependence	K1 – K4	8	1-4
2	Alcohol Dependence, Treatment, Relapse, follow up of substance dependence 2.1 Alcohol Dependence – its different stages - Causative factors of addiction 2.2 Personality of the alcohol dependent person, Individual and group psychological assessment scales, Consequences of dependence 2.3 Treatment - Medical and psychosocial treatment– Identifying goals for treatment, treatment related issues, Psychoeducation, Individual, group and family therapy, Role of self-help groups, therapeutic communities, follow up 2.4 Relapse and recovery - definition, characteristics of relapse. Relapse prevention, Need for continued follow up.	K1-K4	8	1-4
3	After Care, Rehabilitation and Prevention of addiction 3.1 Community Based Rehabilitation - Concept of ‘After Care’ and ‘Rehabilitation’. Setting goals of after care and rehabilitation. Half way homes, day care centres. Camp approach, self - employment and vocational rehabilitation 3.2 Role of Governmental and Non-governmental organisations - TTK 3.3 Prevention of substance abuse – Primary, Secondary, Tertiary levels of prevention. 3.4 Role of Social Worker	K1 – K4	8	1-4
4	Technology Addiction 4.1 Concept, Compulsive Internet use, Excessive Mobile phone use, Social Media Addiction, Gaming disorder, Cybercrime. Consequences of unsafe use of technology, - Physical, psychological and social. 4.2 Overcoming technology addiction, preventing technology addiction, responsible use of technology 4.3 Role of Social Worker	K1 – K6	7	1- 5

UNIT	CONTENT	CL	Hrs	CO
5	Gambling Disorder 5.1 Pathological Gambling, Shopping addiction and other addictions 5.2 Pathological Gambling, Shopping addiction – nature, causes, consequences. Dealing with pathological gambling and shopping addiction. 5.3 Role of Social Work 5.4 Laws relating to addiction – NDPS ACT 1985	K1-K6	10	1- 5

BOOKS FOR STUDY

Palmer, Sharon Duca (Ed.) *Social Work in Mental Health and Substance Abuse*. Apple Academic Press, 2011
 Schuckit, Marc, A. *Drug and Alcohol Abuse – A Clinical Guide to Diagnosis and Treatment*. Springer. 2006

BOOKS FOR REFERENCE

Ahuja, Niraj. A *Short Textbook of Psychiatry*. 7th Edition. Jaypee Brothers, 2011.
 Corey, Schneider Marianne, Corey, Gerald. *Groups – Processes and Practice*. Brooks/Cole Thomson, 2002.
 Ranganathan, Shanthi. *Treatment of Alcoholism. The Community Approach*. TTR Clinical Foundation

JOURNALS

Indian Journal of Psychiatry
 Mental Health Weekly. <https://onlinelibrary.wiley.com>
 Psychiatry Today. [http://www.imh.org.rs/en/publications/psychiatry today/](http://www.imh.org.rs/en/publications/psychiatry%20today/)
 Psychiatric Rehabilitation Journal. <http://www.bu.edu/cpr/prj/>
 Counsellor. <http://cassonnigeria.org/index.html>

WEB RESOURCES

<http://www.counselling-directory.org.uk/counselling.html>
<http://www.ncbi.nlm.nih.gov/books/NBK64342/Chapter5-TherapeuticCommunities>
<https://nlist.inflibnet.ac.in>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:**Total Marks: 50**

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PE/AB13												
	Course Title: SOCIAL WORK WITH ADDICTIVE BEHAVIOUR												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	2	2	3	3	3	3	2	2
CO 2	3	3	3	3	2	2	2	3	3	3	3	2	3
CO 3	3	3	3	3	3	3	3	2	2	3	3	3	3
CO 4	2	2	2	2	2	2	3	2	3	2	2	2	3
CO 5	2	3	3	2	2	3	3	3	2	2	2	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTERS OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023–2024)

DISASTER MANAGEMENT

CODE: 23SW/PE/DM13

CREDITS:3

L T P:3 0 0

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- to gain knowledge on the key concepts related to disasters and its classification
- to understand the disaster management cycle and the interconnectedness of these phases
- to examine response and recovery strategies including emergency response plan, search and rescue operations and post disaster recovery efforts
- to explore the role of policies, governance, structures, and legal frameworks in disaster management
- to understand the role of Social Work in Disaster Management

COURSE LEARNING OUTCOMES

On successful completion of this course, students will be able to

COs	DESCRIPTION	CL
CO1	define disaster and key concepts of disaster	K1
CO2	explain the different types of disasters, its impact, and demonstrate effective risk communication strategies in emergency response	K2
CO3	apply skills and strategies in disaster situations strategies and how to deal with crisis communication and media relations	K3
CO4	analyse the factors contributing to disaster risk and the policies, governance structures and national and international frameworks for disaster risk reduction and disaster management	K4
CO5	assess disaster situations, the psychological and social challenges in disaster recovery, and design public awareness and education campaigns/programmes	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Disaster and Disaster Management 1.1 Meaning, definition and concept of Disaster; Key concepts related to disaster: Hazard and Vulnerability, Risk and Capacity 1.2 Classification of Disasters: Natural – Geophysical, Hydrological, Climatological, Meteorological and Biological. Man-made – War, Environmental Degradation, Pollution and Accidents 1.3 Disaster Management Cycle	K1-K4	8	1-5
2	Disaster Risk Assessment, Vulnerability and Mitigation 2.1 Disaster Risk: Concept and analysis of risk, risk reduction; Risk Assessment: Hazard assessment and mapping, Risk Assessment methods 2.2 Vulnerability: Concept, and analysis and capacity assessment 2.3 Disaster Mitigation: Concept, meaning, guiding principles, approaches and strategies	K1 – K4	8	1-5
3	Disaster Response and Recovery 3.1 Incident Command Systems (ICS) 3.2 Emergency Response Planning, and Search and Rescue Operations 3.3 Humanitarian Assistance and Relief 3.4 Post Disaster Recovery Planning 3.5 Psychosocial Aspects of Disaster – Post Traumatic Stress Disorder and Psychosocial care, and Social Aspects of Recovery	K1 – K6	7	1-5
4	Policy and Governance in Disaster Management 4.1 United nations Office for Disaster Risk Reduction 4.2 The Sendai Framework for Disaster Risk Reduction 2015-2030 and COP 21 4.3 Sustainable Development Goals and Disaster Management 4.4 National Disaster Management Act, 2005 4.5 National Policy on Disaster Management, 2009 4.6 The National Disaster Management Plan, 2019 4.7 National Institute of Disaster Management 4.8 Institutional Framework for Disaster Management in India; National Disaster Management Authority; State Disaster Management Authority; National Disaster Response Force; State Disaster Response Force	K1 – K6	8	1-5
5	Disaster Management Interventions 5.1 Training for disaster preparedness, Public Awareness and Education, Community-based Disaster Risk Reduction, Fire Fighting and First Aid Training 5.2 Technology: Use of GIS, remote sensing techniques and warning systems; Communication in disasters – HAM, Radio, Satellite and Video conferencing 5.3 Role of Government and International Agencies in Disaster Management 5.4 Crisis Communication and Media Relations: Role of Media and Social Media in Disaster Management 5.5 Role of Social Work in Disaster Management	K1 – K6	8	1-5

BOOKS FOR STUDY

Bose, B., C. *Disaster Management in India*. New Delhi :Rajat, 2007

Goel, S., L. *Encyclopedia of Disaster Management*. New Delhi: Deep & Deep, 2007

BOOKS FOR REFERENCE

Abhas K. Jha and Zuzana Stanton-Geddes. *Building Urban Resilience: Principles, Tools, and Practice*. World Bank Publications, 2019

Armando Barrientos, Desh Gupta, and Michael R. Carter. *Disasters and Social Protection: Mechanisms, Risk Reduction, and Policy*. Oxford University Press, 2020

Christine Wamsler and Ebba Brink. *Disaster Risk Reduction: Cases from Urban Africa*. Springer, 2020

David A. McEntire. *Disaster Response and Recovery: Strategies and Tactics for Resilience*. Wiley, 2019

Goel, S., L. *Disaster Management Organisations and Management, Health Management of Human Being and Animals*. New Delhi: Deep & Deep, 2001

Ilan Kelman. *Disasters: Core Concepts and Ethical Theories*. Routledge, 2020

Muhammad Zeeshan Shakir, Momena Kiani, and Shahzad Ali. *Disaster Risk Reduction Approaches in Pakistan*. Springer, 2020

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Newburn, Tim. *Disaster & After*. London: Jessica Kingsley, 1993

Prabhas, Chandra, Sinha. *Disaster Management Process, Law, Policy & Strategy*. NewDelhi: SBS, 2006

Prabhas, Chandra, Sinha. *Disaster Relief, Rehabilitation & Emergency Humanitarian Assistance*. New Delhi: SBS, 2006

Prabhas, Chandra, Sinha. *Disaster Vulnerabilities & Risks*. New Delhi: SBS, 2006. Prabhas, Chandra, Sinha. *Disaster Mitigation, Preparedness, Recovery & Response*. NewDelhi: SBS, 2006

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Sanjay, K., Roy. *Refugees and Human Rights*. Jaipur: Rawat, 2001

Singh, R., B. *Disaster Management*. Jaipur: Rawat, 2000

Smita. *Locked Homes Empty Schools*. New Delhi: Zubaan, 2007

Susan F. Martin and Sanjula Weerasinghe. *Humanitarian Crises and Migration: Causes, Consequences, and Responses*. Routledge, 2020

Verma, K. Manish. *Development, Displacement and Resettlement*. Jaipur: Rawat, 2004

JOURNALS

International Journal of Disaster Risk Reduction

International Journal of Emergency Management

International Journal of Environmental Research and Public Health

Journal of National Institute of Disaster Management

Journal of Geological Society of India

Disaster Prevention and Management

Indian Journal of Disaster and Trauma Studies

Journal of Emergency Management

Environmental Hazards

WEB RESOURCES

<https://ndma.gov.in/>
www.disasterready.org/
<https://www.undp.org/crisis-response>
<https://www.unocha.org/>
<https://www.unicef.org/emergencies>
<https://www.who.int/emergencies/overview>
<https://www.fao.org/emergencies/en/>
<https://www.unhcr.org/emergencies>
<https://www.fema.gov/>
<https://www.undrr.org/>
<https://www.ifrc.org/>
<https://www.cdc.gov/cpr/>
<https://www.nifc.gov/>
<https://www.dec.org.uk/>
<https://www.gdacs.org/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
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Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based assignment will be given which is compulsory

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	K6	20	1 x 20 = 20 Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PE/DM13												
I	Course Title: DIASTER MANAGEMENT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	3	3	2	2	3	3	3	2	3
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CO 3	3	3	3	2	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	2	3	3	3	3	3	3	3	2	3
CO 5	3	2	2	2	3	2	3	3	2	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023–2024)

CORPORATE SOCIAL RESPONSIBILITY

CODE: 23SW/PE/CS13

CREDITS:3

L T P:3 0 0

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- to understand the concept of corporate social responsibility (csr), its evolution, theories, models and ethical considerations of csr
- to know the legal and regulatory frameworks governing csr activities
- to learn the scope of social work in csr activities improving the standard of living of the marginalized
- to examine the role of csr in addressing environmental and social challenges in different sectors
- to critically assess case studies of CSR initiatives and their outcomes

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	appreciate the role of CSR in social change and transformation	K1
CO2	develop strategies and skills for effective CSR planning, implementation and evaluation	K2
CO3	assess the role of CSR in addressing environmental and social challenges in different sectors	K3
CO4	analyse the ethical dimensions of CSR and its relevance to Social Work Practice	K4
CO5	evaluate the impact of CSR activities on various stakeholders and plan CSR initiatives identifying opportunities for collaboration between non-profit organisations and corporate sectors	K5 & K6

CL – Cognitive Level

K1 – Remember | K2 – Understand | K3 – Apply | K4 – Analyse | K5 – Evaluate | K6 – Create

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Corporate Social Responsibility (CSR), History and Evolution, Theories, Models and Ethical Considerations of CSR 1.1 Understanding CSR: Concept of Sustainability and Social responsibility. Meaning and definition of CSR, Corporate Citizenship, Significance of CSR in India 1.2 History and evolution of CSR: Global and India 1.3 Theories and Models of CSR: Carroll's Pyramid Model of CSR, Triple Bottom Line CSR Theory, Stakeholder Theory and Models of CSR in India – Ethical, Statist, Liberal and Stakeholder 1.4 Ethical Considerations of CSR	K1-K4	10	1-5
2	Legal and Regulatory Frameworks 2.1 International CSR standards and guidelines 2.2 CSR Laws and Regulations in India - National Voluntary Guidelines, The Companies Act 2013 2.3 CSR related sections, schedules and rules under the Companies Act – Section 134, 135, 171, 172, 188,198, 443, 450 and Scope for CSR Activities under Schedule VII	K1-K4	7	1-5
3	International Framework for Corporate Social Responsibility 3.1 Relationship between Sustainable Development Goals (SDGs) and Corporate Social Responsibility 3.2 United Nations Global Compact 3.3 United Nations Guiding Principles on Business and Human Rights 3.4 International Labour Organisation Tripartite Declaration of Principles Concerning Multinational Enterprises on Social Policy 3.5 OECD Guidelines for Multinational Enterprises 3.6 ISO 26000 Guidance Standard on Social responsibility	K1-K6	7	1-5
4	CSR in Practice and Stakeholder Engagement 4.1 Corporate Philanthropy and Charitable giving; Corporate volunteerism and employee engagement; socially responsible business practices 4.2 Identification and management of stakeholders, ethical dilemmas in CSR decision-making 4.3 Needs assessment and community engagement, strategies in designing CSR programmes, its implementation, monitoring and evaluation, reporting of programmes and project writing	K1-K6	7	1-5
5	Trends and Opportunities for Collaboration in CSR, Role of Social Work in CSR, and Case Studies 5.1 Opportunities for Collaboration: Non-Profit Organisations as Partners in CSR, Scope of CSR in Social Work 5.2 Challenges in CSR 5.3 The role of Social Work in CSR, Skills for CSR 5.4 Case Studies – Murugappa Group, Larsen and Toubro, Vikatan Group, Tech Mahindra, TATA	K1-K6	8	1-5

BOOKS FOR STUDY

Agarwal. K. Sanjay, *Corporate Social Responsibility in India*. New Delhi: Sage Publications, 2008

Carroll, A. B., & Shabana, K. M. *The Business Case for Corporate Social Responsibility: A Review of Concepts, Research, and Practice*. Oxford University Press, 2018

BOOKS FOR REFERENCE

Benn and Bolton, *Key concepts in Corporate Social Responsibility*. Australia: Sage Publications Ltd, 2011

Bradshaw, T. and D. Vogel, *Corporations and their critics: Issues and answers to the problems of Corporate Social Responsibility*. New York: McGraw Hill Book Company, 1981

Carroll, A. B., & Buchholtz, A. K. *Business and Society: Ethics, Sustainability, and Stakeholder Management*. Cengage Learning, 2018

Crane, A., Matten, D., & Spence, L. J. *Corporate Social Responsibility: Readings and Cases in a Global Context*. Routledge, 2019

Crane, A. et al., *The Oxford handbook of Corporate Social Responsibility*. New York: Oxford University Press Inc., 2008

Panda. K. Sanjay, *Corporate Social Responsibility in India- Past, Present and Future*. Hyderabad: The ICFAI University Press, 2008

Soundarapandian M, *Corporate Social Responsibility and Sustainable Development Vol I & II*. New Delhi :Concept Publishing Company, 2014

Visser, W. *The World Guide to Sustainable Enterprise*. Volume 2: Asia Pacific. Greenleaf Publishing, 2020

JOURNALS

International Journal of Corporate Social Responsibility

Indian Journal of Corporate Social Responsibility

Journal of Corporate Social Responsibility and Environmental Management

The Journal of Corporate Citizenship

Social Responsibility Journal

WEB RESOURCES

<https://csr.gov.in/content/csr/global/master/home/home.html>

<https://www.unglobalcompact.org/>

<https://www.ethicalcorp.com/>

<https://dpe.gov.in/>

<https://niti.gov.in/>

<https://www.bis.gov.in/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project/ Workshops

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23SW/PE/CS13												
	Course Title: CORPORATE SOCIAL RESPONSIBILITY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	3	3	3	3	3	3	3	3	2	3	2	3
CO 2	2	2	3	3	2	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	2	3	3	2	3	3	3	3	2	3	3	3
CO 5	3	3	3	3	2	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023 -2024)

SOCIAL AUDIT

CODE: 23SW/PE/SA13

CREDITS: 3

LTP: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to understand the concepts , history scope and principles of social audit
- to demonstrate the knowledge to assess the physical and financial gaps between needs and resources
- to understand the role of social audit towards promoting good governance and peoples participation
- to utilize the skills ,techniques processes to build effective local governance
- to develop the ability to use social auditing techniques to empower the marginalized groups

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	relate the concepts of social audit , meaning and its types	K1
CO2	demonstrate knowledge and skills in utilizing different tools and techniques of social audit for promoting the peoples participation in development	K2
CO3	apply knowledge and skills to assess the effective utilization of welfares sand development projects . required of a development	K3
CO4	analyse the role of institutions – Government and Not for profit Organisations and apply innovative solutions for challenges in governance	K4
CO5	critically evaluate and explore suitable strategies of social auditing to promote transparency and peoples participation in development	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Social Audit 1.1 Introduction and Concept, Definition, Social Audit Vs Other Audits, 1.2 History of Social Audit, Principles: Foundation values, Pillars of Social Audit, Universal values; 1.3 Purpose, Functions, Benefits 1.4 Scope, Stakeholders; Sectors for application; Salient features of Social Audit	K1-K5	8	1-5

UNIT	CONTENT	CL	HRS	CO
2	Social Audit Design and Methodology 2.1 Designing Social Audit, Salient features - Designing the Data Collection, Traditional Social Indicators, 2.2 Core values linked to indicators, Identifying and selecting indicators, role of stakeholders, 2.3 Report preparations; Key characteristics of a social auditor	K1- K4	8	1-5
3	Social Audit Process 3.1 Key components of an audit process- Social, Economic, Political, Environmental, Health and Education. 3.2 Steps in auditing- Preparatory Activities, Defining Audit Boundaries and Identifying Stakeholders, Social Accounting and Book-keeping, Preparing and Using Social Accounts, Social Audit and Dissemination 3.3 Feedback and Institutionalisation of Social Audit, Checklists, Social Audit Cycle	K1 -K6	10	1-5
4	Good Governance and Social Audit 4.1 Accountability Mechanisms: Government Initiatives, Citizens' Charters, Civil Society Initiatives 4.2 Right to Information Movement (Cases from India) 4.3 Social Auditing and Performance Evaluation	K1 -K6	5	1-5
5	Social Audit Frameworks and Tools 5.1 Social Process Audit, Financial Statements Format Social Audit 5.2 Macro-Micro Social Indicator Audit, Social Performance Audit 5.3 Partial Social Audit – Environment, Energy, Human Resource Auditing, comprehensive audit, Questionnaire, Survey, Interview guide 5.4 Problems encountered in Social Auditing	K1 -K6	4	1-5

BOOKS FOR STUDY

Free Spreckely, *Social Audit Toolkit* - 3rd Edition, Social Enterprise Partnership - LocalLivihoods, (2000)

John Pearce, *Social Audit and Accounting: Community Business Scotland* (CBS) Network(2001)

BOOKS FOR REFERENCE

John Pearce, Peter Raynard, and Simon Zadek *Social Auditing for Small Organisations: A Workbook for Trainers and Practitioners*, New Economics Foundation, London (1996)

Johnson, Gerry and Scholes, Kevan. *Exploring Corporate Strategy*, Sixth edition, Prentice-Hall of India, New Delhi (2004)

Rao, V S P and Hari, Krishna V. *Strategic Management, Texts and Cases*, First Edition, ExcelBooks New Delhi (2003)

Jr. Thompson A Arthur, III Strickland, A.J. *Strategic Management, Concept sand Cases*, Thirteenth edition, 2003, Tata McGraw Hill Publishing, New Delhi, (2003)

Centre for Good Governance, Hyderabad, Social Audit: A Tool for Performance Improvementand Outcome Measurement. (2005)

Velasquez, G. Manuel. *Business Ethics, Concepts and Cases*, Fifth edition, Prentice Hall ofIndia, New Delhi, (2002).

WEB RESOURCES

<http://egyankosh.ac.in/bitstream/123456789/16061/1/Unit-16.pdf>

<http://www.fao.org/docrep/006/ad346e/ad346e09.html>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	4	$2 \times 2 = 4$ Answer all in 50 words each
B	K2	6	$2 \times 3 = 6$ Answer all in 75 words each
C	K3	8	$1 \times 8 = 8$ Answer 1 out of 2 questions in 300 words
D	K4	12	$1 \times 12 = 12$ Answer 1 out of 2 questions in 400 words
E	K5 & K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words (questions will include two parts for K5 and K6 levels - 500 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based Assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation /Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	8	$4 \times 2 = 8$ Answer all in 50 words each
B	K2	12	$4 \times 3 = 12$ Answer all in 75 words each
C	K3	16	$2 \times 8 = 16$ Answer 2 out of 4 questions in 300 words each
D	K4	24	$2 \times 12 = 24$ Answer 2 out of 4 questions in 400 words each
E	K5	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words
	K6	20	$1 \times 20 = 20$ Answer 1 out of 2 questions in 1000 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23SW/PE/SA13												
	Course Title: SOCIAL AUDIT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	3	3	3	3	3	3	3	2
CO 2	3	3	3	2	3	2	3	3	3	3	2	3	3
CO 3	3	3	3	2	3	2	3	3	3	2	3	3	3
CO 4	3	3	2	2	3	3	3	3	3	3	3	2	3
CO 5	3	3	2	3	2	3	3	3	3	3	2	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

Postgraduate Elective Course offered by the Department of Social Work for

M.A. / M.Sc. M.Com. Degree Programmes

SYLLABUS

(Effective from the academic year 2023-2024)

INDIAN CONSTITUTION AND HUMAN RIGHTS

CODE: 23SW/PE/IH23

CREDITS:3

L T P:3 0 0

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- To know the historical evolution of the Indian Constitution, its importance, the features of the Preamble of the Indian Constitution, Fundamental Rights, Directive Principles of State Policy and Fundamental Duties
- To provide an understanding on the historical evolution of Human Rights, its importance and sensitise students on Human Rights Violations of the Vulnerable Groups
- To analyse the role of Constitutional Institutions, Law Enforcement Mechanisms and the Human Rights Non-Profit Organisations in promoting human rights

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	Comprehend the significance of the Constitution of India and acquire knowledge of Human Rights	K1
CO2	Identify Human Rights Violation and work for the protection and promotion of rights of the vulnerable.	K2
CO3	Analyze how the application of Legal Frameworks and Institutions – national and international human rights bodies – are applied to protect and promote human rights	K3, K4

UNIT	CONTENT	CL	HRS	CO
1	Introduction to the Constitution of India 1.1 Indian Constitution: Meaning, Importance, basic features of the Indian Constitution and Historical Background 1.2 The Preamble, Fundamental Rights, Directive Principles of State Policy, Fundamental Duties, Citizenship, Constitutional Remedies for Citizens 1.3 Structure of Government - Union, State and Local (Overview): Union Government – Union Legislature, Union Executive and Union Judiciary; State Government – State Executive, State Legislature and State Judiciary; Local Government – Rural and Urban	K1-K4	7	CO1-3

2	Introduction to Human Rights 2.1 Human Rights – Meaning, Definition, Importance and Categories of Human Rights 2.2 Historical Evolution of Human Rights 2.3 Universal Declaration of Human Rights (UDHR) 2.4 Human Rights and the UN System	K1-K4	7	CO1-3
3	Law and Human Rights 3.1 Indian Constitution and Human Rights – Judiciary and Human Rights, Indian Penal Code, Criminal Procedure Code 3.2 India’s International Human Rights Obligations - International Convention on the Elimination of All Forms of Racial Discrimination (ICERD), International Covenant on Economic, Social and Cultural Rights (ICESCR), International Covenant on Civil and Political Rights (ICCPR), Convention on the Rights of the Child (CRC), Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) 3.3 International Humanitarian Law – Meaning, Importance and principles, origin, main instruments functions, and limitations	K1-K4	8	CO1-3
4	Vulnerable Groups and Human Rights 4.1 Children, Women, Elderly, and Disabled The Scheduled Caste and the Scheduled Tribes 4.2 Persons belonging to Minorities – Ethnic, Religious, Linguistic 4.3 The Internally Displaced Persons, Unorganised Labourers, Transgenders 4.4 Migrant Workers, Refugees, Stateless Persons, and Enforced Disappearance	K1-K4	9	CO1-3
5	Human Rights Enforcement Mechanism in India and Role of Human Rights Non-Profit Organisations 5.1 Protection of Human Rights Act, 1993, National Human Rights Commission (NHRC) and State Human Rights Commission (SHRCs) 5.2 Community Service Register (CSR), First Information Report (FIR), Public Interest Litigation (PIL), Right to Information (RTI), Free Legal Aid 5.3 United Nations – Instruments and mechanisms 5.4 Role of Human Rights Non-Profit Organisations – Amnesty International, Human Rights Watch, People’s Union of Civil Liberties (PUCL), People’s Union for Democratic Rights (PUDR). 5.5 Strategies and skills for Human Rights Advocacy	K1-K4	8	CO1-3

BOOKS FOR STUDY

Agarwal H. O. International Law and Human Rights, Central Law Publications, 2016
Chandra, U. Human Rights, India. Allahabad Law Agency, 2000
Krishna V.R. Iyer. Human Rights and Inhuman Wrongs. United Kingdom: B.R., 2001

BOOKS FOR REFERENCE

Agarwal R. C. *Indian Political System*. S. Chand and Company: New Delhi, 1997
Durga Das Basu. *Introduction to the Constitution of India*. Prentice Hall of India: New Delhi, 2019
Kumar Arvind. *Encyclopedia of Human Rights, Violence and Non Violence*. New Delhi: Anmol, 2002
Kumar Das Ashish and Prasant Kumar Mohanty. *Human Rights in India*. Sarup & Sons New Delhi, 2007
Kumar Singh Pramod and Sanju Singh. *Leading Cases on Human Rights and Social Justice*. Whitesmann Publishing Co., 2023
Parmar Lalit. *Human Rights*. New Delhi: Anmol, 1998
Sharma R.S. *Human Rights Development*. New Delhi: Common Wealth, 1997
Sharma, Brij Kishore. *Introduction to the Constitution of India*. Prentice Hall of India: New Delhi, 2015

JOURNALS

The International Journal of Human Rights ISSN 1364 – 2987
International Journal of Constitutional Law
South Asian Journal of Human Rights
National Law School of India Review
Indian Journal of Constitutional Law
Indian Journal of Human Rights and Law
Journal of Indian Law Institute
Journal of Constitutional Law & Jurisprudence
Journal of Law and Public Policy

WEB RESOURCES

<https://legislative.gov.in/>
<https://nhrc.nic.in/>
<https://www.mha.gov.in/en>
<https://nalsa.gov.in/>
<https://www.hrw.org/>
<https://www.icrc.org/>
<https://www.amnesty.org/en/>
<https://www.ohchr.org/en/ohchr>
<https://www.unicef.org/>
<https://www.iom.int/>
<https://www.refugeesinternational.org/>
<https://www.who.int/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all in 50 words each
B	K2	20	2 x 10 = 20 Answer any 2 out of 3 questions in 300 words each
C	K3 & K4	20	1 x 20 = 20 Answer 1 out of 2 questions in 600 words (questions will include two parts for K3 and K4 levels - 300 words each respectively)

Other Components:

Total Marks: 50

Two components will be conducted for 50 marks (25 marks each) – of which 1 field based assignment will be given which is compulsory

The second component will be a Seminar Presentation/ case study/ group presentation / Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1	20	10 x 2 = 20 Answer all in 50 words each
B	K2	40	4 x 10 = 40 Answer any 4 out of 6 questions in 300 words each
C	K3	20	1 x 20 = 20 Answer 1 out of 2 questions in 600 words
D	K4	20	1 x 20 = 20 Answer 1 out of 2 questions in 600 words

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023–2024)

DISPLACEMENT, MIGRATION AND REFUGEE ISSUES

CODE: 23SW/PI/DR24

CREDITS:4

OBJECTIVES OF THE COURSE

- to trace the history of displacement, migration and refugee issues
- to understand the problems and challenges of displacement, migration and refugee issues
- to understand the causes of displacement, migration and refugee issues
- to comprehend the key principles (legal, political and ethical) related to displacement, migration and refugee issues
- to understand and apply theory and models in the direct and indirect practices while working in such issues

COURSE LEARNING OUTCOMES

On successful completion of this course, students will be able to

- appreciate the complexity of contemporary processes of displacement, migration and refugee issues from different perspectives
- engage in contemporary debates on forced migration and humanitarian responses from an inter-disciplinary perspective, drawing on insights from historical experiences and current cases
- think critically and creatively about policies related to displacement, migration and refugees
- engage in planning social work interventions at all levels
- engage in policy-oriented research

Unit 1 (8 Hours)

Introduction

- 1.1 Basic Concepts and Definition: Displacement, Migration, Refugees, Causes and Consequences.
- 1.2 Historical overview- Migration, The Global Population Movements in Historical Retrospect
- 1.3 Causes, Types, Issues and Challenges

Unit 2 (11 Hours)

Displacement Issues

- 2.1 Problems of Displacement – Social, Economic, Psychological, Cultural,
- 2.2 UNHCR Global Trends; Forced Displacement 2015, IDPs
- 2.3 Legislations – The Displaced Persons Claims and Other Laws Repeal Bill (2004), Programmes, Services,
- 2.4 Rehabilitation, Problems of Rehabilitation – Awareness, Resources, Opportunities, Issues and Challenges

Unit 3 (12 Hours)
Migration Issues

- 3.1 Globalisation and Migration; Trends in International Migration; Skill and Gender Composition of Migration Flows - India Diaspora – Remittances – Socio Cultural Implications
- 3.2 UN Convention 1990- UN International Migration Policies, Role and Functions of Ministry of Overseas Affairs, IOM (International Organisation for Migration), International Migration Law
- 3.3 Migration and Human Security- Meaning and Concept, Need and Importance Multi-Lateral Protection and Migration Issues, Colombo Process, Indian Emigration Policy, Indian Passport Act 2008, the Inter- State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979

Unit 4 (12 Hours)
Refugee Issues

- 4.1 Seeking asylum, refugee status determination and the rise of restrictionism- The development of asylum policies, Deterrence and interdiction policies, Refugee status determination
- 4.2 Humanitarian responses to refugees: Institutions and obligations, Major actors and agencies- UNHCR, Intergovernmental Organisations, Governmental organisations, NGOs
- 4.3 Introduction to Laws and Legislations: International Refugee Law, Regional Refugee Protection Frameworks

Unit 5 (9 Hours)
Case Studies

- 5.1 Displacement- Development Induced Displacement in Chennai, the case of Jammu and Kashmir
- 5.2 Migration- Migration Issues in South Asia
- 5.3 Refugee Issues- Rohingya Refugee Crisis, Syria, Srilankan Refugee issues

BOOKS FOR STUDY

Amal Datta, *Human Migration. A Social Phenomenon*. India: Mittal, 2003.
Caroline B. Brettel, James F. Hollifield, *Migration Theory: Talking Across Disciplines*, Routledge, 2000.
Devesh Kapur. *Diaspora, Development, and Democracy: The Domestic Impact of International Migration from India*. India: Princeton University Press, 2010.

BOOKS FOR REFERENCE

David.J.Siddle. *Migration, Mobility and Modernisation*. Liverpool: Routledge, 2012
R. Mansell Prothero and Murray Chapman. *Circulation in Third World Countries*. London: Routledge and Kegan Paul, 1983.

JOURNALS

Internal Migration in India, Workshop Compendium Vol 1 & 2, UNICEF in collaboration with ICSSR, SDTT.
Ethnicity, Identity and Migration Studies, Routledge, Taylor & Francis Group.
Migration and Development, Routledge, Taylor & Francis Group.
Migration Studies is an international refereed journal, Oxford University Press.
Journal of International Migration and Integration, Population Studies, Springer
Journal of Immigrant & Refugee Studies, Routledge, Taylor & Francis Group.

Crossings: Journal of Migration and Culture, Intellect Publishers, USA
Internal Migration in India- Initiative for a better Inclusion of Internal Migration in India-Policy Briefs.

WEB RESOURCES

<http://www.unhcr.org/50f94cd49.pdf>.

<http://www.unhcr.org/research/RESEARCH/3ae6a0d08.pdf>

<https://www.fmreview.org/unhcr-convention-50/abrar>

PATTERN OF ASSESSMENT

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section – A 10 x 2=20 marks (All questions to be answered in 50 words each)

Section – B 4 x 10 = 40 marks (4 out of 6 questions to be answered in 600 words each)

Section – C 2 x 20 = 40 marks (2 out of 4 questions to be answered in 1200 wordseach)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SOCIAL WORK

SYLLABUS

(Effective from the academic year 2023-2024)

QUALITATIVE RESEARCH

CODE: 23SW/PI/QR24

CREDITS:4

OBJECTIVES OF THE COURSE

To impart knowledge in terms of

- qualitative research and approach for social science research
- to understand qualitative research designs and its application
- to learn the various tools of data collection
- to develop skill in writing research proposal for qualitative research

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- apply and undertake qualitative research activities
- apply various tools and matrix in research related exercises
- formulate research problems and research questions
- write research proposal and undertake qualitative research

Unit 1

Introduction

- 1.1 Introduction to Qualitative Research
- 1.2 Difference between Qualitative and Quantitative Research
- 1.3 Basic Definitions & Types of Qualitative Research
- 1.4 Qualitative Research relevance to contemporary Social work Research

Unit 2

Approaches to Qualitative Research

- 2.1 Different Approaches to Qualitative Research – Phenomenology, Grounded theory, Ethnography, Historical, Narrative and Case study
- 2.2 Literature Review: Systematic Review, Review of Literature, Paraphrasing,
- 2.3 Reference citation Methods – Examples of online reference software.
- 2.4 Ethics involved in conducting Qualitative Research

Unit 3

Tools of Data Collection

- 3.1 Qualitative Research Cycle – Step by Step Guide – Design Cycle, Ethnographic cycle, Analytic cycle
- 3.2 Data Collection Methods and Tools– Indepth Interview, Focus Group Discussion and Observation
- 3.3 Data Collecting and Recording – Primary Data and Secondary Data
- 3.4 Data Editing, Data Coding, Interpretation and Analysis

Unit 4

Research Designs and Methodology

- 4.1 Concept, Scope and Relevance of Mixed Method Research with relevance to current Social work research
- 4.2 Mixed Methods Research Design – Convergent, Sequential, Embedded and Multi-factorial.
- 4.3 Data Analysis and Interpretation
- 4.4 Data Collection, Transcription of Data, Data Cleaning, Coding, Editing and Data Interpretation and Analysis

Unit 5

Qualitative Research Proposal

- 5.1 Formulating a sample Qualitative Research Proposal (Assignment)
- 5.2 Identifying a Research Problem
- 5.3 Identifying Research Questions and Research Variable
- 5.4 Formulating a Qualitative Research Design and proposal
- 5.5 Data Analysis Introduction to Software - Atlas T , R- QAM Software

BOOKS FOR STUDY

Practical social investigation. (2002) Pole Christopher Qualitative and quantitative methods in social research Prentice-Hall international
Roger Gomm, (2008) Social Research Methodology, Palgrave macmillan
Sarantakos S (2005) Social research, Harvard Business School Press -
Lal D K Das (2005), Designs of Social Research, Rawat publications, Jaipur
Jaspal Singh , (2001) Methodology and techniques of social research, Kanishka publishers

PATTERN OF ASSESSMENT

End-Semester Examination:

Section – A 10 x 2=20 marks
Section – B 4 x 10 = 40 marks
Section – C 2 x 20 = 40 marks

Total Marks: 100

Duration: 3 hours

(All questions to be answered in 50 words each)
(4 out of 6 questions to be answered in 600 words each)
(2 out of 4 questions to be answered in 1200 words each)



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

**M.Sc. Degree
BIOINFORMATICS
(CHOICE BASED CREDIT SYSTEM)**

**OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)**

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

DEPARTMENT OF BIOINFORMATICS

PROGRAMME DESCRIPTION

The M.Sc. programme in Bioinformatics at Stella Maris College was started in the year 2002. The programme gives a strong interdisciplinary foundation to Biology and Informatics with courses like Molecular Biology, and ensures adequate Programming skills in C++, Perl, R and Python. The programme includes recent advancements and internationally demanding research cum job courses like Next Generation Sequencing Data Analysis, Big Data Analysis and Molecular Modeling and Computer Aided Drug Design. Other courses like Data Mining, Algorithms, Clinical Research Management and Systems Biology cover not only the theoretical aspects of the field, but also the practical essentials of Bioinformatics. The Summer Internship is an integral part of the course, and is done at the end of the first year where the students intern in reputed institutions such as IGIB, IBAB, NCBS, IIT-M, IISc, etc., where they are involved in live projects, and acquire hands-on experience in both wet lab and dry lab techniques, learn work ethics as well. The students are encouraged to choose their area of interest and work under the guidance of the faculty for their Master's Dissertation during the fourth semester.

VISION OF THE DEPARTMENT

- To be recognised as a distinctive Centre for Bioinformatics and build an informed community of purpose driven Bioinformatics professionals with social responsibility, accountability and integrity

MISSION OF THE DEPARTMENT

- To provide insight for students in the field of Bioinformatics
- To prepare the students to handle Big-Data conducive to transform human health and wellness
- To empower young women in STEM by providing necessary technological skills to handle biological, chemical data, integrate multiomics, develop drugs and perform clinical research
- To encourage students to start Bioinformatics start-ups and enhance entrepreneurial skills with social concern

PROGRAMME SPECIFIC OUTCOME (PSO)

On successful completion of the M.Sc. Bioinformatics programme, the students will be able to:

PSO 1	Attain a strong foundation of the interdisciplinary sciences including computer science, biosciences, mathematics, chemistry and physical sciences
PSO 2	Develop programming skills, interpret biological information computationally and evolve into a professional with integrated skills from multiple fields
PSO 3	Analyse omics data, evaluate the experimental raw data to infer molecular models and contribute to personalised medicine
PSO 4	Establish proficiency in handling huge biological data using software and standardised data analysis pipelines to address the present scientific challenges
PSO 5	Cultivate and strengthen the ability to develop accelerated and precise technologies in resolving the biological, environmental and health care problems

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
DISTRIBUTION OF CREDITS AND HOURS
M.Sc. Bioinformatics 2023-2024

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	5	4	5	4	5	4	5	16	20
	4	6	4	5	4	5	4	5	16	21
	4	5	4	5	4	5	4	5	16	20
	4	5							4	5
PC Practical					2	3			2	3
			2	3	2	3			4	6
Dissertation							5	8	5	8
PE-dept.	5	5	5	5			5	5	15	15
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PA	2	2							2	2
PN					2				2	0
Library		2				4		2		8
TOTAL	23	30	26	30	23	30	22	30	94	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: BIOINFORMATICS

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
SEMESTER-I									
23BI/PC/BM14	Biomolecules and Biochemistry	4	4	1	0	3	50	50	100
23BI/PC/EB14	Essentials of Bioinformatics	4	4	0	2	3	50	50	100
23BI/PC/CP14	Programming in C++ and Perl	4	3	0	2	3	50	50	100
23BI/PC/DB14	Database Management Systems	4	3	0	2	3	50	50	100
	PA/PL								
	Department Elective I								
SEMESTER-II									
23BI/PC/MB24	Molecular Biology	4	4	1	0	3	50	50	100
23BI/PC/GT24	Genomics and Transcriptomics	4	3	0	2	3	50	50	100
23BI/PC/PR24	Python and R Programming	4	4	1	0	3	50	50	100
23BI/PC/P122	Python and R Programming - Practical	2	0	0	3	3	50	50	100
23BI/PK/SS22	Soft Skills	2	2	0	0	-	50	-	100
CD / ET	Value Education								
	Department Elective II								
	Common Elective I								
SEMESTER-III									
23BI/PC/PM34	Proteomics and Metabolomics	4	3	0	2	3	50	50	100
23BI/PC/MA34	Machine Learning, Deep Learning and Artificial Intelligence	4	4	1	0	3	50	50	100
23BI/PC/MC34	Molecular Modeling and Computer Aided Drug Design	4	4	1	0	3	50	50	100
23BI/PC/P232	Molecular Modeling and Computer Aided Drug Design - Practical	2	0	0	3	3	50	50	100
23BI/PC/P332	Molecular Biology - Practical	2	0	0	3	3	50	50	100
23BI/PN/SI32	Summer Internship								
CD / ET	Value Education								
	Common Elective II								
SEMESTER-IV									
23BI/PC/AB44	Applied Bioinformatics	4	4	1	0	3	50	50	100
23BI/PC/BD44	Big Data Analysis	4	4	1	0	3	50	50	100
23BI/PC/SM44	Systems Biology	4	4	1	0	3	50	50	100
23BI/PC/DS45	Dissertation	5	0	0	8	0	50	50	100
	Department Elective III								
Postgraduate Elective Courses Offered to Parent Department									
23BI/PE/CG15	Cell Biology and Genetics	5	4	1	0	3	50	50	100
23BI/PE/BS15	Biomathematics and Biostatistics	5	4	1	0	3	50	50	100
23BI/PE/RM15	Research Methodology, Bioethics and IPR	5	4	1	0	3	50	50	100
23BI/PE/IM15	Immunoinformatics	5	4	1	0	3	50	50	100
23BI/PE/CR15	Clinical Research Management	5	4	1	0	3	50	50	100
23BI/PE/SB15	Structural Bioinformatics	5	4	1	0	3	50	50	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086**M.Sc. DEGREE: BIOINFORMATICS****COURSES OF STUDY****(Effective from the academic year 2023-2024)****CHOICE BASED CREDIT SYSTEM**

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
23BI/PE/AL15	Algorithms for Bioinformatics	5	4	1	0	3	50	50	100
Postgraduate Elective Courses Offered to Other Departments									
23BI/PE/IB23	Introduction to Bioinformatics	3	3	0	0	3	50	50	100
23BI/PE/AP23	Applications of Bioinformatics	3	3	0	0	3	50	50	100
23BI/PE/CD23	Computer Aided Drug Design	3	3	0	0	3	50	50	100
The Department will offer one Social Awareness Course									
Social Awareness									
23BI/PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100
23BI/PA/CR12	Child Rights	2	2	0	0	-	50	-	100
23BI/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100
23BI/PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100
23BI/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100
23BI/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100
23BI/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100
23BI/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100
23BI/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100
Independent Elective Courses									
23BI/PI/TB24	Translational Bioinformatics	4	0	0	0	3	0	100	100
23BI/PI/JV24	Java for Bioinformatics	4	0	0	0	3	0	100	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

BIOMOLECULES AND BIOCHEMISTRY

CODE: 23BI/PC/BM14

CREDITS: 4

L T P : 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to acquire the knowledge on structure, function and metabolism of biomolecules
- to understand the enzyme kinetics and techniques used in biomolecules analytical purpose
- to foster the fundamental understanding on how the structures of biomolecules and their interactions lead to cell function and malfunction
- to understand the physical and chemical properties of molecules and their state of occurrence in biological system
- to undertake investigations and to perform analysis in order to obtain required information for solving the biological problems

COURSE LEARNING OUTCOMES

On successful completion of the course, student will be able to

COs	DESCRIPTION	CL
CO1	define the structure, function, concepts of Biomolecules and relate the importance of the biomolecules	K1, K2
CO2	illustrate the intricacies of metabolic pathways and inculcate effective reasoning capability	K3
CO3	demonstrate the importance of enzymes and enzyme kinetics to inter-relate their role in normal vs diseased condition	K4
CO4	interpret the primary to highly complex structures of protein and its folding mechanisms in evaluating the research questions	K5
CO5	examine the nature of biomolecules, xenobiotics and the applications of various analytical techniques	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Biomolecules 1.1. Biomolecules - Structure and functions of Atoms and Molecules 1.2. Chemical bonds - Covalent and non-covalent interactions, acid base concept and buffers, pH, water - properties and its importance 1.3. Bioenergetics - Thermodynamics systems - laws of thermodynamics, entropy and enthalpy, concepts of free energy	K1-K4 K2-K5 K3-K6	15	1-5
2	Carbohydrates, Lipids and Nucleic acid 2.1. Structures, types and Functions of Carbohydrates 2.2. Structure, types and function of Lipids and nucleic acids 2.3. Carbohydrate and Lipid metabolism – Glycolysis, Glycogen metabolism, TCA cycle, β -oxidation	K1-K4 K2-K5 K3-K6	15	1-5
3	Proteins 3.1. Structures and properties of amino acids, Peptide bonds, disulphide bridges and other conformations. 3.2. Protein structure levels- primary, secondary, tertiary, quaternary. Ramachandran plot. 3.3. Protein folding pathways, classifications of proteins.	K1-K4 K2-K5 K3-K6	15	1-5
4	Enzymes and Enzyme Kinetics 4.1 Nomenclature, Classification of enzymes, Enzyme specificity, Cofactors, Coenzyme and Prosthetic group 4.2 Enzyme Kinetics, Michaelis-Menten Equation, significance of V_{max} and K_m , Enzyme inhibition Competitive and non-competitive Inhibition, Feedback inhibition. Enzyme regulation. Allosteric modulation. 4.3 Extraction and purification of enzymes, Immobilized enzymes, Application of enzymes in medicine and industry	K1-K4 K2-K5 K3-K6	10	1-5
5	Xenobiotics and Analytical Techniques 5.1. Xenobiotics and general detoxification methods in the body. 5.2. Principles, types and applications of Spectroscopy, Nuclear Magnetic Resonance- The phenomenon, types and applications 5.3. Mass Spectrometry for protein and peptide analysis, MALDI-TOF Analyser, Tandem Mass Analyser, The Ion Trap Mass Analyser, Q-TOF Instrument	K1-K4 K2-K5 K3-K6	15	1-5

BOOKS FOR STUDY

Victor W. Rodwell, David Bender, Kathleen M. Botham, Peter J. Kennelly, P. Anthony Well, Harper's Illustrated Biochemistry, McGraw Hill / Medical; New York, USA, 32nd ed., 2022.

David L. Nelson, Michael M. Cox, Lehninger Principles of Biochemistry, W H Freeman & Co; New York, USA, 8th ed., 2021.

Thomas. E. Creighton, Proteins: Structures and molecular properties, W. H. Freeman, New York, USA, 2018.

Narayanan P. Essentials of Biophysics Mumbai, India: Anshan Ltd; 2nd ed., 2010.

BOOKS FOR REFERENCE

Champe, Pamela C, Richard A. Harvey and Denise R. Ferrier. Lippincott's Illustrated Reviews: Biochemistry, India: J.P. Brothers Medical Publishers, Philadelphia, 7th ed., 2016.

Lubert and Stryer. Biochemistry, WH Freeman; New York, USA 9th ed. 2019.

Voet, D. and Voet, G. Biochemistry, New York (USA): Wiley; 4th ed., 2010.

Bengt Nolting. Methods in Modern Biophysics, Springer, Germany, 2004.

JOURNALS

Journal of Biochemistry

Indian Journal of Clinical Biochemistry

Biochemistry

Biophysical Journal

European Biophysics Journal

Journal of Biophysics

WEB SOURCES

<http://www.biophysics.org/Education/Careers/CareersinBiophysics/tabid/112/Default.aspx>

http://www.rcsb.org/pdb/101/static101.do?p=education_discussion/Looking-at-Structures/methods.html

<http://www2.chemistry.msu.edu/faculty/reusch/VirtTxtJml/Spectrpy/MassSpec/masspec1.htm>

www.themedicalbiochemistrypage.org

www.biochemistry.org

Pattern of Assessment**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/BM14												
	Course Title: BIOMOLECULES AND BIOCHEMISTRY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	1	2	2	1	1	1	1	1	2	2	2
CO 2	3	3	2	2	1	1	1	1	2	1	3	2	3
CO 3	3	3	2	2	2	1	1	1	3	2	3	1	3
CO 4	3	2	3	2	1	2	1	1	2	1	3	1	3
CO 5	3	3	3	2	2	1	1	1	2	2	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

ESSENTIALS OF BIOINFORMATICS

CODE: 23BI/PC/EB14

CREDITS: 4

L T P : 4 0 2

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to provide an integrative approach to the understanding of both theory and practice of bioinformatics
- to apply biological concepts at different levels to study gene / protein analysis, and the proteins implicated in diseases
- to understand the evolution of the life through phylogenetic analysis
- to perform comparative sequence analysis through different alignment approach and bring the meaningful information from the aligned sequences
- to access different biological databases and retrieve the required specific information

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recognize and relate the biological databases, tools and software to be used in the interdisciplinary fields	K1, K2
CO2	infer the required information from different databases and utilise the fundamental tools in bioinformatics analysis	K3
CO3	compare and identify the differences in sequences to interpret their role in health and disease	K4
CO4	perform a complete analysis of the genes and protein to provide innovative research outcomes	K5
CO5	examine the gene, protein sequences and offer solutions to the health care problems	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Basics of Bioinformatics 1.1. Introduction to Bioinformatics; Computers in Biology to understand Biological System; Concept of open resources in Bioinformatics. Biological databases 1.2. Concept of reference genome. Genome sequencing - human genome project- versions hg19, hg38, T2T. Role of bioinformatics in human genome projects. Other genome projects- 1000 genomes, Encode, Indian genome project. 1.3. Browsers and visualizers- UCSC, IGV, JBrowse, the Wellcome Trust Sanger Institute (WTSI), ENSEMBL, NCBI Map viewer	K1- K3 K2– K4 K5- K6	8	1-5
2	Introduction to Biological Databases 2.1. Type of Databases, Public Biological Databases –. Primary Nucleotide Sequence Databases: EMBL, GenBank, DDBJ 2.2. Secondary Nucleotide Sequence Databases: UniGene, Sequence Submission Methods and Tools (Sequin, Sakura, Bankit) 2.3. Sequence Retrieval Systems (Entrez & SRS); Sequence File Formats and Conversion Tools.	K1, K2 K3, K4 K5, K6	10	1-5
3	Introduction to Sequence Alignment 3.1. Protein and nucleotide alignment, Homology, Similarity, Identity, Pairwise alignments: Dot Plots, Scoring Matrix-PAM, BLOSUM, Gap Penalty 3.2. Dynamics programming - Alignment Algorithms: Global Sequence Alignment: Needle man-Wunsch Algorithm. Local Sequence Alignment: Smith –Waterman Algorithm. Rapid, Heuristic Versions of Smith Waterman: FASTA 3.3. Basic Local Alignment Search Tool - BLAST Search Steps, Search Strategy, E Value, Raw Scores and Bit Scores, Ensembl BLAST, TIGR BLAST, PSI-BLAST	K1, K2 K3, K4 K5, K6	10	1-5
4	Multiple Sequence Alignment and Phylogeny 4.1. Definition of Multiple Sequence Alignment. Tools of Multiple Sequence Alignment Programs and their algorithms - Clustal, Phylip, MAFT, Hidden Markov Models 4.2. Evolutionary analysis, Relationship of Phylogenetic Analysis to Sequence Alignment, Genome Complexity. Bootstrap, Tree Construction Methods. Neighbor-Joining Method, Unweighted Pair Group Method with Arithmetic Mean (UPGMA) 4.3. Character based methods: Maximum Parsimony Method and Maximum-Likelihood Method	K1, K2 K3, K4 K5, K6	12	1-5

UNIT	CONTENT	CL	Hrs	CO
5	Specialised databases 5.1. Literature databases and biomedical databases – PubMed, OMIM, Metabolic database- KEGG, Metacyc, Reactome 5.2. Protein domain and motif prediction. Databases and tools to infer STS, EST, CDS, ORF, Domains and motifs. Protein structure databases - PDB, SCOP, CATH. Small molecule databases - Zinc, PubChem, Drug Bank. 5.3. Homologs, paralogs, xenologs, orthologs, COG databases, Plant and Animal databases. Model organism databases - SGD, MGD, ZFIN	K1, K2 K3, K4 K5, K6	10	1-5
	Practical Component Primary Nucleotide Sequence Databases: NCBI, EMBL, DDBJ Protein Sequence Databases – PIR, RefSeq, UniProt Protein Structure Databases – PDB, CATH, SCOP Protein Visualization Tools- RasMol, Swiss PDB Viewer, PyMol Small molecular databases - PubChem, zinc, Drug Bank Genome browsers - UCSC, ENSEMBL, ENCODE, IGV Basic Local Alignment Search Tool (BLAST), Pairwise and Multiple Sequence Alignment Tools: EMBOSS, Clustal W and Clustal Omega Phylogenetic Tree Construction Tool: MEGA Software, Phylip, MAFT	K1- K2, K3 - K4 K5 - K6	15	1-5

BOOKS FOR STUDY

Lesk, Arthur M. Introduction to Bioinformatics. OUP Oxford; USA 5th ed., 2019.

David W. Mount. Bioinformatics Sequence and Genome Analysis. Cold Spring Harbor Laboratory Press, US; 2nd ed., 2004.

Pevsner, Jonathan. Bioinformatics and Functional Genomics. Wiley publications, New York, USA, 3rd ed., 2015.

Baxevanis, Andreas, D. and Francis B.F. Ouellette, Bioinformatics- A Practical Guide to the Analysis of Genes and Proteins. Wiley publications, New York, USA, 2nd ed., 2004.

BOOKS FOR REFERENCE:

Chen and Yi-Ping Phoebe. Bioinformatics Technologies. Springer, Germany 2005.

Durbin, R., S. Eddy, A. Krogh and G. Mitchison. Biological Sequence Analysis: Probabilistic Models of Proteins and Nucleic Acids. Cambridge University Press, Oxford, USA, 2005.

Higgins, Des and Willie Taylor. Bioinformatics –Sequence, Structure and Databanks – Practical Approach. Oxford University Press, USA, 2001.

Richard Blum, Linux Command Line and Shell Scripting Bible, Wiley, New York, USA, 3rd ed., 2021.

Baldi, P. and Brunak, S. Bioinformatics: Machine Learning Approach. MIT Press, Cambridge, US 2003.

JOURNALS

BMC Bioinformatics

Bioinformatics

Journal of Bioinformatics and Computational Biology

Journal of Biomedical Informatics

Journal of Integrative Bioinformatics

WEB RESOURCES

<http://bioinformaticsweb.net/tools.html>

<https://www.bits.vib.be/index.php/training/122-basic-bioinformatics>

<http://bioinformaticssoftwareandtools.co.in/>

<http://www.genscript.com/tools.html>

Pattern of Assessment

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
Theory			
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K5, K6	10	2 X 5 = 10 (Internal choice) Answers in about 500 words
Practical			
A	K3, K4	10	2 X 5 =10 (All questions to be answered)
B	K5, K6	10	1 x 10 =10 (All questions to be answered)
	Record & Viva	5	
	Total	50	

Other Components:

Total Marks: 50

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs, open book tests/ Tests	K1 - K2	CO1-CO2	20
	K3 - K4	CO3-CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Mark allocation	Pattern
Theory			
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K5, K6	20	4 X 5 = 20 (Internal choice) Answers in about 500 words
Practical			
A	K3, K4	20	2 X 10 =20 (All questions to be answered)
B	K5, K6	20	2 x 10 =20 (All questions to be answered)
	Record & Viva	10	
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/EB14												
	Course Title: ESSENTIALS OF BIOINFORMATICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	1	2	3	1	1	3	1	1	3	3	2	1	3
CO 2	3	1	3	1	3	1	2	1	3	2	3	2	2
CO 3	3	2	3	2	1	2	2	1	1	1	3	3	3
CO 4	3	2	3	2	2	3	3	1	2	1	3	3	3
CO 5	3	1	3	2	2	1	2	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

PROGRAMMING IN C++ AND PERL

CODE: 23BI/PC/CP14

CREDITS: 4

L T P : 3 0 2

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to facilitate the students in gaining programming skills.
- to enable the students to design and execute C++ and perl scripts
- to interpolate biological demands through programming
- to provide fundamentals on using programming languages for editing the dna and protein sequences
- to utilize bioperl modules to build a pipeline and process biological data

COURSE LEARNING OUTCOMES

On successful completion of the course, student will be able

COs	DESCRIPTION	CL
CO1	explain the basics of programming to handle multitudes of data	K1, K2
CO2	relate the necessity for programming in handling high volumes of data from various fields of science	K3
CO3	solve biological problems with c++ and perl scripts	K4
CO4	apply programing to analyse genomic, proteomic sequences and structure to aid innovative research solutions	K5
CO5	elaborate use of bio-perl in precisely solving complex problems in bioinformatics	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Programming language 1.1. Machine/Assembly Language, Higher Level Languages, Simple and Compound Data, Code: Syntax and Semantics 1.2. Programming in C++: C++ Characteristics, Tokens, Keywords, Identifiers and Constants, Basic Data Types, User Defined Data Types, Derived Data Types, Expressions and Control Structures. 1.3. Functions and Variables: Scope, Declaration and Definition, Arrays and Strings in C++.	K1- K3 K2 – K4 K4- K6	8	1-5
2	Object Oriented Programming 2.1. Using Objects, Classes, Encapsulation, Inheritance, Abstraction and Polymorphism. Friend functions 2.2. String and file operations– creating string objects, Standard Streams – string and Files, Open, close, EOF, updating files and error Handling 2.3. String manipulation- String operators Manipulating String, String characteristics, Comparing and Swapping	K1, K2 K3, K4 K5, K6	10	1-5
3	Introduction to Perl Programming 3.1. Introduction, Statements and Declarations, Default Variable, Expressions, Statements, Operators in Perl, Control Structures 3.2. Variable Types and Data types– Scalar, Arrays, Hashes. Functions- split, join, length, lcfirst, ucfirst, index and exists 3.3. Creating Regular Expressions-Characters, Character Classes, Alternative Match Patterns, Quantifiers, Assertions, Back References, Modifiers and Translator	K1, K2 K3, K4 K5, K6	10	1-5
4	Subroutines and File Handling 4.1. Subroutines- Defining Subroutines, Returning Values, Using Arguments 4.2. Files- Overview and working with File handles, Closing the files, printing, renaming files 4.3. Various Ways of Opening a Perl File Handlers- Normal Scalar variable, Use Perl IO, Open the Standard Input and Standard Output, Use Sysopen ().	K1, K2 K3, K4 K5, K6	12	1-5
5	Bioperl 5.1. Introduction to Bioperl: Installation Procedures, Architecture, Uses of Bioperl 5.2. Modules of bioperl- seq, seqio, alignio, db 5.3. Modules of Bioperl – Annotation, location, tools	K1, K2 K3, K4 K5, K6	10	1-5

UNIT	CONTENT	CL	Hrs	CO
	Practical components C++ Find the area and circumference of a circle Armstrong Number Prime Number An example with classes and object Checking for palindrome of a given string (without using the built in string function) Perl Use regular expressions to modify a sequence of letters in sentences Convert DNA to RNA (transcription) Translate the given RNA sequence Calculate the frequency of bases Bioperl Using Bioperl retrieve a sequence from database Using Bioperl Convert DNA to Protein (Translation) Using Bioperl retrieve a subset of sequences, domain and motif regions from the given protein sequence	K1, K2 K3, K4 K5- K6 K1 - K4 K5, K6	15	1-5

BOOKS FOR STUDY

E. Balagurusamy. Object Oriented Programming with C++. Tata McGraw- Hill, India, 8th ed., 2020.
Tisdall James D. Beginning Perl for Bioinformatics. O'Reilly and Associates, US 1st ed., 2001.

BOOKS FOR REFERENCE

Conrod Bessant, Ian Shadforth and Darren Oakley. Building Bioinformatics Solutions with Perl, R and MySQL. Oxford University Press, US 1st ed., 2010.
Bjarne, Stroustrup. The C++ Programming Language. Addison Wesley, 4th ed., UK, 2013.
Holzner and Steven. Perl Black Book. Dream Tech Press, India 2nd ed., 2004.
Hubbard, John. Programming with C++, Schaum's Outline Series. Tata McGraw Hill, USA 2nd ed., 2000.

JOURNALS

C/C++ Users Journal
International Journal of Computer Applications
Computer Methods and Programs in Biomedicine
Perl in communities

WEB RESOURCES

<http://www.cplusplus.com/doc/tutorial/>
<http://www.cprogramming.com/>
<http://www.stroustrup.com/4th.html>

Pattern of Assessment**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Sections	Cognitive levels	Marks	Pattern
Theory			
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K5, K6	10	2 X 5 = 10 (Internal choice) Answers in about 500 words
Practical			
A	K3, K4	10	2 X 5 =10 (All questions to be answered)
B	K5, K6	10	1 x 10 =10 (All questions to be answered)
	Record & Viva	5	
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs, open book tests/ Tests	K1 - K2	CO1-CO2	20
	K3 - K4	CO3-CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Mark allocation	Pattern
Theory			
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K5, K6	20	4 X 5 = 20 (Internal choice) Answers in about 500 words
Practical			
A	K3, K4	20	2 X 10 =20 (All questions to be answered)
B	K5, K6	20	2 x 10 =20 (All questions to be answered)
	Record & Viva	10	
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/CP14												
	Course Title: PROGRAMMING IN C++ AND PERL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	1	1	1	2	2	2	1	3	3	2	2	2
CO 2	3	2	1	1	2	2	1	1	3	2	2	3	2
CO 3	3	3	2	2	1	2	2	1	2	2	3	2	3
CO 4	3	3	3	2	2	2	1	2	3	3	2	2	2
CO 5	3	3	2	1	2	2	2	1	3	2	2	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

DATABASE MANAGEMENT SYSTEMS

CODE: 23BI/PC/DB14

CREDITS: 4

L T P : 3 0 2

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to introduce the basic concepts of relational database management system and client / server environment
- to be trained in designing databases and manipulating them for biological applications
- to understand the working knowledge of linux environment and databases
- to familiarize the basic database storage structure and access techniques
- to apply the concepts of NoSQL and MongoDB to utilize the preferred schemas and the specific technical requirements

COURSE LEARNING OUTCOMES

On successful completion of the course, student will be able to

COs	DESCRIPTION	CL
CO1	explain the working of different operating systems to analyse various data types	K1, K2
CO2	compare the data models and schemas in dbms for a variety of datasets	K3
CO3	create entity- relationship between multiple data tables and write sql queries to develop databases	K4
CO4	compare various rdbms tools, nosql databases in the context of research problems	K5
CO5	design databases using the knowledge of sql to provide feasible solutions	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Files, Databases and Linux 1.1 Introduction to File and Database systems- Record Storage and Primary File Organization- Secondary Storage Devices. 1.2. Linux basics commands. Working with Files, Text Editors, I/O Redirections, Pipes, Filters, and Wildcards. 1.3 Changing Access Rights. Bash scripting, loops, text mining, Awk, sed and grep. Editors- vim, nano, gedit.	K1, K2 K3-K4 K5-K6	8	1-5
2	Introduction to Database Systems 2.1 Introduction to Database Systems, Architecture, Data Models, Layers and Types of Database Management Systems 2.2. Operations on Files- Heap File- Sorted Files- Hashing Techniques – Index Structure for Files. Different Types of Indexes- B-Tree - B+Tree. Database System Structure, Data Models, database schemas. 2.3. Database Normalisation and denormalization for Relational Databases (up to BCNF) .	K1, K2 K3-K4 K5-K6	10	1-5
3	SQL 3.1. Data Definition Language, Data Manipulation Language, Transaction Control and Data Control Language Grant and Revoke Privilege Command. 3.2. Set Operators, Joins-Kinds of Joins, Table Aliases, Sub queries, Multiple and Correlated Sub Queries. 3.3. Functions-Single Row, Date, Character, Numeric, Conversion, Group Functions. Constraints-Domain, Equity, Referential Integrity Constraints	K1, K2 K3-K4 K5-K6	10	1-5
4	RDBMS and No SQL databases 4.1. Text and Multimedia Databases - Basic Concepts and Applications, Types of DBMS-Network, object oriented, graph based. Overview of RDBMs, Advantages of RDBMs Over DBMs. 4.2. Establishing relations between tables. Entity relationship concepts. Keys in linking relational databases - primary, foreign, super, candidate keys. 4.3. Brief history of No SQL databases. Features of No SQL, differences and advantages of No SQL over RDBMS. Types and misconceptions in No SQL databases. No SQL vs SQL.	K1, K2 K3-K4 K5-K6	12	1-5
5	Recent trends in databases 5.1. MongoDB, web development with MongoDB, install MongoDB, shell commands. 5.2. How can you store a DNA sequence using MongoDB? Role of MongoDB in 1000 genomes projects, MongoDB or Redis for biomedical data. 5.3 Database file formats- JSON, BSON, Creating uniprot mongoddb, querying and retrieving protein sequences.	K1, K2 K3-K4 K5-K6	10	1-5

UNIT	CONTENT	CL	Hrs	CO
	Practical Components Linux Linux- create directory, move directory, remove directory and create files, move files, copy files Linux – using wildcard characters and sort files Linux - changing user rights SQL Create – a table and insert values using SQL Create subqueries with a where clause Create queries with constraints – NOT NULL and, DEFAULT Queries with Joins and functions Queries with primary and foreign keys	 K1-K4 K5- K6 K1- K4 K5- K6	15	1-5

BOOKS FOR STUDY

Ramakrishnan Raghu and Gehrke Johannes. Database Management Systems, McGraw–Hill, UK, 3rd ed., 2002

Kristina Chodorow, Michael Dirolf, MongoDB: The definitive guide, O'Reilly Media, Inc., USA, 1st ed., 2010.

Gerardus Blokdijk, NoSQL A Complete Guide, 5Starcooks, Australia, 2020.

BOOKS FOR REFERENCE

Harrison Guy, Next Generation Databases: Nosql and Big Data, Apress publishers, India, 1st ed., 2018.

Anthony DeBarros, Practical SQL, No Starch Press, USA, 1st ed., 2018.

Anthony Molinaro, Robert de Graaf, SQL Cookbook, O'Reilly, USA, 1st ed., 2006.

Thomas Nield, Getting Started with SQL: A Hands-On Approach for Beginners, O'Reilly, USA, 1st ed., 2016.

Rick Copeland, MongoDB Applied Design Patterns: Practical use cases with the leading NoSQL database O'Reilly, USA, 1st ed., 2013.

JOURNALS

International Journal of Database Management Systems

Journal of Database Management

Journal of Advanced Database Management & Systems

International Journal of Intelligent Information and Database Systems

WEB RESOURCES

www.oracle.com/technetwork/oem/db-mgmt/db-mgmt-093445.html

<http://education-portal.com/academy/lesson/what-is-a-database-management-system-purpose-and-function.html>

www.odbms.org/

http://www.comptechdoc.org/os/linux/usersguide/linux_ugbasics.html

<http://www.dummies.com/how-to/content/common-linux-commands.html>

Pattern of Assessment**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Sections	Cognitive levels	Marks	Pattern
Theory			
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K5, K6	10	2 X 5 = 10 (Internal choice) Answers in about 500 words
Practical			
A	K3, K4	10	2 X 5 =10 (All questions to be answered)
B	K5, K6	10	1 x 10 =10 (All questions to be answered)
	Record & Viva	5	
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs, open book tests/ Tests	K1 - K2	CO1-CO2	20
	K3 - K4	CO3-CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Mark allocation	Pattern
Theory			
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K5, K6	20	4 X 5 = 20 (Internal choice) Answers in about 500 words
Practical			
A	K3, K4	20	2 X 10 =20 (All questions to be answered)
B	K5, K6	20	2 x 10 =20 (All questions to be answered)
	Record & Viva	10	
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/DB14												
	Course Title: DATABASE MANAGEMENT SYSTEMS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	1	3	1	3	3	1	2	3	3	2	3	1
CO 2	1	1	3	2	3	3	1	1	3	2	2	3	1
CO 3	3	2	3	2	3	3	2	1	2	3	3	3	2
CO 4	2	2	3	1	3	1	1	1	3	3	1	3	2
CO 5	3	2	3	2	3	3	1	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023–2024)

MOLECULAR BIOLOGY

CODE: 23BI/PC/MB24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to explore the structural organisation of chromosomes and genes
- to understand the general principles of genes at the molecular level of different organisms
- to acquire knowledge on dna, rna replication, mutations and transcriptional controls
- to familiarize the various levels of gene regulation and protein function
- to analyse the various genetic and molecular mechanisms involved in cancer signalling

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	grasp the functions of the prokaryotic and eukaryotic genome mechanisms at the molecular level	K1
CO2	represent and illustrate the structural organization of genes and the control of gene expression	K2
CO3	interpret the significance of central dogma of life	K3,K4
CO4	relate and analyse the protein synthesis mechanism	K4,K5
CO5	link the concepts of molecular signaling to a better understanding of diseases, including cancer	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Structure and Organisation of Genes and Chromosomes 1.1. DNA-Structure and Conformations, Chromosomes – Structure and Functions 1.2. Cell division - Mitosis and meiosis, Cell cycle regulation, Check points 1.3. Organisation of Genomes - Coding Sequences, Repetitive Sequences, transposons	K1-K3 K2-K5 K5-K6	10	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Organelle, Bacterial and Viral Genome 2.1. Mitochondrion and Chloroplast Genome - Organisation and Function 2.2. Bacteria - Cells structure and bacterial genetics 2.3. Virus - Structure, Viral genome, Viroids and Prions	K1-K3 K2-K5 K5-K6	13	1-5
3	Replication and Transcription 3.1. DNA replication, Mutations, DNA damage and repair mechanisms in prokaryotes and eukaryotes 3.2. Transcription- Eukaryotes and Prokaryotes, Transcriptional control by regulatory proteins, RNA polymerases 3.3. Post Transcriptional Regulation - DNA Methylation, Histone modification - Capping, RNA editing, Splicing, and Polyadenylation	K1-K4 K2-K5 K5-K6	15	1-5
4	Translation 4.1. RNA- Types, structure and functions, Ribosomes – Structure and Assembly 4.2. Translational Regulation - Regulation of gene expression in Prokaryotes (Operon) and Eukaryotes, Genetic code, Gene Silencing 4.3. Post- translational modifications of proteins	K1-K3 K2-K6 K5-K6	12	1-5
5	Cell Signalling and Cancer 5.1. Cell signalling – Signalling molecules, Receptors - Hormones receptors, cell surface receptor, G-protein coupled receptors, signal transduction pathways 5.2. Cancer Biology- Characteristics and genetic basis of cancers, Proto-oncogene, Oncogenes, Tumor Suppressor Genes 5.3. Oncogenesis - Cancer Immunotherapy, Regulation of Cell Death, Apoptosis	K1-K3 K2-K6 K5-K6	15	1-5

BOOKS FOR STUDY

Harvey Lodish, Arnold Berk, Chris A. Kaiser, Monty Krieger, Anthony Bretscher, Hidde Ploegh. *Molecular Cell Biology*. USA: W. H. Freeman, Eighth edition, 2016.

Wolfe, Stephen L. *Molecular and Cellular Biology*. USA: Wadsworth, 2005.

Watson, James, D. *Molecular Biology of the Gene*. USA: The Benjamin Cummings Publishing Company, 2007.

BOOKS FOR REFERENCE

Cooper, Geoffrey M. and Robert E. Hausman. *The Cell, A Molecular Approach*. USA: Sinauer Associates, 2004.

Harvey Lodish, Arnold Berk, Chris A. Kaiser, Monty Krieger, Matthew P. Scott, Anthony Bretscher, Hidde Ploegh and Paul Matsudaira. *Molecular Cell Biology*. USA: W.H. Freeman, 2008.

Watson, James, D. *Molecular Biology of the Gene*. UK: Pearson, Seventh edition, 2017.

Darnell, James, Harvey Lodish and David Baltimore. *Molecular and Cell Biology*, Scientific American Books, USA: W.H. Freeman, 2004.

Karp and Gerald. *Cell and Molecular Biology- Concepts and Experiments*, USA: John Wiley, 2013.

Lewin and Benjamin. *Genes IX*, UK: Oxford University Press, 2009.

Roitte, Ivan M., Brostoff, Jonathan and Male, David K. *Immunology*. Philadelphia: J.B. Lippincott, 1990.

Purvis, William K, David Sadava, Craig Heller and Gordon H. Orians. *Life: The Science of Biology*. USA: Sinauer, 2004.

WEB SOURCES

www.molbiolcell.org

www.sciencedirect.com

<http://www.nature.com/scitable/topic/cell-biology-13906536>

http://www.biology.arizona.edu/cell_bio/cell_bio.html

<http://ghr.nlm.nih.gov/>

JOURNALS

Journal of Molecular Biology

Molecular Biology

Journal of Genetics and Genomics

BMC Cell Biology

Pattern of Assessment

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 = 5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 = 10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
Total			50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/MB24												
	Course Title: MOLECULAR BIOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	1	1	3	1	2	1	3
CO 2	3	3	3	3	3	3	2	2	3	3	3	2	3
CO 3	3	3	3	3	3	3	2	2	3	2	3	1	3
CO 4	3	3	2	2	3	2	1	1	3	2	3	1	3
CO 5	3	3	3	3	3	3	2	2	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

GENOMICS AND TRANSCRIPTOMICS

CODE: 23BI/PC/GT24

CREDITS: 4

L T P: 3 0 2

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to provide an insight into the complete genome sequences of a model organisms and human genome through comparative and functional genomics
- to acquaint knowledge on functional genomics techniques such as microarrays, est, sage and interpret data obtained through high throughput expression studies
- to provide hands on experience of handling the genomic datasets
- to obtain and analyse information and data relating to specific genes, next generation sequencing tools and next generation mapping portals
- to instill students to utilize bioinformatic pipelines for the characterization and quantification of RNAs and annotations at the genome level and make new discoveries

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	acquaint the fundamental concepts of genome sequencing, file formats and data analysis	K1
CO2	perform powerful computational and statistical methods to decode the functional information hidden in DNA and RNA sequences	K2
CO3	experiential knowledge on Next generation sequencing and gene editing techniques	K3
CO4	exploit the mechanisms of genomics and transcriptomics to deal with the growing demand for multiomics	K4
CO5	apply functional genomics techniques to analyse data from biological system	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Genome Sequencing and Sequence File Formats 1.1. Understanding a Genome sequence, Locating the genes in a Genome Sequence, Genome Sequencing technologies - Conventional Sequencing techniques 1.2. Next generation sequencing technology- Whole Genome Shotgun Sequencing, Exome and amplicon sequencing, Genome assembly, Comparative Genomics 1.3. File formats- FASTQ, SAM/BAM, VCF, GFF/GTF, and BED. Databases and tools, Variations at the Level of individual Nucleotides, Duplications, Indels, Rates and patterns of Nucleotide substitution, Molecular Clocks	K1- K3 K2- K4 K5- K6	8	1-5
2	Epigenetic and Metagenome sequence analysis 2.1. Genome variant analysis- GATK pipeline, concepts of genome wide association studies (GWAS) 2.2. Metagenome analysis- amplicon and shotgun metagenome, Alpha and Beta diversity, rarefaction curves and metrics, Logical steps for metagenome analysis, Taxonomical classification- silvaDB, green genes 2.3. Epigenomics, Local chromatin dynamics and epigenetic modifications, analysis of regulatory sequence motifs, transcription factor - DNA interaction	K1, K2 K3, K4 K5, K6	10	1-5
3	Genome Editing 3.1. Genome editing technologies - Clustered regularly interspaced short palindromic repeats (CRISPR) CAS 9 technology, Variants of CAS 9 nuclease, selection of targets from sequences 3.2. Guide RNA design, recognition sequences, Best practices in SgRNA design, Repair and data analysis of the edited genome, Therapeutic applications. 3.3. Targeted mutagenesis- Transcription activator-like effector nuclease (Talens), Zinc Finger Nuclease (ZFNs) Technology. Recent innovations in genome editing in agriculture, diseases and healthcare	K1, K2 K3, K4 K5, K6	10	1-5
4	Transcriptomics 4.1. Transcriptomics - microarray technology and gene expression, SAGE, Applications of Microarrays in Medicine, Databases - GEO, array express 4.2. Next generation Sequencing -RNA isolation and purification, RIN number. Bulk RNA sequencing, single-cell RNA sequencing, small RNA sequencing 4.3. Importance of gene silencing, miRNA, siRNA, lncRNA, competing endogenous RNA	K1, K2 K3, K4 K5, K6	12	1-5
5	Transcriptomic Gene Annotation 5.1. Data analysis- Quality check- fastqc, multi fastqc and trimming of adapters – trimmomatic, cutadapt 5.2. Generation of contigs and scaffolds- Assembly using genome assemblers and alignment of sequences, Samtools and bowtie 5.3. Competing endogenous RNA network, Predicting DEGs and ontology analysis, Statistics behind DGE analysis. Gene annotations and protein interaction network prediction	K1, K2 K3, K4 K5, K6	10	1-5

UNIT	CONTENT	CL	Hrs	CO
	Practical Component Genome databases of plants, animals and pathogens, Gene Prediction by ORF analysis, Gen scan, UCSC Genome Browser DNA markers - dbSNP, EST Clustering databases - DBEST, UNIGene, Epigenetic data analysis, EWAS atlas, PWM and DNA binding motifs- signature logo generation Command line SRA download, fastqc, trimmomatic and assembly GATK pipeline. Metagenomics - In silico -Mg RAST, Kaiju web server, Galaxy server Differential gene expression analysis –RNA seq, microarray datasets- volcano plot, heatmap, DEGs and annotations – Geo2R, Biojupies. Small RNA network- using cytoscape, Crispr – sg RNA design- Chop Chop	K1- K2 K3 - K4 K5 - K6	15	1-5

BOOKS FOR STUDY

Head, Steven R., Ordoukhanian, Phillip, Salomon, Daniel R, Next Generation Sequencing Methods and Protocols, Germany, 1st ed., Springer, 2018

Eija Korpelainen, Jarno Tuimala, Panu Somervuo, Mikael Huss, Garry Wong, RNA-seq Data Analysis: A Practical Approach, UK, 1st ed., Taylor and Francis publishers, 2014

Arthur Lesk M. Introduction to Genomics. New York, 3rd ed., Oxford university press, 2017.

Leland Hartwell, Michael L. Goldberg and Janice Fischer. Genetics: From Genes to Genomes. USA, 6th ed., McGraw-Hill Publishing Company. 2017

BOOKS FOR REFERENCE:

Vijai Singh, Pawan K.Dhar, Genome Engineering via CRISPR-CAS9 system, 1st ed., Academic Press Inc., 2020.

Jiaqian Wu, Transcriptomics and Gene regulation, 1st ed., Springer, 2016.

Muniyandi Nagarajan, Metagenomics: Perspectives, Methods and Applications, USA, 1st ed., Academic Press, 2017.

JOURNALS

Genome Research
Genome medicine
Genomics, Proteomics & Bioinformatics
Journal of Data Mining in Genomics & Proteomics
Human Genomics and Proteomics
Journal of Proteomics and Genomics

WEB RESOURCES

<http://www.oncolink.org/resources/article.cfm?id=326>

<http://www.nature.com/nature/journal/v422/n6928/full/nature01510.html>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4678780/>

<https://crisprtx.com/gene-editing/crispr-cas9>

Pattern of Assessment

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
Theory			
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K5, K6	10	2 X 5 = 10 (Internal choice) Answers in about 500 words
Practical			
A	K3, K4	10	2 X 5 =10 (All questions to be answered)
B	K5, K6	10	1 x 10 =10 (All questions to be answered)
	Record & Viva	5	
	Total	50	

Other Components:

Total Marks: 50

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs, open book tests/ Tests	K1 - K2	CO1-CO2	20
	K3 - K4	CO3-CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Mark allocation	Pattern
Theory			
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K5, K6	20	4 X 5 = 20 (Internal choice) Answers in about 500 words
Practical			
A	K3, K4	20	2 X 10 =20 (All questions to be answered)
B	K5, K6	20	2 x 10 =20 (All questions to be answered)
	Record & Viva	10	
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/GT24												
	Course Title: GENOMICS AND TRANSCRIPTOMICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	3	3	1	1	2	1	3	3	3
CO 2	3	2	3	1	3	3	1	2	2	2	3	3	3
CO 3	2	2	3	3	3	2	2	2	2	2	3	3	3
CO 4	3	3	3	2	3	3	1	2	2	3	3	3	3
CO 5	3	2	3	2	3	3	1	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023–2024)

PYTHON AND R PROGRAMMING

CODE: 23BI/PC/PR24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to demonstrate how to locate and download files for data analysis involving genes and transcriptomes
- to select datasets, open files and pre-process data using python and r language
- to develop and write python and r scripts to replace missing values
- to write r scripts to normalize data, discretize data, and sample data
- to use biopython and bioconductor packages to analyze biological data

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	relate the necessity for programming in biology	K1
CO2	handling biological concepts with python and r scripts	K2
CO3	apply r and python programming to analyze genomic sequences	K3
CO4	gain efficient programming skills to handle missing values and impute values in data	K4
CO5	perform genomic data analysis and visualize them using python and r	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Python 1.1. Installation of Python and Jupyter notebooks 1.2. Variables- list, tuples, sets, dictionary, matrix, dataframe. handling strings, Functions, control structures, operators, Pandas, Numpy and Scipy 1.3. Fasta files, Parsing DNA and protein information, Gene locations splices, extracting all gene locations. Object Oriented Programming in Python. Constructors, Type(), Issubclass(), Super()	K1 K2-K4 K4-K6	12	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Biopython 2.1 Getting started and installation of modules and packages, Coding DNA, proteins, extracting translations. 2.2 Modules- Bio Import, Bio Seq, Bio Align 2.3 Plot ABI traces, Retrieve and Annotate Entrez gene	K1-K3 K3-K4 K5-K6	12	1-5
3	Data Visualization 3.1 Getting Started with Pandas, Matplotlib, scki-kit learn. 3.2 Visualisation using Matplotlib and scikit learn – Line Plots- Scatter Plots-Visualizing Errors-Density and Contour Plots- Histogram, Binnings and Density -Customizing Color Bars. 3.3 Customising Plot Legends -Multiple Subplots-Text and Annotation-Customizing Ticks.	K1-K3 K5-K6 K4-K6	15	1-5
4	R programming 4.1 R as a statistical Calculator, Creating Objects and Assigning Values. 4.2 Vectors, matrices, factors, levels, dataframes. 4.3 Graphics: Simple Plotting, Advanced Plotting - ggplot, Using Color in Plots. Using Subscripts and Superscripts in Graph Labels, Interactive Graphics, Saving Graphical Output, Loops.	K1 K2-K4 K5-K6	13	1-5
5	Bioconductor 5.1 Introduction, Bioconductor Packages, Bio strings, Biomart 5.2 Bioconductor packages for protein- protein interaction graphs, gene variation packages, genomic ranges, genomic alignments, genomic annotations. 5.3 Biomedical data science in R- BioML(R). Data wrangling with Tidyverse and shiny	K1-K3 K2-K4 K5-K6	13	1-5

BOOKS FOR STUDY

Robert Gentleman, *R programming for Bioinformatics*, CRC Press, 2016
 Jason Kinser. *Python for Bioinformatics*. Massachusetts: Jones and Barlett Publishers, 2009.
 Mitchell L Model. *Bioinformatics Programming Using Python*. USA: O'Reilly Media Publication, 2009.

BOOKS FOR REFERENCE

Mark Lutz. *Learning Python*. USA: O'Reilly Media Publication, 2009.
 Martin C Brown. *Python: The Complete Reference*. Osborne: McGraw-Hill Media, 2001
 Gentleman R, Carey V.J, Huber W, Irizarry, RA, and Dudoit, S. *Bioinformatics and Computational Biology Solutions Using R and Bioconductor*. New York: Springer, 2008.

WEB SOURCES

www.sthurlow.com/python/
www.learnpython.org
www.codecademy.com/en/tracks/python
<https://docs.python.org/2/tutorial/>
www.pyschools.com/
<http://cran.r-project.org/doc/Rnews/>

JOURNALS

The Python Papers Source Codes

The Python Papers Anthology

Python Journal

The R Journal

Pattern of Assessment**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/PR24												
	Course Title: PYTHON AND R PROGRAMMING												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	1	3	3	3	2	2
CO 2	3	3	2	3	2	2	2	1	3	3	3	2	2
CO 3	3	3	3	3	3	2	1	1	3	2	3	2	2
CO 4	3	3	2	2	2	2	1	1	3	3	2	2	2
CO 5	3	3	3	3	2	2	1	1	3	2	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023–2024)

PYTHON AND R PROGRAMMING – PRACTICAL

CODE: 23BI/PC/P122

CREDITS: 2

L T P: 0 0 3

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to use python and r languages for dataset retrieval and accession
- to analyze biological data using biopython and bioconductor packages
- to develop and write python and r scripts to access biological databases
- to perform normalization and discretization of sample data
- to use Python and R languages for graphical visualization of biological data

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	relate the necessity for programming in biology, Handling biological concepts with Python and R scripts	K1
CO2	perform and distinguish genomic and transcriptomic data analysis	K2
CO3	apply programing to analyze genomic sequences and process the information	K3
CO4	gain efficient programming skills by solving biological problems	K4
CO5	perform biological data analysis using python and R language	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Basics of Python 1.1 Creating tuples, lists, sets, dataframes 1.2 Importing Data, Data Frames, Handling Missing Data 1.3 Data visualization – volcano, PCA plot, heatmap, Object oriented python – displaying genomic coordinates	K1-K3 K2-K4 K5-K6	7	1-5
2	Biopython 2.1 Counting the base frequency, Plotting ABI traces, To transcribe and translate a sequence 2.2 Biopython- using Bioseq –Sequence reading and writing, Biopython using Bio.Genbank – reading entries 2.3 Using BioALign to perform pairwise and multiple sequence alignment	K1-K3 K5-K6 K3-K4	8	1-5

UNIT	CONTENT	CL	Hrs	CO
3	Basics of R 3.1 Creating vectors, matrix, factors, list, dataframes 3.2 Plots – simple –bar, pie, line etc., 3.3. Setting up axis and labels	K1-K4 K5-K6	8	1-5
4	Advanced plotting 4.1 GGplot – geom point, jitter, geom bar, geom line. 4.2. PCA, heat maps, Clustering 4.3. Data analysis - Importing Data, Data Frames, Handling Missing Data	K5-K6 K2-K4	8	1-5
5	Bioconductor 5.1 Bioconductor packages- bioclite, Biostring, Biomart, protein -protein network graphs 5.2 Microarray data analysis – Limma/edgeR/DESEQ2 5.3 Microbiome data analysis- vegan/ phyloseq	K1-K3 K2-K4 K5-K6	8	1-5

BOOKS FOR STUDY

Robert Gentleman, *R programming for Bioinformatics*, CRC Press, 2016
 Jason Kinser. *Python for Bioinformatics*. Massachusetts: Jones and Barlett Publishers, 2009.
 Mitchell L Model. *Bioinformatics Programming Using Python*. USA: O'Reilly Media Publication, 2009.

BOOKS FOR REFERENCE

Mark Lutz. *Learning Python*. USA: O'Reilly Media Publication, 2009.
 Martin C Brown. *Python: The Complete Reference*. Osborne: McGraw-Hill Media, 2001
 Gentleman R, Carey V.J, Huber W, Irizarry, RA, and Dudoit, S. *Bioinformatics and Computational Biology Solutions Using R and Bioconductor*. New York: Springer, 2008.

WEB SOURCES

www.sthurlow.com/python/
www.learnpython.org
www.codecademy.com/en/tracks/python
<https://docs.python.org/2/tutorial/>
www.pyschools.com/
<http://cran.r-project.org/doc/Rnews/>

JOURNALS

The Python Papers Source Codes
 The Python Papers Anthology
 Python Journal
 The R Journal

PATTERN OF ASSESSMENT**Continuous Assessment Test: Total Marks: 50 Duration: 90 minutes**

Sections	Cognitive levels	Marks	Pattern
A	K3, K4	10	2 X 5 =10 (All questions to be answered)
B	K5, K6	30	2 x 15 = 30 (All questions to be answered)
Record		5	
Viva		5	
	Total	50	

End Semester Examination: Total Marks: 100 Duration: 3 Hours

Sections	Cognitive levels	Marks	Pattern
A	K3, K4	50	5 X 10 =50 (All questions to be answered)
B	K5, K6	30	2 x 15 = 30 (All questions to be answered)
Record		10	
Viva		10	
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/P122												
	Course Title: PYTHON AND R PROGRAMMING - PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	2	2	1	3	3	3	2	2
CO 2	3	3	2	3	2	2	2	1	3	3	3	2	2
CO 3	3	3	3	3	3	2	1	1	3	2	3	2	2
CO 4	3	3	2	2	2	2	1	1	3	3	2	2	2
CO 5	3	3	3	3	2	2	1	1	3	2	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023 -2024)

SOFT SKILLS

CODE: 23BI/PK/SS22

CREDITS: 2

L T P: 2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- to empower students and create opportunities for self-development.
- to instill confidence in students to face challenges.
- to manage emotions and resolve conflicts.
- to organize activities and manage time.
- to set goals and plan ahead.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	communicate with confidence and poise	K1
CO2	accept themselves and improve on their weaknesses	K2
CO3	work more effectively and complete activities on time	K3
CO4	work more effectively and complete activities on time	K4
CO5	plan their future with clarity and focus	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Behavioural Traits 1.1 Self-Awareness 1.2 Communication Skills –Verbal and Non Verbal 1.3 Leadership Qualities 1.4 Etiquette and Good Manners 1.5 Experiential Learning –Based on activities	K1-K6	6	1-5
2	Team Work 2.1. Interpersonal Skills 2.2. People Management 2.3. Creative Thinking 2.4. Critical Thinking 2.5. Experiential Learning – Based on activities	K1-K6	5	1-5

UNIT	CONTENT	CL	Hrs	CO
3	Time Management 3.1. Importance of time management 3.2. Planning and Prioritizing 3.3. Organizing skills 3.4. Action Plan 3.5. Experiential Learning – Based on activities	K1-K6	5	1-5
4	Conflict Resolution 4.1. Reasons for conflict 4.2. Consequences of conflict 4.3. Managing emotions 4.4. Methods of resolving conflicts 4.5. Experiential Learning – Based on activities	K1-K6	5	1-5
5	Career Mapping 5.1. Goal Setting and Decision Making 5.2. Career Planning 5.3. Resume Writing 5.4. Handling Interviews 5.5. Experiential Learning – Based on activities	K1-K6	5	1-5

BOOKS FOR REFERENCE

Khera. Shiv. *You Can Win*. New Delhi: Macmillan India, 2002.

Mishra. Rajiv. K. *Personality Development: Transform Yourself*. New Delhi: Rupa 2004.

Newstorm, John. W. and Scannell. Edward. E. *Games Trainers Play: Experiential Learning*. New Delhi: Tata McGraw Hill, 1980.

PATTERN OF EVALUATION

Other Components: Total Marks: 50

Categories of other components	Cognitive levels	Marks allocation
Quiz/MCQs, open book tests/ Tests	K1 - K2	10
Assignment, Mini projects, Debate.	K3 - K4	20
Critique a concept/ Seminar/ Group Presentation	K5 - K6	20

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023–2024)

PROTEOMICS AND METABOLOMICS

CODE: 23BI/PC/PM34

CREDITS: 4

L T P: 3 0 2

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to provide an insight into the complete proteome and metabolome map of humans
- to instill methods of protein modeling and validation
- to foster knowledge on the significance of protein interactions in disease conditions
- to acquaint knowledge on various experimental and computational techniques available for proteomic and metabolomic profiling
- to develop an understanding of the entire protein/metabolome components of a cell through analytical approaches, Data mining and other software tools

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	gain an insight of the basic and advanced concepts and applications of proteomics and metabolomics	K1
CO2	understand the mechanisms of integrating proteomics and metabolomic data with the previously learnt omics techniques	K2
CO3	apply functional genomics techniques to analyze proteome and metabolome data for biological system	K3
CO4	deduce differential abundances in proteome and metabolome during health and disease	K4
CO5	analyze the proteomic and metabolomic interactions in complex disease	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Proteomics		10	
	1.1. Introduction to Proteomics - Proteins structure, Organization of protein structure, structural conformation of proteins, three dimensional structures of proteins.	K1-K2		1-2
	1.2. Protein extraction and purification - 1D and 2D-gel electrophoresis, Mass Spectrometry - ESI, MALDI, Software for Matching MS Data with Specific Protein Sequences, Peptide sequencing by tandem mass spectrometry	K2-K3		2-3
	1.3. Preparative IEF, Protein Digestion Techniques, Protein structure prediction - Elementary Description of Crystallography - Crystal Growth, Data Collection, Structure Solution, Refinement and Interpretation	K3-K6		3-5

UNIT	CONTENT	CL	Hrs	CO
2	Computational proteomics		10	
	2.1. Protein Structure prediction - Secondary Structure Prediction, Homology modelling, Structure validation tools - Ramachandran Plot, Threading and <i>ab initio</i> method, Tools for Structure prediction	K1-K3		1-3
	2.2. Protein structural visualization; Geometry optimization and Loop refinement, AI based methods- alpha fold, alpha meet	K3		3
	2.3. Proteogenomics - overview, applications and computational resources available	K4-K6		4-5
3	Protein -protein interactions		10	
	3.1. Proteomic interactions - Yeast Two-Hybrid, Mammalian Screen Methods and Co-Immuno Precipitation techniques	K1-K3		1-3
	3.2. Protein-Protein Interactions, chaperones, protein misfolding in diseases and protein complexes. Databases and proteomic tools	K3-K6		3-5
	3.3. Post translational modifications, top down and bottom up approaches in proteomics. Data analysis in proteomics, Applications of proteomics in Biomarker discovery, personalized medicine, astrobiology, paleo proteomics	K4-K6		5
4	Metabolomics		12	
	4.1. Metabolite to metabolome and metabolic reactions, importance of metabolomics and designing a metabolome study	K1-K3		1-3
	4.2. Metabolomic databases and web resources, Experimental methods in metabolome generation-Plant/bacterial secondary metabolites, MS based approaches, targeted and untargeted metabolomics, and experimental errors.	K3-K4		3-4
	4.3. Metabolomic categories - Lipidomics, Glycomics, Fluxomics, genome scale metabolic modelling	K4-K6		4-5
5	Computational Analysis of Metabolomics		13	
	5.1. Generation of metabolome data, over representation analysis and disease-based enrichment analysis.	K1-K3		1-3
	5.2. Statistical analysis in metabolomics – univariate and multivariate analysis, dimensionality reduction and differential abundance of metabolomics.	K4-K6		4-5 2-3
	5.3. Functional annotation, Softwares and tools for metabolome analysis - Mzime, metabolome analyst, paintomics.	K2-K3		

UNIT	CONTENT	CL	Hrs	CO
	Practical component		10	1-5
	Metabolic pathway database – KEGG, PharmGKB, Pubchem	K1,K2		
	Protein classification and structure analysis –Chou fasman, GOR, Procheck	K3,K4		
	Protein motif and domain search – PROSITE, PDBeMotif, MASCOT			
	Homology modelling – Swiss model, Modeller software	K5,K6		
	Secondary structure prediction – JPRED, MFOLD			
	Protein–Protein interaction analysis – DIP, STRING, BIND, Expasy, Cytoscape			

BOOKS FOR STUDY

Lesk Arthur M. *Introduction to Protein Science: Architecture, Function and Genomics*. New York: Oxford university press, 2016

Pennington S and M. J. Dunn. *Proteomics: From Proteins Sequence to Function*. Germany: Springer Publications, 2001

Palzkill and Timothy. *Proteomics*. USA: Kluwer Academic Publishers, 2013.

Daniel C. Leibler. *Introduction to Proteomics: Tools for New Biology*. USA: Humana Press, 2002.

Srivastava Sudhir. *Informatics in Proteomics*. USA: Taylor & Francis Group, 2005.

BOOKS FOR REFERENCE

Collado Vides Julio and Ralf Hofstadter. *Gene Regulation and Metabolism – Post Genomic Computational Approaches*. India: Ane Books, 2004.

Dale, Jeremy W and Malcolm von Schantz. *From Genes to Genomes – Concepts and Applications of DNA Technology*. USA: John Wiley and Sons, 2012.

Griffiths, A.J.F, Miller, J.H, Suzuki, D.T. Lewontin, R. C. and Gelbart, W.M. *An Introduction to Genetic Analysis*. USA: W.H. Freeman, 1996.

Golemis and Erica. *Protein-Protein Interaction*. USA: CSHL, 2005.

WEB SOURCES

<http://www.oncolink.org/resources/article.cfm?id=326>

<http://www.nature.com/nature/journal/v422/n6928/full/nature01510.html>

<http://proteomics.cancer.gov/whatisproteomics>

<http://www.isaaa.org/resources/publications/pocketk/15/default.asp>

JOURNALS

Genomics, Proteomics & Bioinformatics

Journal of Data Mining in Genomics & Proteomics

Human Genomics and Proteomics

Journal of Proteomics and Genomics

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
Theory			
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K5, K6	10	2 X 5 = 10 (Internal choice) Answers in about 500 words
Practical			
A	K3, K4	10	2 X 5 =10 (All questions to be answered)
B	K5, K6	10	1 x 10 =10 (All questions to be answered)
	Record & Viva	5	
	Total	50	

Other Components:

Total Marks: 50

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs, open book tests/ Tests	K1 - K2	CO1-CO2	20
	K3 - K4	CO3-CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Mark allocation	Pattern
Theory			
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K5, K6	20	4 X 5 = 20 (Internal choice) Answers in about 500 words
Practical			
A	K3, K4	20	2 X 10 =20 (All questions to be answered)
B	K5, K6	20	2 x 10 =20 (All questions to be answered)
	Record & Viva	10	
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/PM34												
	Course Title: PROTEOMICS AND METABOLOMICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	1	3	2	2	1	1	1	1	2	2	2
CO 2	3	3	2	3	2	1	1	1	2	1	3	2	3
CO 3	3	3	2	3	2	2	1	1	3	2	3	1	2
CO 4	3	3	3	3	2	1	1	1	2	1	3	1	1
CO 5	3	2	3	3	2	2	1	1	2	2	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

MACHINE LEARNING, DEEP LEARNING AND ARTIFICIAL INTELLIGENCE

CODE: 23BI/PC/MA34

CREDITS: 4

L T P : 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to provide an insight in discovering pattern in the data and to make predictions as well as to intricate patterns for solving healthcare problems
- to identify objects from large datasets and to perform complex tasks with increasing accuracy
- to identify the precise 3d geometry of biological molecules and enhance the ability of biological research for better disease diagnosis
- to annotate biological databases and retrieve the key information hidden in the data.
- to construct model in order to identify the patterns and relationships in data and apply in the AI tool development

COURSE LEARNING OUTCOMES

On successful completion of the course, student will be able to

COs	DESCRIPTION	CL
CO1	demonstrate the fundamental knowledge on concepts of machine learning and deep learning	K1, K2
CO2	utilise the different libraries available to understand the fundamental prerequisite for ml and dl	K3
CO3	identify the right method of classification and clustering analysis specific for the datasets	K4
CO4	enable to build a model and examine their performance using various statistical methods by training and testing to culminate artificial intelligence	K5
CO5	apply the ml, dl and ai concepts to solve problems in biology and medicine	K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Data Types and Preprocessing 1.1. Different Forms—statistics, data mining, data analysis, data science, Statistics vs. Data Mining vs. Data Analytics vs. Data Science. 1.2. Machine Learning perspectives of data—Scales of Measurement, data imputation, dealing with missing data, normalising data, feature generation. 1.3. Machine Learning Categories-supervised, unsupervised, reinforcement learning.	K1-K4 K2-K5 K3-K6	10	1-5
2	Machine Learning 2.1. Exploratory data analysis –multivariate and univariate analysis, Supervised Learning concepts- Regression, correlation and causation. 2.2. Supervised Learning – Classification, ROC curve, Evaluating a Classification Model Performance, SVM, SOM and KNN. 2.3. Unsupervised learning – K means, Hierarchical and random forest, evaluation – cross fold K validation.	K1-K4 K2-K5 K3-K6	15	1-5
3	Building and Evaluating Model 3.1. Ensemble methods- bagging, boosting, Ensemble voting, stacking. 3.2. Text mining, data assemble, Data Preprocessing (Text) - Convert to Lowercase and Tokenize, Removing Noise, Part of Speech (PoS) Tagging, Stemming, Lemmatization, N-grams, Word2Vec, FastText, Glove. 3.3. Transformer based architecture and models, Data Exploration, model building and evaluation.	K1-K4 K2-K5 K3-K6	15	1-5
4	Deep Learning and Artificial Intelligence 4.1. Artificial Neural Network (ANN), Image Recognition with Deep Learning and Neural Networks, Perceptron– Single Artificial Neuron, Multilayer Perceptrons (Feedforward Neural Network). 4.2. Restricted Boltzmann Machines (RBM), Multilayer Perceptrons (MLP) Using Keras, tensor flow, Autoencoders. 4.3 Convolution Neural Network (CNN), Recurrent Neural Network (RNN), Long Short- Term Memory (LSTM), Transfer Learning and Reinforcement Learning	K1-K4 K2-K5 K3-K6	10	1-5
5	Applications of ML, DL and AI 5.1. ML, DL and AI in drug discovery and development 5.2. Approaches of ML, DL and AI in medical diagnosis and personalized medicine 5.3. Implementation of ML, DL and AI in disease prediction and prevention	K1-K4 K2-K5 K3-K6	15	1-5

BOOKS FOR STUDY

Michael Bowels, Machine Learning in Python: Essential Techniques for Predictive Analysis, Wiley publications, 2015

Andreas Muller, Introduction to Machine Learning with Python a guide for data scientists, O'Reilly, 2016

François Chollet, Deep Learning with Python, 2nd eds., Manning publications, 2021.

BOOKS FOR REFERENCE

Aurélien Géron, Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow: Concepts, Tools, and Techniques to Build Intelligent Systems, Third Edition, 2022

John Patterson, Deep Learning: A Practitioner's Approach (Greyscale Indian Edition), 2017

Seth Weidman, Deep Learning from Scratch: Building with Python from First Principles, O'Reilly, 2019.

Ian Goodfellow, Yoshua Bengio and Aaron Courville, Deep Learning, MIT Press, 2016

JOURNALS

Journal of Machine Learning Research

Journal of Artificial Intelligence Research

Applied Artificial Intelligence

International Journal on Artificial Intelligence Tools

WEB SOURCES

<https://www.futurelearn.com/courses/artificial-intelligence-in-bioinformatics>

<https://towardsdatascience.com/ai-in-bioinformatics-a1acdc3cdd89#:~:text=AI%20in%20bioinformatics%20includes%20both,as%20well%20as%20complex%20systems.>

<https://addepto.com/blog/the-role-of-machine-learning-in-bioinformatics-and-biology/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration:90 minutes

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/MA34												
	Course Title: MACHINE LEARNING, DEEP LEARNING AND ARTIFICIAL INTELLIGENCE												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	2	1	1	3	3	3	3	2
CO 2	3	2	3	2	3	3	2	1	3	3	3	3	3
CO 3	3	3	3	2	3	3	2	1	3	2	2	2	3
CO 4	3	2	2	3	3	3	2	2	3	2	3	2	3
CO 5	2	2	3	2	2	2	1	1	3	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023 -2024)

MOLECULAR MODELING AND COMPUTER AIDED DRUG DESIGN

CODE: 23BI/PC/MC34

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- to provide clear concepts on bond angle, bond stretching, bond distance and role on different types of bonds in interactions
- to understand theoretical background to the various methods of energy minimization
- to instill molecular modelling mechanics and interaction
- to develop and understand the mechanism of drug design using computers
- to acquire knowledge on molecular dynamics and monte carlo simulations

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	interpret the protein structural features, minimise the energy and simulate to attain the stability for its importance in drug action	K1,K2
CO2	construct and analyse the molecular dynamics and monte carlo simulation methods	K2,K3
CO3	compare, categorise and examine the concepts of molecular interactions and qsar studies	K3,K4
CO4	determine the functional disease targets and interpret the target-ligand interactions	K4,K5
CO5	apply the knowledge towards design and development of potential lead molecules	K5,K6

CL – Cognitive Level

K1 – Remember | K2 – Understand | K3 – Apply | K4 – Analyse | K5 – Evaluate | K6 – Create

UNIT	CONTENT	CL	Hrs	CO
1	Molecular Mechanics 1.1. Concepts in Molecular Modeling - Molecular Representations, Coordinate Systems, Potential Energy Surfaces. 1.2. Molecular Mechanics, Force fields - Bond Length, Bond Angle and Torsion angle potential 1.3. Non- bonded Interactions-Van der Waals and Electrostatic Potential, Hydrogen bond interactions	K1-K4 K2-K4 K5-K6	10	1-5
2	Energy Minimization Methods 2.1. Energy Minimization- Derivative and Non-Derivative Energy Minimization Methods. 2.2. Calculation of Simple Thermodynamic Properties, Computer Simulation, Boundaries, Monitoring the Equilibration, Long Range Forces. 2.3. Analyzing the Results of Simulation and Estimating Errors.	K1-K4 K2-K4 K5-K6	10	1-5
3	Pharmacophores 3.1. Molecular structures, representation – SMILES, InChi keys, Chemical Fingerprint generation, Tanimoto coefficient. 3.2. Molecular structure similarity and diversity, Molecular Descriptors – 1D, 2D, 3D, 4D, CoMFA, COMSIA, QSAR, 3D QSAR, ADMET prediction. 3.3. 3D Pharmacophore identification and mapping, Ligand-based and structure based pharmacophores, Chemical libraries, Scaffold hopping	K1-K3 K2-K4 K5-K6	15	1-5
4	Molecular Docking 4.1. Drug discovery and development, computational approaches in drug discovery. 4.2. Structure Based Drug Design - Target Discovery and Validation, Active Site Prediction, Lead identification and Optimization, De Novo Drug Design. 4.3. Molecular docking and high throughput virtual screening.	K1-K3 K2-K4 K5-K6	15	1-5
5	Molecular Dynamics and Monte Carlo Simulations 5.1. Molecular Dynamics Using Simple Model, Molecular Dynamics with Continuous Potentials 5.2 Molecular Dynamics at Constant Temperature and Pressure Incorporating Solvent effects into Molecular Dynamics, Conformational Changes from Molecular Dynamics Simulation 5.3. Monte Carlo Simulation of Molecules, Calculation of Chemical Potential-Simulating Phase Equilibria by Gibbs Ensemble Monte Carlo Method	K1-K4 K2-K4 K5-K6	15	1-5

BOOKS FOR STUDY

N. Claude Cohen. *Guidebook on Molecular Modelling In Drug Design*. California: Academic Press, 2006.

Andrew R. Leach. *Molecular Modeling: Principles and Applications*. USA: Prentice Hall, 2007.

Daan Frenkel and Berend Smit. *Understanding Molecular Simulation: From Algorithms to applications*. USA: Academic Press, 2002.

Claudio N. Cavasotto. *In Silico Drug Discovery and Design: Theory, Methods, Challenges, and Applications*. USA: Taylor & Francis Group, 2017

BOOKS FOR REFERENCE

Charifson P S. *Practical Application of Computer Aided Drug Design*. New York: Dekker, 1997

Alan Hinchliffe. *Molecular Modelling for Beginners*. USA: John Wiley & Sons, 2008

Sivasamy Ramasamy. *Molecular Modeling*. India: LAMBERT Academic Publishing, 2015.

Luca Monticelli, Emppu Salonen. *Biomolecular Simulations: Methods and Protocols*. USA: Humana Press, 2016.

JOURNALS

Journal of Molecular Modeling
Journal of Molecular Graphics and Modelling
Journal of Computer-Aided Molecular Design
Current Computer Aided-Drug Design

WEB RESOURCES

<http://accessengineeringlibrary.com/browse/computer-aided-drug-design-and-delivery-systems>
<http://www.southernresearch.org/life-sciences/lead-discovery-and-optimization/medicinal-chemistry/computational-chemistry>
<http://www.ch.ic.ac.uk/local/organic/mod/>
http://www.chemcomp.com/MOE-Molecular_Modeling_and_Simulations.htm

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 = 5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 = 10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/MC34												
	Course Title: MOLECULAR MODELING AND COMPUTER AIDED DRUG DESIGN												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	3	2	1	3	3	3	2	3
CO 2	3	3	3	3	2	3	1	1	3	2	2	2	2
CO 3	3	3	3	3	3	3	2	1	3	3	3	2	3
CO 4	3	3	3	3	3	3	2	1	3	3	3	2	3
CO 5	3	3	3	3	3	3	3	2	3	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023 -2024)

**MOLECULAR MODELING AND COMPUTER AIDED DRUG
DESIGN- PRACTICAL**

CODE: 23BI/PC/P232

CREDITS : 2

L T P : 0 0 3

TOTAL TEACHING HOURS : 39

OBJECTIVE OF THE COURSE

- to provide practical experience in the analysis of protein sequences
- to instill knowledge on pharmacophore mapping
- to understand the use of informatics in drug design and development
- to identify new drug targets to treat diseases
- to gain insights on protein-ligand docking and knowledge-based scoring functions for molecular simulations

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the importance of drug-like properties and their prediction	K1,K2
CO2	describe the use of lead candidates and database representations	K2,K3
CO3	in silico identification of lead molecules through molecular docking, pharmacophore modeling	K3,K4
CO4	perform the mechanics and dynamics of molecules	K4,K5
CO5	gain practice in macromolecular simulations and perform research work in the area of computational drug design	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3– Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Pharmacophore modeling Ligand Search – PubChem, Drug bank, ChEMBL, ZINC databases. Chemical drawing package – Marvin Sketch. ADME prediction – Online tools (Swiss ADME, etc.). QSAR model prediction – In Silico tools. Pharmacophore mapping.	K1-K6	8	1-5
2	Active site prediction Binding Site Identification Different approaches for binding site identification Tools - Cast-P, POCASA, 3D ligand site, Metapocket, Ghecom.	K1-K6	8	1-5
3	Molecular Docking Structure Based Drug Design-Molecular docking using AutoDock and pyrx, Discovery Studio	K1-K6	8	1-5
4	Molecular Visualisation: Pymol and Chimera, Pdb file format and Parsing Visualizing a molecule in different representations Identifying interacting residues (protein and ligand interactions) Measuring distances between atoms B-factor visualisation Image tracing and preparation. Geometry Optimization using SwissPdb Viewer Energy Minimization of protein molecule, Determining Maxima and Minima energy points	K1-K6	7	1-5
5	Molecular Dynamics Molecular dynamics using GROMACS/NAMD/ AMBER, Discovery Studio (CHARMM)	K1-K6	8	1-5

BOOKS FOR REFERENCE:

N. Claude Cohen. *Guidebook on Molecular Modelling In Drug Design*. California: AcademicPress, 2006.

Andrew R. Leach. *Molecular Modeling: Principles and Applications*. USA: Prentice Hall, 2007.

Daan Frenkel and Berend Smit. *Understanding Molecular Simulation: From Algorithms to applications*. USA: Academic Press, 2002.

Claudio N. Cavasotto. *In Silico Drug Discovery and Design: Theory, Methods, Challenges, and Applications*. USA: Taylor & Francis Group, 2017

Charifson P S. *Practical Application of Computer Aided Drug Design*. New York: Dekker, 1997

Alan Hinchliffe. *Molecular Modelling for Beginners*. USA: John Wiley & Sons, 2008

Luca Monticelli, Emppu Salonen. *Biomolecular Simulations: Methods and Protocols*. USA: Humana Press, 2016.

PATTERN OF ASSESSMENT**Continuous Assessment Test: Total Marks: 50 Duration: 90 minutes**

Sections	Cognitive levels	Marks	Pattern
A	K3, K4	10	2 X 5 =10 (All questions to be answered)
B	K5, K6	30	2 x 15 = 30 (All questions to be answered)
Record		5	
Viva		5	
	Total	50	

End Semester Examination: Total Marks: 100 Duration: 3 Hours

Sections	Cognitive levels	Marks	Pattern
A	K3, K4	50	5 X 10 =50 (All questions to be answered)
B	K5, K6	30	2 x 15 = 30 (All questions to be answered)
Record		10	
Viva		10	
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/P232												
	Course Title: MOLECULAR MODELING AND COMPUTER AIDED DRUG DESIGN-PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	3	2	1	3	3	3	2	3
CO 2	3	3	3	3	3	3	2	1	3	3	3	3	3
CO 3	3	3	3	3	3	3	2	1	3	3	3	3	3
CO 4	3	3	3	2	3	2	1	1	3	2	3	3	3
CO 5	3	3	3	3	3	3	2	1	3	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023 -2024)

MOLECULAR BIOLOGY PRACTICAL

CODE: 23BI/PC/P332

CREDITS : 2

L T P : 0 0 3

TOTAL HOURS : 39

OBJECTIVE OF THE COURSE:

- to identify subcellular structures, organelles and understand their functions
- to provide practical experience of the various techniques involved in molecular biology and biochemistry
- to perform a range of molecular techniques used for the isolation, estimation, purification of biomolecules
- to instill practical knowledge on plant extraction and identification of secondary metabolites
- to understand the mechanism of sequencing of environmental samples through metagenomics approach

COURSE LEARNING OUTCOMES

On successful completion of the course, the student will be able to

COs	DESCRIPTION	CL
CO1	utilize laboratory skills to enhance understanding of cell structure and function while participating in a group environment	K1,K2
CO2	develop responsible conduct of laboratory skills appropriate to the field of cell and molecular biology	K2,K3
CO3	apply the molecular biology techniques to biotechnological approaches	K3,K4
CO4	perform the mechanics and dynamics of molecules	K4,K5
CO5	gain practice in macromolecular simulations and perform research work in the area of computational drug design	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1. Cell Fraction and Extraction of cell organelles - Chloroplast 1.2. Extraction of DNA from Onion 1.3. Extraction of RNA from Yeast	K1-K6	8	1-5
2	2.1. Estimation of DNA and RNA 2.3. Estimation of Proteins by Lowry's Method 2.3. Estimation of Mitochondria by Assessing the Marker Enzyme	K1-K6	8	1-5

UNIT	CONTENT	CL	Hrs	CO
3	3.1. Denaturing Proteins and Identification of Amino Acids by Thin Layer Chromatography 3.2. Amplification of DNA by PCR 3.3. Electrophoretic Techniques: Agarose Gel Electrophoresis, SDS PAGE, Southern Blotting (Demo)	K1-K6	8	1-5
4	4.1. Plant sample extraction using solvents 4.2. Identification of secondary metabolites 4.3. Evaluation of secondary metabolites for therapeutic use	K1-K6	7	1-5
5	5.1. Sample collection from different environments 5.2. Microbial isolation and culture techniques 5.3. Metagenomics analysis	K1-K6	8	1-5

BOOKS FOR REFERENCE

Wilson, K; Walker, J. *Principles and techniques of Biochemistry and Molecular Biology*. USA: Cold Spring Harbor Laboratory Press, 2010.

Sambrook, J; Russel, DW. *Molecular Cloning*. USA: Cold Spring Harbor Laboratory Press, 2001.

Sadasivam, S. and Manickam, A. *Biochemical Methods*. India: New Age International, 2009.

Wilson, K; Walker, J. *Principles and techniques of Biochemistry and Molecular Biology*. USA: Cold Spring Harbor Laboratory Press, Eighth edition, 2010.

Swati Agarwal, Suphiya Khan. *Advanced Lab Practices in Biochemistry & Molecular Biology*. India: I K International Publishing House, 2018.

PATTERN OF ASSESSMENT

Continuous Assessment Test: Total Marks: 50 Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
A	K3, K4	10	2 X 5 =10 (All questions to be answered)
B	K5, K6	30	2 x 15 = 30 (All questions to be answered)
Record		5	
Viva		5	
	Total	50	

End Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Sections	Cognitive levels	Marks	Pattern
A	K3, K4	50	5 X 10 =50 (All questions to be answered)
B	K5, K6	30	2 x 15 = 30 (All questions to be answered)
Record		10	
Viva		10	
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/P332												
	Course Title: MOLECULAR BIOLOGY-PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	3	2	3	1	3	2	1	1	2
CO 2	3	2	3	2	3	2	3	1	3	1	2	1	3
CO 3	3	3	3	3	3	2	3	2	3	2	2	2	3
CO 4	3	3	3	2	3	3	1	1	3	3	3	2	3
CO 5	3	3	3	3	3	3	1	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023 -2024)

SUMMER INTERNSHIP

CODE: 23BI/PN/SI32

CREDITS: 2

OBJECTIVES OF THE COURSE

- to enable students to gain experiential learning in the field of bioinformatics
- to acquire hands on training in Bioinformatics Softwares

The Summer Internship program is for a minimum period of three weeks. The students are expected to have regular attendance in their respective Institutes and submit a report to the Department reporting the experiments they have observed/conducted. The students are expected to give a seminar presentation in the third semester of the work they have observed/conducted.

Guidelines for Evaluation

The maximum marks for the Summer Internship is 50 and is divided into the following:

- a) Log Book (20 Marks)
- b) Seminar presentation (15 Marks)
- c) Attendance (15 Marks)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023 -2024)

APPLIED BIOINFORMATICS

CODE: 23BI/PC/AB44

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to explore the potentials of dietary supplements with the impact on genome, proteome and metabolome.
- to examine factors that affect drug response and the application of pharmacogenetics to drug development and drug treatment
- to empower the trait screening and marker-assisted backcrossing for the improvement of genetic merit of plant breed.
- to be aware of biodiversity importance and utilize software for identification and accessing the biodiversity databases.
- to instill knowledge on the major steps in cancer development and progression and their relationship to disease mechanisms and therapeutic strategies

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	apply the nutritional information to genomics and vice versa	K1
CO2	emphasise the application of bioinformatics and biological databases for the development of personalized medicine.	K2
CO3	imbibe the genome technologies to change breeding, monitor and protect the wild plant population	K3
CO4	evaluate the red data books, biodiversity registers and to interpret their morphological and molecular characterization	K4
CO5	describe the major clinical-translational areas of research in cancer biology and the goals of biomedical research in these areas	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Nutrigenomics 1.1. Introduction-Background & Preventive Health. Applications -Nutrigenomics & gut health-prebiotics and probiotics. Nutrition linked to genes and phenotypes. 1.2. Role of folate, choline, and vitamins B2, B6 and B12, in gene regulation. Databases -SGMD, Barleybase and others. 1.3 Tools-Use of BioConductor, Booly.	K1 K2-K3 K4-K6	13	1-5
2	Pharmacogenomics 2.1. Introduction to Pharmacogenomics, Application and Challenges in Pharmacogenomics, Genetic Variation, Types of Variants, SNPs, Insertion/Deletions. 2.2. Databases - Pharmacogenomics Knowledge Base (PharmGKB), GWAS (Genome Wide Association study). 2.3. Personalised medicine - The use of AI in personalised medicine. Database-PreMedKb	K1-K2 K4-K6 K3-K6	13	1-5
3	Agrigenomics 3.1. Genomics application in Agriculture- The advantages and outcomes. Wheat genomics program. Seed saving techniques. 3.2. Genomic breeding, genetic engineering of plants. Development of high performance plants- Case study. 3.3. Databases of interest -Integbio, NARO- (RAP-DB), Tools- Parentage Testing, Marker assisted backcrossing.	K1-K3 K3-K4 K5-K6	13	1-5
4	Biodiversity Informatics 4.1. Concepts of Biodiversity, Major drivers of biodiversity change; biodiversity management approaches, Endangered animals, Endemism and Red data books- Biodiversity registers 4.2. Software for identification of Accessing existing biodiversity databases on the WWW- Delta, MicroIS, AVIS, ICTV 4.3. UNEP/GEF biodiversity data management project (BDM). – CBD and bioethics– General agreement on trade and traffics.	K1-K3 K3-K4 K4-K6	13	1-5
5	Cancer Genomics 5.1. Carcinogenesis - chemical and physical carcinogenesis, molecular pathways in carcinogenesis, Apoptosis and cancer. Mutagens, genetic variants. 5.2. Databases and tools to analyse cancer data- TCGA, Biportal, GTEX, HPA, Reactome, UALCAN, Oncomine, KM plotter, COSMIC. Kaplan meier survival plots. Analysing Big Data of Cancer Genomics. 5.3. Application of next generation sequencing technologies in diagnosis and prediction of cancer genes. Identification of Methylation sites, Expression profiles, pathway analysis.	K1-K2 K2-K3 K3-K6	13	1-5

BOOKS FOR STUDY

Russ B. Altman, David Flockhart, David B. Goldstein. *Principles of Pharmacogenetics and Pharmacogenomics*. UK: Cambridge University Press, 2012.

Rapley R and Harbron S. *Molecular analysis and Genome discovery*. John Wiley, 2004.

Lynnette R. Ferguson, *Nutrigenomics and Nutrigenetics in Functional Foods and Personalized Nutrition*, CRC Press, 2016.

KJ Gaston, *Biodiversity – An introduction*, 2nd ed., Wiley-Blackwell, 2003.

Graham Dellaire, Jason N. Berman, Robert J. Arceci, *Cancer Genomics: From Bench to Personalized Medicine*, 1st ed., Academic Press, 2013.

BOOKS FOR REFERENCE

Bryce Mendelsohn, Jeanette McCarthy, *Precision Medicine: A Guide to Genomics in Clinical Practice (INTERNAL MEDICINE)*, Paperback, McGraw-Hill Education

Raffaele De Caterina, J. Alfredo Martinez, Marin Kohlmeier, *Principles of Nutrigenetics and Nutrigenomics: Fundamentals of Individualized Nutrition*, Academic Press Inc., 2019.

Martin M. Zdanowicz. *Concepts in Pharmacogenomics*. New York: McGraw Hill, 2010.

JOURNALS

The Pharmacogenomics Journal

American Journal of Pharmacogenomics

Pharmacogenomics and Personalized Medicine

Agronomy Journal

Lifestyle genomics

Nutrigenomics- Frontiers in Nutrition

Cancer genomics

WEB RESOURCES

<http://ghr.nlm.nih.gov/handbook/genomicresearch/pharmacogenomics>

<https://www.pharmgkb.org/>

<http://www.fda.gov/drugs/scienceresearch/researchareas/pharmacogenetics/ucm083378.htm>

<http://www.emolecules.com/info/molecular-informatics>

<https://www.illumina.com/areas-of-interest/agrigenomics.html>

<https://center-forward.org/genomics-agricultural-innovation/>

<http://www.pmjournal.ir/>

<https://www.cbiportal.org/>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/AB44												
	Course Title: APPLIED BIOINFORMATICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	3	2	1	3	3	3	2	3
CO 2	3	3	3	2	3	3	2	1	3	3	3	3	3
CO 3	3	3	3	3	3	2	2	1	3	3	2	2	3
CO 4	3	3	2	3	3	3	3	2	3	3	2	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023–2024)

BIG DATA ANALYSIS

CODE: 23BI/PC/BD44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to develop a quantitative understanding of how data science in bioinformatics plays a role in the current decade
- to understand the various aspects of data science and applying them in health care
- to obtain adequate knowledge of machine learning approaches
- to be aware of fundamentals and the use of computing power of clusters in accessing the sheer size of biological big data
- to create a general pipeline for complex data models and control analysis in a step-by-step fashion

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	collect meaningful values out of big biological data	K1
CO2	describe the big data landscape including examples of real world big data problems	K2
CO3	identify what are and what are not big data problems and be able to recast big data problems as data science questions	K3
CO4	apply the skills of hadoop and spark technology to solve the data science questions	K4
CO5	create pipelines for data analysis and reusable methods	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Big data 1.1. Big data -characteristics, data structures and data repositories, Example of Big Data. 1.2. Machine and People Generated Data and Advantages. Characteristics of big data – 6 V's 1.3. Getting value out of big data using a 5-step process to structure your analysis.	K1 K2-K3 K4-K6	12	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Big data in healthcare 2.1 Data Science in Biomedicine and Healthcare. Sequence Processing, Medical Image Analysis, Natural Language Processing. 2.2 Network Modeling and Probabilistic Modeling. Concepts of Hadoop and spark, The Hadoop Distributed File System: A Storage System for Big Data, YARN: A Resource Manager For Hadoop. 2.3 MapReduce: Simple Programming for Big Results. Introduction to Spark for big data analysis. Pyspark in Solving big data.	K1-K2 K4-K6 K3-K6	15	1-5
3	Biological data analysis 3.1 ChIPseq - Introduction and biological theories on ChIPseq analysis. DNA fragment evaluation. Peak identification. Two condition comparison. Saturation analysis. Motif finding and related theories. 3.2 ATAC sequencing, Bisulfite sequencing for big biological data. 3.3 Integrating Multiomics big data. Seqware, distmap, read annotation pipelines.	K1-K3 K3-K4 K5-K6	13	1-5
4	Computer clusters 4.1 Introduction to essential computing, Distributed computing systems. An oversimplified, but useful, view of a computing cluster, Essential Unix/Linux Terminal Knowledge, Clusters, parallel, supercomputers, workstations, HPC. 4.2 Cluster computing and the job scheduler, High performance computer clustering (HPCC), learning about the resources on HPCC 4.3 Cloud computing - Cloud Primer, Cloud Foundations, Cloud Security and Migration. Cloud services – AWS or Google cloud.	K1-K3 K3-K4 K4-K6	12	1-5
5	Workflows and pipelines 5.1 Introduction to Snake make and next flow- installation, rules, directives: input, output, shell, script, target files, best-practices of bioinformatics pipeline development. 5.2 History of containers, Containers vs. virtual machines. Docker -Concept of and the difference between Docker & Singularity containers 5.3 Git and version control - github learning lab, git cheat sheet and best practices, REST- API.	K1-K2 K2-K3 K3-K6	13	1-5

BOOKS FOR STUDY

Teschendorff, A. E. Computational and Statistical Epigenomics. Springer Netherlands, 2015.
Xiong, M. Big data in omics and imaging: Association analysis. Chapman and Hall/CRC, 2017.
Ye, S. Q. Big data analysis for bioinformatics and biomedical discoveries. CRC Press, 2016.

BOOKS FOR REFERENCE

Paul Gerrard and Radia M. Johnson. Mastering Scientific Computing with R. Packt Publishing, UK, 2015.
P.P. Sinha. Bioinformatics with R Cookbook. Packt Publishing, UK, 2014.
Mandoiu, I., & Zelikovsky, A. Computational Methods for Next Generation Sequencing Data 50 Analysis, 2016.
John Wiley & Sons. Peter, D. Introductory statistics with R, 2nd ed. Springer Science & Business Media, 2015.

WEB SOURCES

<https://hevodata.com/learn/top-21-hadoop-big-data-tools/>
<https://www.cloudxlab.com>
<https://www.abinitio.com>

JOURNALS

BMC: Big data Analytics
Journal of Bigdata, Springer
Big Data Research, Elsevier

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/BD44												
	Course Title: BIG DATA ANALYSIS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	3	2	2	3	3	3	3	2	1	3	3	3
CO 2	3	3	3	1	2	3	2	2	3	2	2	3	3
CO 3	3	3	3	2	2	2	3	1	3	1	1	3	3
CO 4	3	3	2	1	2	3	2	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	2	2	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023 -2024)

SYSTEMS BIOLOGY

CODE: 23BI/PC/SM44

CREDITS: 4

L T P : 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVE OF THE COURSE

- to introduce the basic concepts of systems biology
- to train the students in designing a new organism through modelling network concept and manipulating them for biological applications
- to investigate the effects and regulation of gene expression in different temporal and spatial environments
- to simulate and interpret the complex cell organelle interactions and their relations with different biological entities
- to construct novel biological parts or devices and to redesign the existing natural biological systems.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the principles of integrative analysis methods for biological system analysis and interactions.	K1
CO2	appreciate the model behaviour concepts	K2
CO3	model gene expressions and integrate them with other omics	K3
CO4	simulate the cell environments and model a cell	K4
CO5	develop synthetic biology applications for omics	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction 1.1. Introduction – Systems Biology is a Living Science 1.2. Properties of Models-Model Behaviour - Model development 1.3. Systems Biology is Data Integration	K1- K3 K2– K4 K5- K6	15	1-5
2	Standard Models and Approaches in Systems Biology 2.1. Standard Models and Approaches in Systems Biology 2.2. Enzyme Kinetics and Thermodynamics-Metabolic Networks. 2.3. Structure of Intra- and Intercellular Communication- Receptor- Ligand Interactions	K1, K2 K3, K4 K5, K6	10	1-5
3	Modeling of Gene Expression 3.1. Modeling of Gene Expression-Modules of Gene Expression – Promoter Identification - General Promoter Structure 3.2. Sequence Based Prediction of Promoter Representation of Gene 3.3. Network as Directed and Undirected Graphs, Bayesian Networks- Boolean Networks- Gene Expression Modeling with Stochastic Equations	K1, K2 K3, K4 K5, K6	15	1-5
4	Integrating Networks 4.1. Computer Simulation of the whole Cell. Human Erythrocyte Model and its applications. Software for Modeling, ECELL, VCELL and GROMOS. 4.2. Simulation of cellular subsystems, network of metabolites and enzymes 4.3. Signal transduction networks, Gene 5 regulatory networks, metabolic pathways: databases such as KEGG, EMP, MetaCyc, AraCyc.	K1, K2 K3, K4 K5, K6	12	1-5
5	Introduction to Synthetic Biology 5.1. General concepts and enabling technologies. Biological Parts. Modularity and Standardization. 5.2. Part repositories DNA synthesis and assembly. Genome Editing. Controlling Gene Expression and Protein Production. 5.3. Gene synthesis and genetic engineering. Optogenetics. Gene therapy, Microbiome engineering, synthetic biosystems.	K1, K2 K3, K4 K5, K6	13	1-5

BOOKS FOR STUDY

E. Klipp, R. Herwig, A. Kowald, C. Wierling, H. Lehrach. *Systems Biology In Practice- Concepts, Implementation And Application*. Germany: Wiley-Vch Verlag Gmbh & Co.Kgaa, 2005.

Andres Kriete and Roland Eils. *Computational Systems Biology*. Uk: Elsevier, 2005.

BOOKS FOR REFERENCE

Uri Alon. *An Introduction To Systems Biology: Design Principles Of Biological Circuits*. London: Chapman & Hall/Crc, Taylor And Francis Group, 2006.

Choi And Sangdun. *Introduction To Systems Biology*. Usa: Humana Press, 2007.

Edda Klipp, Wolfram Liebermeister, Christoph Wierling, Axel Kowald, Hans Lehrach, Ralf Herwig. *Systems Biology: A Textbook*. Uk: Wiley- Vch.Edinburgh, 2009.

Zoltan Szallasi, Joerg Stelling, Vipul Periwal. *Systems Modeling In Cellular Biology*. USA: Mit Press, 2006.

Najarian, K., Najarian, S., Gharibzadeh, S., & Eichelberger, C. N. (2009). *Systems biology and bioinformatics: a computational approach*. CRC Press

JOURNALS

Current Synthetic and Systems Biology

Journal of Computer Science & Systems Biology

Eurasip Journal on Bioinformatics and Systems Biology

BMC Systems Biology

WEB RESOURCES

<http://Sysbio.Med.Harvard.Edu/>

www.Systemsbiology.Org

www.Systemsbiology.Ucsd.Edu/

www.Sysbio.Org/

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:

Total Marks: 50

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination

Total Marks: 100

Duration: 3 hours

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PC/SM44												
	Course Title: SYSTEMS BIOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	1	3	2	2	2	3
CO 2	3	3	2	2	3	2	1	1	2	2	3	2	3
CO 3	3	3	3	2	3	1	1	2	3	3	2	2	3
CO 4	3	3	2	2	2	1	1	1	3	2	3	3	2
CO 5	3	3	3	2	2	2	1	1	3	2	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023 -2024)

DISSERTATION

CODE: 23BI/PC/DS45

CREDITS: 5

The Dissertation shall contain at least 50 pages and shall be typed with double spacing.

The format for the thesis is as follows:

1. Cover page shall contain
 - a) Title of the dissertation
 - b) Name of the Candidate
 - c) Department of Bioinformatics
Stella Maris College (Autonomous), Chennai – 86
 - d) Month, Year
2. The dissertation shall contain
 - a) Contents page
 - b) i. Certificate page
ii. Acknowledgement page
 - c) At least 5 Chapters including an introduction, Review of Literature, Materials and Methods, Result and Discussion and Summary
 - d) List of figures / list of abbreviations (if needed) shall be given as an appendix
 - e) Bibliography shall be given in alphabetical / chronological order at the end.
3. Each candidate may prepare 3 hard copy and one soft copy of the thesis, one copy for her and submit 2 copies to the Head of the department 15 days before the commencement of the fourth semester examination.
4. The candidate may be advised that the dissertation will be valued and given credit on the criteria of
 - a) Motivation towards the chosen area / formulation of the problem
 - b) Methodology and Analysis
 - c) Capacity to interpret the results obtained

5. The Controller of Examination is requested to arrange for the valuation of the Dissertation as well as the conduct of the Viva – Voce at the college where the candidates take examinations, within two weeks of the last date of examination for M.Sc. Degree. The panel of examiners will consist of an external examiner and the guide. The guidelines for the Viva-Voce examiners would be that a) They will satisfy themselves that this is a work of the candidate as certified by the department b) The thesis is in the given form and
- c) The candidate has clear understanding of the concepts, discussed in the thesis.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Periodic review 25 marks

Presentation 25 marks

End Semester Examination:

Total Marks: 100

Rubrics for Evaluation	Marks	Cognitive Level
Documentation	10	K1
Formulating topic statement	15	K2
Explaining the conceptual framework	15	K3
Textual analysis	25	K4
Research arguments	15	K5
Research conclusions & Viva	20	K6

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

CELL BIOLOGY AND GENETICS

CODE: 23BI/PE/CG15

CREDITS: 5

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to understand the structure and function of the basic unit of life
- to gain knowledge about the cell and all its components in both prokaryotic and eukaryotic cells
- to familiarize the students with the basic concepts of genetics
- to gain the fundamentals of human genetics and hereditary
- to comprehend the cellular components underlying the cell division and inheritance of gene traits

COURSE LEARNING OUTCOMES

On successful completion of the course, student will be able to

COs	DESCRIPTION	CL
CO1	relate the functions and the key mechanisms of cells at the molecular level to integrate the chemical and biological points	K1, K2
CO2	illustrate the structural organization of genes and the control of gene expression	K3
CO3	explore prokaryotic and eukaryotic protein synthesis mechanisms and demarcate their working in various healthcare issues	K4
CO4	conceptualize mechanisms of signal transduction, cell cycle and cell death in the critical analysis of research problems	K5
CO5	compile the concepts of cell and molecular biology to offer precise solutions to complications in cancer	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Prokaryotic and Eukaryotic cells 1.1. Introduction - Prokaryotic and Eukaryotic cell - Characteristics, Similarities and differences 1.2. Bacteria Cells - Structure, organisation and bacterial genetics 1.3. Virus - Structure, Viral Infective cycles, origin and significance, Viroids and Prions	K1, K2 K3-K4 K5-K6	15	CO 1-5

UNIT	CONTENT	CL	Hrs	CO
2	Organelles 2.1. Structure and function of Mitochondria, Plastids (i.e. chloroplasts), Endoplasmic Reticulum Golgi bodies, Lysosomes and Peroxisomes 2.2. DNA -Structure – conformations, Histones and Nonhistones, Nuclear matrix and Lamins; Nuclear envelope, Pore complexes, transport through the envelope 2.3. RNA- Types, Ribosomes – Structure, Assembly of polypeptides on Ribosomes	K1, K2 K3-K4 K5-K6	10	CO 1-5
3	Cytoskeleton 3.1. Structure of the Cell Wall, Structure and Role of Microtubules and Microfilaments in cells -cell-cell interactions- cell adhesion, tight junctions and plasmodesmata 3.2. Introduction to Membranes - Structure, Function, and Communication: Roles of membranes in eukaryotic cells; Membrane structure and composition 3.3. The Plasma Membrane - Fluid Mosaic Model	K1, K2 K3-K4 K5-K6	15	CO 1-5
4	Multiple alleles 4.1. Human blood groups (A, B, AB, O, M, N and H) and Rh factor - Inheritance and significance 4.2. Gene Linkage and Recombination: Coupling and repulsion hypothesis Linkage in Drosophila Cytological proof of crossing over - Example – Drosophila 4.3. Mapping: Locating genes along a chromosome: Two - point and three – point crosses	K1, K2 K3-K4 K5-K6	12	CO 1-5
5	Cell Cycle and Karyotyping 5.1. Chromosomes- Structure and function, Centromeres and Telomeres, Cell Cycle-Mitosis and Meiosis 5.2. Karyotyping, Sex determination in Human - Barr body - Importance of Y Chromosome - Klinefelters' and Turners' Syndromes 5.3. Inter –sexuality Linked Inheritance: Colour blindness and Haemophilia Y -linked genes	K1, K2 K3-K4 K5-K6	13	CO 1-5

BOOKS FOR STUDY

Harvey Lodish, Arnold Berk, Chris A. Kaiser, Monty Krieger, Anthony Bretscher, Hidde Ploegh. Molecular Cell Biology., W. H. Freeman-Macmillan Learning, New York, 8th ed., 2016.

Peter Snustad and Michael J. Simmons, Principles of Genetics, Wiley Publications, USA, 7th ed., 2015.

Klug, William, S., Michael R. Cummings. Concepts of Genetics. Pearson Publications, USA, 12th ed., 2009.

BOOKS FOR REFERENCES

Watson, James, D. Molecular Biology of the Gene. Pearson Publications, USA, 7th ed., 2013.

Hartwell L, Hood L, Goldberg M, Ann E. Reynolds, Lee Silver, Genetics: From Genes to Genomes, McGraw-Hill Education, UK, 4th ed., 2010.

JOURNALS

Journal of Molecular Biology

Journal of Genetics and Genomics

BMC Cell Biology

WEB SOURCES

www.cellbio.com

www.molbiolcell.org

www.sciencedirect.com

http://www.biology.arizona.edu/cell_bio/cell_bio.html

Pattern of Assessment

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:

Total Marks: 50

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
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D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PE/CG15												
	Course Title: CELL BIOLOGY AND GENETICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	1	1	2	2	2	1
CO 2	3	3	3	2	2	2	1	1	1	2	2	1	1
CO 3	3	3	3	3	3	2	2	2	2	1	2	2	2
CO 4	3	3	3	3	3	2	2	2	2	1	1	2	2
CO 5	3	3	3	3	3	2	3	2	1	2	2	1	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

BIOMATHEMATICS AND BIOSTATISTICS

CODE: 23BI/PE/BS15

CREDITS: 5

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to enhance the skills in mathematics those are essential for learning bioinformatics
- to understand and implement various mathematical techniques being applied in analyzing information of biological data
- to understand statistical methods in its several forms is the basis of biological research
- to introduce the various statistical techniques useful for handling quantitative data
- to interpret the statistical measures reported in the scientific researches

COURSE LEARNING OUTCOMES

On successful completion of the course, student will be able to

COs	DESCRIPTION	CL
CO1	list the importance of mathematics for research based problems	K1
CO2	explain the different statistical tests for the research	K2
CO3	analyse and solve aptitude based problems in competitive exams	K3, K4
CO4	evaluate the equations and problems related to population genetics	K5
CO5	propose the regression and correlation techniques to interpret drug activity based on qsar	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Set Theory and Vectors 1.1. Introduction, Representation of a Set, Set Operations - Types of Sets, Subsets, Complement of Sets, Union and Intersection of Sets, Difference of Sets. 1.2. De Morgan's Law, Venn diagram, Cartesian Product of Sets. 1.3. Vectors Additions, Subtraction, Dot, Cross, Magnitude, Scalar Triple Product.	K1, K2 K3-K4 K5-K6	15	1-5
2	Matrices, Relations and Functions 2.1. Matrix, Basic Operations, Transpose, Square matrices, Non Singular Matrices. 2.2. Inverse of a Matrix, Determinants, Elementary Applications. 2.3. Relations and Functions - Linear Function, Polynomials and Differences	K1, K2 K3-K4 K5-K6	10	1-5
3	Probability 3.1. Rules of probability, Theorems of probability, Addition and Multiplication Theorem. 3.2. Probability distributions: Binomial distribution, Poisson distribution, Normal distribution. 3.3. Binomial Coefficient, Permutations, Combinations, Identities Applications.	K1, K2 K3-K4 K5-K6	15	1-5
4	Introduction to Biostatistics 4.1. Scope, collection, classification and tabulation, Graphical representation of data- measures of location and dispersion - Diagrammatic and Graphical Presentation of data, Types of data. 4.2. Frequency distribution: Discrete and continuous frequency distribution. Mean-Median- Mode. 4.3. Measures of dispersion- Standard Deviation, Coefficient of variation, Range	K1, K2 K3-K4 K5-K6	12	1-5
5	Application and Testing 5.1. Sampling techniques, Sampling Distribution, Standard error, testing of hypotheses, Null Hypothesis. 5.2. Correlation - Types of Correlation-Simple, Linear and Nonlinear- Pearson's Coefficient Correlation, Regression analysis- Types of Regression, Regression Equations. 5.3. Chi - χ^2 test, t-test, Analysis of Variance (ANOVA), Population Genetics: Hardy-Weinberg principle.	K1, K2 K3-K4 K5-K6	13	1-5

BOOKS FOR STUDY

Lipschutz S. and Lipson, M.L. Discrete Mathematics, McGraw Hill Book Company, UK, 3rd ed., 2017.

Veer Bala Rastogi, Fundamentals of Biostatistics, Ane Books Pvt Ltd, India, 1st ed., 2009.

Jae K.Lee, Statistical Bioinformatics for Biomedical and Life Science Researchers, John Wiley & Sons Publications, USA, 1st ed., 2010

Rao P. S. S. Sundar, Introduction to Biostatistics and Research Methods, Prentice Hall, India, New Delhi, 5th ed., 2012.

Narayanan S., Manicavachagam Pillay, T.K., Ancillary Mathematics- Book II, India: S. Viswanathan Printers and Publishers, India, 1st ed., 2009.

BOOKS FOR REFERENCE

Vittal, P.R. Allied Mathematics, Margham Publishers, India, 3rd ed., 2012.

Papoulis, Athanasios and S. Unnikrishnan Pillai, Probability, Random Variables and Stochastic Processes, Tata McGraw Hill Pub. Co. UK, 4th ed., 2017.

J. Richard, Sundar P. S. S. Rao, An Introduction to Biostatistics: A Manual for Students in Health Sciences, Prentice Hall, India, New Delhi, 3rd ed., 2004

Bernard Rosner, Fundamentals of Biostatistics, Duxbury Press, USA, 8th ed., 2010.

JOURNALS

The Journal of Mathematical Behavior

Mathematical Journals

The College Mathematics Journal

International Journal of Mathematics and Statistics Studies

WEBSITES

<http://mathworld.wolfram.com/Integral.html>

http://www-math.mit.edu/~djkl/calculus_beginners/

<http://mathworld.wolfram.com/Probability.html>

<https://www.math.hmc.edu/calculus/tutorials/matrixalgebra/>

Pattern of Assessment

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PE/BS15												
	Course Title: BIOMATHEMATICS AND BIOSTATISTICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	1	1	1	3	2	1	1	2
CO 2	3	3	3	3	3	3	1	1	3	2	1	2	2
CO 3	3	3	3	3	3	3	2	1	3	1	1	2	2
CO 4	3	3	3	3	3	3	2	2	3	2	3	2	3
CO 5	3	3	3	3	3	3	2	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

RESEARCH METHODOLOGY, BIOETHICS AND IPR

CODE: 23BI/PE/RM15

CREDITS: 5

L T P : 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to describe and express the role and importance of research in basic and applied sciences
- to facilitate writing of research proposals / projects and apply for grants in the field of bioinformatics
- to understand the analytical tests to be applied for research
- to comprehend the importance of intellectual property rights and bioethics to perceive in the field of research
- to decipher the regulations, national, international protocols relative to research and materials.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	better understanding of the research methods	K1
CO2	design an action plan of research	K2
CO3	acquire skills of writing a research manuscript	K3
CO4	application of statistical study in research	K4
CO5	understand the ethics in writing research work	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Types of Data and research problem identification 1.1. Data Collection, Sources of Data- Primary, Secondary and Tertiary Sources, Sampling Methods- Probability and non-probability methods, Sample size and Sampling error. 1.2. Definition of Research, Types of research, Research Methodology, Principles and Practice of Research, Identifying The Research Problem. 1.3. Research Design: Exploratory, Descriptive and Experimental Research Design.	K1- K3 K2– K4 K5- K6	15	1-5
2	Scientific Communication 2.1. Literature Review - Its Relevance and Importance in Directing Research. Citations – Types of Citations, Bibliography and End Matters, Editing and Proofreading. 2.2. Action Plan, Design and Pilot Study undertaking a Research Project, Writing a Research grant Proposal, Format of thesis. 2.3. Scholarly Communication: IMRaD concepts for papers, and Poster and Oral Presentation, the Purpose and the Methods of Paper Critiquing.	K1, K2 K3, K4 K5, K6	12	1-5
3	Writing well 3.1. Writing for non- native audiences, usage of simple sentences, untangle long noun phrases, make complete sentences, Use of punctuations- comma, colon, semicolon, dash and periods, Creating non-textual information- acquiring, processing and printing illustrations. 3.2. Concepts of mind maps. Use of Encyclopedias, Research Guides, Handbook etc., Academic Databases for Computer Science Discipline, Use of tools / techniques for Research: methods to search required information effectively. 3.3. Reference Management Software like Zotero/ Mendeley, Software for paper formatting like LaTeX/MS Office, Software for detection of Plagiarism.	K1, K2 K3, K4 K5, K6	13	1-5
4	Bioethics 4.1. Bioethics – Definition – Bioethics of IPR, Ethical Issues in Biotechnology, Animal Models. 4.2. Ethical issues related to embryonic stem cells, Genetic testing and screening, human clinical trials and drug testing, Ethical Clearance 4.3. Ethics in Scientific Writing, Plagiarism and Common Errors in Scientific Writing. Misconduct in science.	K1, K2 K3, K4 K5, K6	12	1-5

UNIT	CONTENT	CL	Hrs	CO
5	Intellectual Property Rights 5.1. Introduction of IPR, General Agreement on Trade and Tariff (GATT) and World Trade Organizations. Establishment and functions of GATT, World Trade Organization (WTO) and World International Property Organization (WIPO). 5.2. WTO Summits, Role of Integrated Business Solution Center (IBSC) and Review Committee on Genetic Manipulation (RCGM), Production of Plant variety and farmers right act. 5.3. TRIPS, Different types of intellectual property rights (IPR), Patents, Trade mark, Trade secret, Copyright, Geographical distribution on biological diversity, Obligations, Production of Traditional Knowledge, Impact of GM Crops and GM Foods. Case studies on Patents (Basmati, Turmeric and Neem).	K1, K2 K3, K4 K5, K6	13	1-5

BOOKS FOR STUDY

Gopalan, R. Thesis Writing. India: Vijay Nicole Imprints Private Limited, 2005.
 Gurumani, N. Research Methodology for Biological Sciences. India MJ Publishers, 2010.
 Ahuja VK., Intellectual Property Rights in India, 1st ed., Lexis Nexis publisher 2015.

BOOKS FOR REFERENCE:

Pence, G.E. Classic Cases in Medical Ethics. India: McGraw-Hill, 2004.
 Kothari C R. Research Methodology, Methods and Techniques. India: Wishwa Prakashan, 2009
 Radhakrishnan R and Balasubramanian S., Intellectual Property Rights, Excel Books Publishers, 2008

JOURNALS

The Journal of Communication
 International Association for Media and Communication Research
 Indian Journal of Science Communication

WEB RESOURCES

<http://www.palgrave.com/studentstudyskills/page/choosing-appropriate-researchmethodologies/>
<https://explorable.com/research-methodology>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PE/RM15												
	Course Title: RESEARCH METHODOLOGY, BIOETHICS AND IPR												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	1	3	1	3	2	3	2	1	3	3	2
CO 2	3	3	2	2	1	1	2	2	2	2	2	2	2
CO 3	3	3	3	3	1	2	1	2	3	1	2	1	2
CO 4	3	3	3	3	2	3	1	1	2	2	3	3	3
CO 5	3	3	2	3	2	1	1	1	1	1	1	1	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

IMMUNOINFORMATICS

CODE: 23BI/PE/IM15

CREDITS : 5

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to understand the immune system, its components and their functions
- to impart knowledge of immune responses to various pathogens
- to familiarize the structure of antigen and antibodies and its function
- to analyse the immune data by integrating genomics and proteomics approach
- to understand the application of information technology to immunology

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	grasp the functions of the immune system	K1,K2
CO2	understand the application of information technology to immunology	K2,K3
CO3	study informatics-based approaches for prediction of epitopes and immuno-diagnostic tools	K3,K4
CO4	comprehend knowledge about computer aided vaccine design and reverse vaccinology	K4,K5
CO5	analyse the immunological data to find computational solutions available for immunological research	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Immune System 1.1. Introduction to Immune System - Adaptive and Innate Immunity. 1.2. Cells and organs of the Immune System, Soluble Mediators of Immunity, Cell and Antibody mediated immunity. 1.3. Immune Responses - Inflammation, Immunopathology, Auto immune diseases, Vaccines	K1-K3 K2-K4 K5-K6	10	1-5
2	Antigens and Antibodies 2.1. Antigen types – Epitope, Affinity Maturation, Epitope mapping 2.2. Immunoglobulin classes and subclasses, Structure and Function. 2.3. Major Histocompatibility Complex (MHC) its Polymorphism, Causes for Polymorphism, MHC Supertypes, Human Leucocyte Antigen (HLA) – Types and Polymorphisms.	K1-K3 K2-K4 K5-K6	15	1-5
3	Computational Immunology 3.1. Computational Immunology - Databases in Immunology, dbMHC-MHC database at NCBI 3.2. B-cell and T-cell Epitope Prediction, T-cell epitope databases, B-cell epitope databases, SYFPEITHI MHC-presented epitopes, IEDB 3.3. IMGT International ImmunoGeneTics Information system, HLA Nomenclature and the IMGT/HLA Sequence Database	K1-K3 K2-K4 K5-K6	10	1-5
4	Vaccine Design 4.1. From immunome to Vaccine – Prediction of immunogenicity, Vaccine design tools. 4.2. Reverse Vaccinology and Immunoinformatics, Peptides with Antimicrobial Activity or Antibiotic Peptides. 4.3. Functional Prospecting of Genes and Transcripts, Future of Computational Modeling and Prediction Systems in Clinical Immunology	K1-K3 K2-K4 K5-K6	15	1-5
5	Viral Bioinformatics 5.1. Viral Bioinformatics - Computational Views of Hosts and Pathogens using VIDA. 5.2. Virus- human protein interaction databases. Virus- NCBI. GISAID database. 5.3. Virus mint, Virus host database. Viral zone- Expasy	K1-K3 K2-K4 K5-K6	15	1-5

BOOKS FOR STUDY

Darren R. Flower. *Bioinformatics for Immunomics (Immunomics Reviews)*. New York: Springer-Verlag, 2010.

Abul K. Abbas, Andrew H. H. Lichtman, and Shiv Pillai. *Cellular and Molecular Immunology* USA: Elsevier, 2017.

Andrew R. Leach, Valerie J. Gillet. *An Introduction to Chemoinformatics*.UK: Springer, 2007.

BOOKS FOR REFERENCE

Christian Schönbach, ShobaRanganathan, and Vladimir Brusic. *Immunoinformatics (Immunomics Reviews)* USA: Humana Press, 2010.

Kenneth Murphy. *Janeway's Immunobiology*, UK: Garland Science, 2014.

Bunin, Barry A. Dordrecht. *Chemoinformatics: Theory, Practice, and Products*.UK: Springer, 2010.

WEB SOURCES

<http://www.imgt.org/Immunoinformatics.html>

<http://rsob.royalsocietypublishing.org/content/3/1/120139>

<http://cheminformatics.org/>

<http://www.emolecules.com/info/molecular-informatics>

JOURNALS

Immunoinformatics

BMC Genomics

Journal of Computational Biology

Immunology

Journal of Computational Biology

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PE/IM15												
	Course Title: IMMUNOINFORMATICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	1	2	1	2	2	1	1	3
CO 2	3	3	3	2	2	3	2	1	3	2	1	1	3
CO 3	3	3	3	3	3	3	2	1	3	3	3	2	3
CO 4	3	3	3	2	3	3	3	3	3	3	3	2	3
CO 5	3	3	3	3	3	3	3	2	3	3	3	2	3

High Correlation: 3

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

CLINICAL RESEARCH MANAGEMENT

CODE: 23BI/PE/CR15

CREDITS : 5

L T P : 4 1 0

TOTAL PRACTICAL HOURS : 65

OBJECTIVES OF THE COURSE

- to give a basic understanding about clinical research
- to understand the various aspects of clinical research management
- to be conversant with the regulations in clinical management
- to compare different medical approaches and the effectiveness on groups of population
- to provide high quality data by reducing the error rate and improving the significance of research analysis

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	evaluate critical global regulatory and health care issues that challenge and influence biopharmaceutical product development	K1,K2
CO2	understand the drug development process and its importance in clinical trials	K2,K3
CO3	forecast the resources necessary for regulatory submission and comprehend regulatory Affairs procedure in clinical research	K3,K4
CO4	understand the basic statistical principles, concepts, and methods for clinical data analysis and reporting	K4,K5
CO5	demonstrate advanced critical thinking skills necessary to enhance employment opportunities or advance within the biopharmaceutical industry	K5,K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Clinical Research 1.1. History of drug development - Pharmaco-epidemiology. 1.2. Issues in Clinical Trials. Nuremberg Code, Declaration of Helsinki, International Conference of Harmonization and Good Clinical Practice. 1.3. Clinical trials – History of clinical trials. Stages of Clinical trials.	K1-K3 K2-K4 K5-K6	10	1-5
2	Pharmacology and Drug Development 2.1. Introduction to Drug Discovery and Development, Approaches, Sources of Drugs, Databases for drug search. 2.2. Pharmacokinetics and pharmacodynamics, Toxicological requirements. 2.3. Emerging technologies in Drug Discovery, Preclinical Testing, Clinical Trials.	K1-K3 K2-K4 K5-K6	10	1-5
3	Regulations in Clinical Research 3.1. Evolution and History of Regulations in Clinical Research, US FDA Regulations, IND, NDA, ANDA, FDA Audits and Inspections. 3.2. European Regulatory Affairs, Organization and Functions. 3.3. INDIAN Regulatory system, Schedule Y- Rules and Regulations, Post Drug Approval Activities, PMS.	K1-K3 K2-K4 K5-K6	15	1-5
4	Clinical Trial Management 4.1. Role of Ethics Committees and Institutional Review Boards. Special populations; women elderly and children. 4.2. Designing of Protocol, SOP, ICF, Pharmacovigilance. 4.3. Project management Documentation, Monitoring, Audits, Inspections, Fraud and Misconduct, Roles and Responsibilities of Clinical Research Professionals.	K1-K3 K2-K4 K5-K6	15	1-5
5	Clinical Data Management 5.1. Importance of CDM in clinical research, Clinical Data Entry, CRF, e-CRF. 5.2. Statistical considerations at the design, analysis and reporting stage. 5.3. Data validation, SAE reconciliation, Quality Assurance	K1-K3 K2-K4 K5-K6	15	1-5

BOOKS FOR STUDY

Lori A. Nesbitt. *Clinical Research What It Is and How It Works*. UK: Jones Barlett Publishers, 2006.

Richard K. Rondel, Sheila A. Varley, Colin F. Webb. *Clinical Data Management*. UK: John Wiley, 2013.

Steven Piantadosi. *Clinical Trails A Methodologic Perspective*. UK: John Wiley, 2005.

BOOKS FOR REFERENCE

Russ B. Altman, David Flockhart, David B. Goldstein *Principles of Pharmacogenetics and Pharmacogenomics*. UK: John Wiley, 2012.

Martin M. Zdanowicz. *Concepts in Pharmacogenomics*. UK: Mc Graw Hill, 2010.

JOURNALS

Journal of Clinical Research

Bioethics Perspectives in Clinical Research

Asian Journal of Pharmaceutical and Clinical Research

WEB RESOURCES

<http://hub.ucsf.edu/clinical-study-management>

http://icmr.nic.in/ethical_guidelines

<http://www.niaaa.nih.gov/research/guidelines-and-resources/clinical-trial-regulations-policies-and-guidance>

<http://www.fda.gov/ScienceResearch/SpecialTopics/RunningClinicalTrials/ucm155713.html>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:

Total Marks: 50

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PE/CR15												
	Course Title: BASICS OF CLINICAL RESEARCH MANAGEMENT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	3	3	3	3	2	3	3	1	2	2	2	1
CO 2	2	3	3	2	2	2	3	3	1	2	2	1	1
CO 3	2	2	3	2	2	2	3	2	2	1	2	2	2
CO 4	2	2	3	3	2	3	2	2	2	1	1	2	2
CO 5	2	2	2	3	2	2	2	2	1	2	2	1	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

STRUCTURAL BIOINFORMATICS

CODE: 23BI/PE/SB15

CREDITS: 5

L T P : 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to develop new ways for analysing biological macromolecular data in order to address biological problems and discover new information
- to understand the factors that influence and determine the function of biological macromolecules
- to create general-purpose methods for manipulating information about biological macromolecules and the application of these methods to solve problems in biology
- to impart the importance of indeterminate protein structure data analysis to gain useful information in the view of research context.
- to discern the subcellular location of protein and to create the 3D protein map for further prediction of novel information about its regulation.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recognize the fundamental structural and functional concepts of DNA and RNA molecules	K1
CO2	demonstrate the relativity and mechanisms of DNA molecules with protein molecules	K2
CO3	utilise the knowledge on the structure and properties of protein molecules and identify them computationally using variety of tools	K3
CO4	infer the functions, similarity, structural properties and their interactions in complex with other biological molecules using bioinformatics tools and databases	K4
CO5	measure the importance of peptides to proteins in the body functions and apply for solving biological problems	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Molecular Structures – An Introduction 1.1. Introduction to Molecular structures including genes and gene products: protein, DNA, and RNA structure. structure representation, comparison of structures, visualisation, and modeling 1.2. DNA sequence and structures- complementarity, Chargaff's rule, other base pairs in sequence, reverse complementarity, palindromic sequences. 1.3. RNA sequences, types and structures – mRNA, tRNA, rRNA, miRNA, siRNA, circRNA, lncRNA, sg RNAs.	K1- K3 K2– K4 K5- K6	12	1-5
2	Nucleic acids 2.1. DNA – chromosome structure and architecture, Intron-exon boundary, histones, euchromatin, heterochromatin, CpG islands, methylated DNA structures. 2.2. Computational Structure prediction –RNA Structure determination methods, RNA structural refinement, predicting targets for inhibitory RNAs, Reading frames; Codon Usage analysis. 2.3. Translational and transcriptional signals, Splice site identification, Gene prediction methods and RNA fold analysis.	K1, K2 K3, K4 K5, K6	13	1-5
3	Proteins 3.1. Protein sequences and structure fundamentals, Amino acids – types, single letter codes, essential and non-essential amino acids. 3.2. Protein sequence analysis-Compositional analysis, Hydrophobicity profiles, Amphiphilicity detection, Moment analysis, Transmembrane prediction methods, Protein function prediction, motifs and domains, predicting binding site geometry and evolution. 3.3. Patterns and fingerprints. Point based and surface based binding site matching, Pattern based search using MeMe and PRATT); Motif-based search using ScanProsite and eMOTIF; Profile-based database searches using PSI-BLAST and HMMer.	K1, K2 K3, K4 K5, K6	15	1-5
4	Structural Properties of Proteins 4.1. Prediction of Coiled coils, Low complexity, non-globular, and disordered regions, Contact prediction, Alternative splicing 4.2. Target selection for diseases, Identification of Extreme environments, Functionally important residues, Local sequence motifs, Exons and domains, Mutations and their effect on structures. 4.3. Protein-protein interactions, Protein evolution, Structure-function relationships in proteins	K1, K2 K3, K4 K5, K6	12	1-5

UNIT	CONTENT	CL	Hrs	CO
5	Peptides and Proteogenomics 5.1. Peptide modelling - Signal peptides, natural peptides, Proteome - peptide repositories – PRIDE DB, peptide modeling, epitope and antibody structures. 5.2. Peptide- protein docking, Databases and tools for identifying protein- peptide interactions, network analysis, Tools and softwares to predict protein-protein and protein-peptide interactions. 5.3. Proteogenomics overview, Phenotype- Genotype, Gene expression, Proteogenomics approach to unravel proteoforms, Sequence centric proteogenomics, ProTIGY.	K1, K2 K3, K4 K5, K6	13	1-5

BOOKS FOR STUDY

Jenny Gu, Philip E. Bourne, Structural Bioinformatics, 2nd Ed., 2009.

Thomas E. Creighton, Proteins: Structures and Molecular properties, 2nd ed., WH Freeman Publications, 1992.

Akos Vegvari, Proteogenomics (Advances in Experimental Medicine and Biology), 1st ed., Springer Publications, 2016.

Stephen Neidle, Mark Sanderson, Principles of Nucleic acid Structure, 2nd ed., Academic Press, 2021.

BOOKS FOR REFERENCE:

Zoltan Gaspari, Structural Bioinformatics, Methods and Protocols, Springer publication, 2020.

Forbes J. Burkowski, Structural Bioinformatics An algorithmic approach. Taylor and Francis Publication, 2009.

JOURNALS

Journal of Structural Biology

BMC Structural Biology

Computational and Structural Biotechnology Journal

Journal of Molecular Biology

WEB RESOURCES

<https://ball-project.org/ballaxy/>

<https://bio.tools/bioinfo3d>

<https://computomics.com/services/megan6.html>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PE/SB15												
	Course Title: STRUCTURAL BIOINFORMATICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	3	2	3	3	1	1	1	2	3	2	1
CO 2	3	3	2	3	3	2	1	2	1	2	3	2	1
CO 3	3	3	3	3	2	2	2	2	1	2	2	1	2
CO 4	3	2	2	3	2	2	1	2	2	2	2	2	2
CO 5	3	3	3	2	3	2	1	1	2	2	3	1	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023-2024)

ALGORITHMS FOR BIOINFORMATICS

CODE: 23BI/PE/AL15

CREDITS: 5

L T P : 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to provide students with the basic knowledge of algorithms, computational biology and their advances in biology.
- to facilitate the students to attain skills in solving biological problems with algorithms, computational biology, sequence matching and learn its various biomedical applications.
- to develop skills to analyse algorithms related to bioinformatics
- to enable students with a particular focus on algorithms and data structures for search, comparisons, and motif discovery in strings.
- to instigate problem-solving skills through sorting and searching, algorithm design paradigms, and graph algorithms in the field of biological applications

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, student will be able to

COs	DESCRIPTION	CL
CO1	understand the working of bioinformatics algorithms	K1
CO2	describe the divide-and-conquer paradigm and explain when an algorithmic design situation calls for it.	K2
CO3	apply the algorithms and design techniques to solve problems	K3
CO4	employ the important algorithmic design paradigms and methods of biomedical data analysis.	K4
CO5	solve current biological research problems using computational approaches	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction 1.1. Algorithms and Complexity. Definition, Biological Algorithms versus Computer Algorithms, Fast versus Slow Algorithms. 1.2. Algorithm Design Techniques Exhaustive Search Branch-and-Bound Algorithms Greedy Algorithms. Dynamic Programming algorithm. 1.3. Divide-and-Conquer Algorithms Machine Learning Randomised Algorithms, Big-O Notation.	K1-K4 K2-K5 K3-K6	10	1-5
2	Restriction Mapping 2.1. Impractical Restriction Mapping Algorithms, Practical Restriction Mapping Algorithm 2.2. Regulatory Motifs in DNA Sequences Profiles: The Motif Finding Problem Search Trees 2.3. Finding a Median String. String matching algorithm	K1-K4 K2-K5 K3-K6	15	1-5
3	Sequence Alignment 3.1. Longest Common Subsequences - Global Sequence Alignment- Local Sequence Alignment. 3.2. Graph Algorithms- Graphs and Genetics- DNA Sequencing Shortest Superstring Problem. 3.3. DNA Arrays as an Alternative Sequencing Technique. Sequencing by Hybridization	K1-K4 K2-K5 K3-K6	15	1-5
4	Clustering and Evolutionary Analysis 4.1 Gene Expression Analysis. Hierarchical Clustering - k-Means Clustering- Clustering and Corrupted Cliques. 4.2 Evolutionary Trees - Distance-Based Tree Reconstruction, Reconstructing Trees from Additive Matrices. 4.3 Evolutionary Trees and Hierarchical Clustering Character-Based Tree Reconstruction	K1-K4 K2-K5 K3-K6	10	1-5
5	Pattern Matching 5.1. Combinatorial Pattern Matching. - Identical, Similar and Distant Repeats Finding methods. Exact Pattern Matching 5.2. Keyword Trees and Suffix Trees. Heuristic Similarity Search Algorithms 5.3. Hidden Markov Models, BLAST: Comparing a Sequence against a Database.	K1-K4 K2-K5 K3-K6	15	1-5

BOOKS FOR STUDY

Neil C Jones and Pavel A. Pevzner. An Introduction to Bioinformatics Algorithms. USA: MIT press, 2011.

Pavel A. Pevzner. Computational Molecular Biology- An algorithmic approach. USA: MIT press, 2004.

BOOKS FOR REFERENCE

Miguel Rocha, Pedro G. Ferreira, Bioinformatics Algorithms: Design and Implementation in Python, Academic Press, 1st ed. 2018.

Thomas H. Cormen, Charles E. Leiserson and Ronald L. Rivest. Introduction to Algorithms. New Delhi: Prentice Hall of India, 3rd ed. 2009.

Jeffrey J. McConnell. Analysis of Algorithm. New Delhi: Narosa Publishing House, 2007.

Clark, John and Derek Allan Holton. A First Look at Graph Theory. Singapore: Singapore Publishers, 1995.

Horowitz, Ellis, and Sartag Sahni. Fundamentals of Computer Algorithms. New Delhi: Galgotia Publications, 1994.

JOURNALS

Algorithms for Molecular Biology

Journal of Computational Intelligence in Bioinformatics

International Journal of Bioinformatics Research and Applications

BMC Bioinformatics

Bioinformatics Algorithms

WEB SOURCES

https://www.comp.nus.edu.sg/~ksung/algo_in_bioinfo/

<https://www.bioinformaticsalgorithms.org/>

<http://www2.chemistry.msu.edu/faculty/reusch/VirtTxtJml/Spectrpy/MassSpec/masspec1.htm>

<https://compeau.cbd.cmu.edu/online-education/bioinformatics-algorithms-an-active-learning-approach/>

<https://www.bioalgorithms.info/>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
A	K1, K2, K3	20	2 X 10 =20 (2 out of 3 questions to be answered - Open choice) Answers in about 1000 words
B	K4, K5, K6	30	3 X 10 = 30 (3 out of 4 questions to be answered - Open choice) Answers in about 1000 words
	Total	50	

Other Components: Total Marks: 50

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs, open book tests/ Tests/ Assignment/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3-CO4	20
	K5 - K6	CO5	10
	Total		50

End Semester Examination: Total Marks: 100 Duration: 3 hours

Sections	Cognitive levels	Mark allocation	Pattern
A	K1, K2, K3	50	5 X 10 =50 (5 out of 6 questions to be answered - Open choice) Answers in about 1000 words
B	K4, K5, K6	50	5 X 10 =50 (5 out of 6 questions to be answered - Open choice) Answers in about 1000 words
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BI/PE/AL15												
	Course Title: ALGORITHMS FOR BIOINFORMATICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	3	3	2	2	1	1	1	2	3	2	1	3
CO 2	2	3	3	2	2	1	1	1	2	3	2	2	3
CO 3	1	3	3	1	3	2	1	1	3	2	1	2	3
CO 4	3	2	3	2	2	3	2	1	3	3	2	2	3
CO 5	3	2	3	2	2	3	2	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Postgraduate Elective Course offered by the Department of Bioinformatics for
M.A. / M.Sc./ M. Com Degree Programmes**

SYLLABUS

(Effective from the academic year 2023–2024)

INTRODUCTION TO BIOINFORMATICS

CODE: 23BI/PE/IB23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to become familiar with bioinformatics and how it's changing complex biological research
- to enable textual mining of biological literature and bioinformatics tools that are required to query biological data
- to understand the application of information technology in biological research
- to construct the phylogenetic trees to study the evolutionary concepts
- to implement the fundamental tools to predict the important sites of genes and proteins

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	better understanding of the bioinformatics concepts	K1
CO2	emphasis the application of bioinformatics and biological databases to problem solving in real research problems	K2
CO3	understand the evolutionary concepts related to biological query	K3
CO4	perform a complete analysis of the genes and protein	K4
CO5	analyse the importance of protein structure and functions of enzymes in restriction mapping.	K5, K6

CL – Cognitive Level

K1 – Remember | K2 – Understand | K3 – Apply | K4 – Analyse | K5 – Evaluate | K6 – Create

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Bioinformatics			
	1.1 Introduction to Bioinformatics, Classification of biological databases, Biological data formats, Application of Bioinformatics in various fields	K1-K4	8	1-5
	1.2 Introduction to single letter code of amino acids, symbols used in nucleotides	K2-K3		
	1.3 Data retrieval systems- Entrez and SRS	K3-K6		

UNIT	CONTENT	CL	Hrs	CO
2	Sequence and Structure analysis 2.1 Introduction to Sequence alignment. BLAST, Multiple sequence alignment 2.2 Structural Databases – PDB and other online tools 2.3 Visualizing tools – Rasmol, Pymol	K1-K4 K4-K6 K3-K6	8	1-5
3	Phylogenetic analysis 3.1 Evolutionary analysis: distances, Cladistic and Phenetic methods 3.2 Clustering Methods. Rooted and unrooted tree representation 3.3 Bootstrapping strategies, Tools for Phylogenetic tree construction	K1-K3 K3-K6 K4-K6	8	1-5
4	Genomics 4.1 Genome - Gene finding methods 4.2 Gene prediction tools 4.3 Repeat Sequence finder	K1-K3 K3-K4 K4-K6	7	1-5
5	Proteomics 5.1 Proteomics - Protein structure – levels of organisation 5.2 Protein separation techniques – SDS-PAGE 5.3 Restriction Enzymes and Mapping	K1-K3 K4-K6 K2-K3	8	1-5

BOOKS FOR STUDY

Pevsner and Jonathan. Bioinformatics and Genomics Functional. USA: John Wiley, 2003.
 Baxevanis, Andreas D. and Francis B.F. Ouellette. Bioinformatics- A Practical Guide to the Analysis of Genes and Proteins. USA: John Wiley, 2001.
 David W. Mount. Bioinformatics Sequence and Genome Analysis. INDIA: CBS Publishers, 2003.

BOOKS FOR REFERENCE

Baldi P. and Brunak S. Bioinformatics: Machine Learning Approach. USA: MIT Press, 2003.
 Chen, Yi-Ping Phoebe. Bioinformatics Technologies. Germany: Springer, 2005.
 Durbin R, S. Eddy, A. Krogh and G. Mitchison. Biological Sequence Analysis: Probabilistic Models of Proteins and Nucleic Acids. USA: Cambridge University Press, 2005.
 Higgins, Des and Willie Taylor. Bioinformatics – Sequence, Structure and Databanks – Practical Approach. UK: Oxford University Press, 2001.
 Lesk, Arthur M. Introduction to Bioinformatics. UK: Oxford University Press, 2014.

JOURNALS

BMC Bioinformatics
 Bioinformatics
 Journal of Bioinformatics and Computational Biology
 Journal of Biomedical Informatics
 Journal of Integrative Bioinformatics
 PLoS Computational Biology

WEB SOURCES

<http://bioinformaticsweb.net/tools.html>

<https://www.bits.vib.be/index.php/training/122-basic-bioinformatics>

<http://bioinformaticssoftwareandtools.co.in/>

<http://www.genscript.com/tools.html>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:

Total Marks: 50

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination

Total Marks: 100

Duration: 3 hours

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

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SYLLABUS

(Effective from the academic year 2023–2024)

APPLICATIONS OF BIOINFORMATICS

CODE: 23BI/PE/AP23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to be familiar with the use of a wide variety of internet applications and biological database
- to access the fundamental biological databases and their retrieval, submission systems.
- to understand the basics of pharmacogenomics in the context of variability in drug response
- to recognize the application of information technology in immunology
- to introduce the basic concepts of using chemical structure databases

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	examine factors that affect drug response and the application of pharmacogenetics to drug development and drug treatment	K1
CO2	apply the immunological data and to the sophisticated computational solutions available for immunological research	K2
CO3	emphasis the application of bioinformatics and biological databases to problem solving in real research problems	K3
CO4	investigate the immune cells types, activities and access the database for epitope prediction	K4
CO5	ability to interpret the 2D and 3D chemical structures and access them computationally.	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Bioinformatics 1.1. Classification of biological data, and different data formats 1.2. Introduction to single letter codes of amino acids, symbols used in nucleotides 1.3. Bioinformatics Perspectives on Human Diseases	K1-K2 K2-K3 K3-K6	7	1-5
2	Bioinformatics databases 2.1. Overview of Biological Sequence Databases - NCBI, EMBI, DDBJ 2.2. Sequence Retrieval Systems (Entrez & SRS), Sequence Submission Methods and Tools (Sequin, Sakura, Bankit) 2.3. Finding Scientific Articles Using PubMed, Identification of disease genes, OMIM database	K1-K3 K3-K4 K4-K6	8	1-5
3	Pharmacogenomics 3.1. Introduction to Basic Concept of Pharmacogenomics, Application and Challenges in Pharmacogenomics, Personalized Medicine 3.2. Genetic Variation, Types of Variants, SNPs, Insertion/Deletions 3.3. Databases - Pharmacogenomics Knowledge Base (PharmGKB)	K1-K3 K3-K6 K4-K6	8	1-5
4	Computational Immunology 4.1. Introduction to Immune System - Adaptive and Innate Immunity, Cells of the Immune System 4.2. Major Histocompatibility Complex (MHC) its Polymorphism, Principles of B-cell and T-cell Epitope Prediction 4.3. Databases in Immunology, IMGT immunoinformatics	K1-K3 K3-K4 K4-K6	8	1-5
5	Applications of Cheminformatics Tools in Drug Design 5.1. Definition of drugs - 2D and 3D Molecular Structures 5.2. Searching for Chemicals on the Internet (PubChem, eMolecules) 5.3. Chemical structure drawing tools	K1-K3 K4-K6 K2-K3	8	1-5

BOOKS FOR STUDY

Darren R. Flower. Bioinformatics for Immunomics (Immunomics Reviews). New York:Springer-Verlag, 2010.

Abul K. Abbas, Andrew H. H. Lichtman, and Shiv Pillai. Cellular and Molecular Immunology. USA: Elsevier, 2017.

Andrew R. Leach, Valerie J. Gillet. An Introduction to Chemoinformatics.UK: Springer, 2007.

Russ B. Altman, David Flockhart, David B. Goldstein. Principles of Pharmacogenetics and Pharmacogenomics. UK:Cambridge University Press, 2012.

BOOKS FOR REFERENCE

Christian Schönbach, ShobaRanganathan, and Vladimir Brusic. Immunoinformatics (Immunomics Reviews) USA: Humana Press, 2010.
Kenneth Murphy. Janeway's Immunobiology, UK: Garland Science, 2014.
Bunin, Barry A. Dordrecht. Chemoinformatics: Theory, Practice, and Products.UK: Springer, 2010.

JOURNALS

The Pharmacogenomics Journal
Pharmacogenomics and Personalized Medicine
Pharmacogenetics and Genomics
Immunoinformatics
BMC Genomics
Journal of Computational Biology
Chemoinformatics: Concepts, Methods, and Tools for Drug Discovery
International Journal of Chemoinformatics and Chemical Engineering
BMR Bioinformatics & Cheminformatics

WEB SOURCES

<http://www.imgt.org/Immunoinformatics.html>
<http://rsob.royalsocietypublishing.org/content/3/1/120139>
<http://ghr.nlm.nih.gov/handbook/genomicresearch/pharmacogenomics>
<https://www.pharmgkb.org/>
<http://cheminformatics.org/>
<http://www.emolecules.com/info/molecular-informatics>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Postgraduate Elective Course offered by the Department of Bioinformatics for
M.A. / M.Sc./ M. Com Degree Programmes**

SYLLABUS

(Effective from the academic year 2023–2024)

COMPUTER AIDED DRUG DESIGN

CODE: 23BI/PE/CD23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to understand the general pathway for drug discovery and development
- to define new methodologies for analysis of ligands with their bound protein target
- to know the guidelines and regulations imbibed by fda
- to gain an in-depth overview of methods and techniques applied in computer assisted drug design (cadd)
- to learn about computer-aided drug design, safety evaluation, bioavailability and clinical trials

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify the key elements in drug and explain new methodologies for drug design	K1
CO2	describe the role and importance of the various disciplines involved in the different phases of drug discovery and development	K2
CO3	review and evaluate preclinical and clinical pharmaceutical studies	K3
CO4	follow new ideas in utilizing main approaches of ligand screening methods	K4
CO5	examine the pharmacodynamic and pharmacokinetic properties for small molecules	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Drug Discovery and Development 1.1. Drug Development Process Overview - The Changing Landscape of drugs development 1.2. Drug Discovery Phases 1.3. Preclinical Phase studies	K1-K2 K2-K3 K3-K6	7	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Regulations in Drug Discovery 2.1. FDA regulations on Drug Development 2.2. Indian Regulatory Systems 2.3. Ethical Considerations and Special Populations	K1-K3 K3 K4-K6	8	1-5
3	Drug Target Identification 3.1. Computational inferences used to identify and validate small molecule drug targets 3.2. Databases for Drug targets, Retrieving protein structure and visualisation 3.3. Target Discovery and Validation, Active Site Prediction	K1-K3 K3-K6 K4-K6	8	1-5
4	Ligand Based Drug Design 4.1. Screening of lead molecules - Natural products and their analogues 4.2. Chemical Databases – PubChem, Drug Bank 4.3. Chemical file formats, Retrieving drug molecules	K1-K3 K3-K4 K3-K6	8	1-5
5	Pharmacokinetics and Molecular Docking 5.1. Pharmacokinetics - ADME Prediction 5.2. Pharmacodynamics 5.3. Molecular Docking - Scoring and evaluation	K1-K3 K4-K6 K3-K6	8	1-5

BOOKS FOR STUDY

Claudio N. Cavasotto. In Silico Drug Discovery and Design: Theory, Methods, Challenges, and Applications. USA: Taylor & Francis Group, 2017.
Charifson P S. Practical Application of Computer Aided Drug Design. New York:Dekker, 1997.

BOOKS FOR REFERENCE

Andrew R. Leach. Molecular Modeling: Principles and Applications. USA: Prentice Hall, 2007.
Daan Frenkel and Berend Smit. Understanding Molecular Simulation: From Algorithms to applications. USA: Academic Press, 2002.
Alan Hinchliffe. Molecular Modelling for Beginners. USA: John Wiley & Sons, 2008.
Luca Monticelli, Emppu Salonen. Biomolecular Simulations: Methods and Protocols. USA:Humana Press, 2016.

JOURNALS

Journal of Molecular Graphics and Modelling
Journal of Computer-Aided Molecular Design
Current Computer Aided-Drug Design

WEB SOURCES

<http://accessengineeringlibrary.com/browse/computer-aided-drug-design-and-deliverysystems>
<http://www.southernresearch.org/life-sciences/lead-discovery-and-optimization/medicinal-chemistry/computational-chemistry>
<http://www.ch.ic.ac.uk/local/organic/mod/>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	5	5 X 1 =5 (All questions to be answered, Objective type)
B	K3, K4	10	5 X 2 =10 (Answers in about 50 words)
C	K4, K5	20	2 X 10 = 20 (Internal choice) Answers in about 600 words
D	K6	15	1 X 15 = 15 (1 out of 2 questions to be answered - Open choice) Answers in about 1200 words
	Total	50	

Other Components:**Total Marks: 50**

Categories of other components	Cognitive levels	Course Outcome	Marks allocation
Quiz/MCQs/open book tests/ Tests/ Assignment/ Mini projects/ Debate/ Seminar/ Weblems	K1 - K2	CO1-CO2	20
	K3 - K4	CO3- CO4	20
	K5 - K6	CO5	10
	Total		50

End semester examination**Total Marks: 100****Duration: 3 hours**

Sections	Cognitive levels	Marks	Pattern
A	K1, K2	10	10 X 1 =10 (All questions to be answered, Objective type)
B	K3, K4	20	10 X 2 =20 (Answers in about 50 words)
C	K4, K5	40	4 X 10 = 40 (Internal choice) Answers in about 600 words
D	K6	30	2 X 15 = 30 (2 out of 4 questions to be answered - Open choice) Answers in about 1200 words
	Total	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023 -2024)

TRANSLATIONAL BIOINFORMATICS

CODE: 23BI/PI/TB24

CREDITS : 4

OBJECTIVES OF THE COURSE

- to develop a quantitative understanding of recent and emerging fields of bioinformatics
- to provide a platform for knowledge on imminent concepts to serve the present societal requirements
- to provide a better understanding of data and its applications in bioinformatics
- to impart a forum for disseminating the field of medical and biological image analysis
- to illustrate the information technology-driven efficiency to integrate real world context in public health informatics

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	apply knowledge of bioinformatics data exploration	K1, K2
CO2	analyse, interpret and appraise bioinformatics research data	K3
CO3	critically appraise the key concepts and conclusions from disease models	K4
CO4	infer functional association networks	K5
CO5	justify the use of genome scale networks in clinical settings	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction 1.1. Overview of bioinformatics and principle applications: Sequencing, Microarray, ‘omics’ fields, Systems biology, data mining. 1.2. Relationships to diseases and health. Data-driven Disease Biology. 1.3. Translational Bioinformatics: Past, Present, and Future.	K1-K3 K2-K4 K5-K6		1-5

UNIT	CONTENT	CL	Hrs	CO
2	Biomedical Knowledge Integration 2.1. Data, Molecules, and Diseases, Computational Causal Analytics, Transforming patient care. 2.2. Omics based approaches in diagnosis and treatment. Health informatics and the influence on the delivery of healthcare. 2.3. The electronic patient record and the importance of coding healthcare delivery consultations. The management of multi-dimensional and heterogeneous data sets.	K1-K3 K2-K4 K5-K6		1-5
3	Biomedical Image Analysis 3.1. Picture archive communication system (PACS) design and implementation; clinical PACS-based imaging informatics 3.2. Elemedicine/teleradiology; image content indexing, image data mining; grid computing in large-scale imaging informatics 3.3. Image-assisted diagnosis, surgery and therapy.	K1-K3 K2-K4 K5-K6		1-5
4	Disease Informatics 4.1. Small molecules and diseases. Cause and treatment of diseases. The Small Molecule Pathway Database (SMPDB). Toxin and Toxin-Target Database (T3DB), Poly Search and Metabolite Set Enrichment Analysis. 4.2. Protein interaction and diseases - molecular and genetic basis of diseases. Protein-DNA interaction disruptions 4.3. Protein misfolding problems. Network based approaches in complex diseases.	K1-K3 K2-K4 K5-K6		1-5
5	Biological Knowledge Assembly and Interpretation 5.1. Gene Set-Wise Differential Expression Analysis, Gene set enrichment analysis. 5.2. Differential coexpression analysis. Statistical inferences- p values, hyper parametric test, Bonferroni corrections, Benjamini Hochberg corrections. 5.3. False drug discovery rate.	K1-K3 K2-K4 K5-K6		1-5

BOOKS FOR STUDY

Arjen Hommersom, Peter JF Lucas, 2015. Foundations of Biomedical Knowledge representation: Methods and Applications, 1st ed., Springer Publications, 2015.
Vitali Sintchenko, Infectious Disease Informatics, 2010th ed., Springer Publications, 2009.
Hsinchun Chen, Daniel Zeng, Ping Yan, Infectious Disease Informatics: Syndromic Surveillance for Public Health and Bio-Defence. 2010th ed., Springer Publications, 2010.
Geoff Dougherty, Medical Image Processing: Techniques and Applications, 2011th ed., Springer Publications, 2011

BOOKS FOR REFERENCE

Maricel Kann (Ed), Fran Lewitter (Ed), PLOS Computational Biology: Translational Bioinformatics, 2016.
Trevor Hastie, Robert Tibshirani and Jerome Friedman, The Elements of Statistical Learning: Data Mining, Inference, and Prediction (Second Edition) 2009.

WEBSITE

<http://web.stanford.edu/~hastie/pub.html>

PATTERN OF ASSESSMENT

End Semester Examination:

Total Marks: 100

Duration: 3 Hours

Section	Cognitive Level and Allocation of Marks	Marks per Section	No of Questions to be answered	No. of Questions to be set
A	K1(10) K2(10)	20X1=20	10 K1 questions 10 K2 questions	10 K1 questions 10 K2 questions
B	K3(10)	10X2=20	10 K3 questions	10 K3 questions
C	K4(15) K5(15)	3X5=15 3X5=15	3 K4 questions 3 K5 questions	4 K4 questions 4 K5 questions
D	K6(30)	2X15=30	2 K6 questions	3 K6 questions
	Total	100	38	41

End semester examination

Total Marks: 100

Duration: 3 hours

Section A - 10 X 1 =10 (All questions to be answered, Objective type)

Section B - 10 X 2 =20 (All questions to be answered, Answers in about 50 words)

Section C - 4 X 10 = 40 (Internal choice - Answers in about 600 words)

Section D - 2 X 15 = 30 (2 out of 4 questions to be answered, Answers in about 1200 words)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: BIOINFORMATICS

SYLLABUS

(Effective from the academic year 2023 -2024)

JAVA FOR BIOINFORMATICS

CODE: 23BI/PI/JV24

CREDITS : 4

OBJECTIVES OF THE COURSE (COs)

- to understand the concepts of object oriented programming.
- to learn about the control structures, class with attributes and methods used in java
- to understand the application of java in biological research
- to automate the tasks of parsing the different biological data formats, implement data structures and algorithms for common genomics and proteomics analysis
- to facilitate the code reuse for the standard implementation of external scripts and applications in biological data analysis.

COURSE LEARNING OUTCOMES

On successful completion of the course, the student will be able to:

COs	DESCRIPTION	CL
CO1	understanding of the structure of the java programming language.	K1, K2
CO2	apply the basic principles of creating a java program.	K3,K4
CO3	differentiate various methods used in java	K4
CO4	comprehend the relevance of java in biological applications	K5
CO5	decipher the uses of biojava pipelines in bioinformatics	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Java 1.1. Java Basics: Importance and features of JAVA, Lexical elements of JAVA 1.2. Data types and Control structure, Program structure, Arrays 1.3. Command line input handling, OOPS, String Handling.	K1-K3 K2-K4 K5-K6		1-5
2	File Handling 2.1. Package, Exception Handling and File Handling: Package concept, working with util package	K1-K3		1-5

UNIT	CONTENT	CL	Hrs	CO
	2.2. Built-in Exceptions, Exception Handling, User Defined Exception 2.3. Streams in Java: FileInputStream, FileOutputStream, DataInputStream, DataOutputStream, Serialization.	K2-K4 K5-K6		
3	JDBC and Applets 3.1. JDBC, Steps to connect database, Classes and Methods for Database connectivity and Data Manipulation 3.2. Applets: Importance of applets, Steps to build an applet, Applet class methods, applet life cycle 3.3. Creation and execution of applets, Graphics class methods.	K1-K3 K2-K4 K5-K6		1-5
4	Class and objects 4.1. Defining a class and Creating objects – Accessing class members 4.2. Constructors – Method overloading – Static members – Nesting of Methods – this keyword – Command line input. 4.3. Inheritance: Defining inheritance and types of inheritance	K1-K3 K2-K4 K5-K6		1-5
5	Biojava 5.1. Concepts, Installation, Symbols & SymbolList, DNATools, MotifTools, RNATools, DNA to RNA conversion 5.2. Translation of DNA sequence to Protein sequence, proteomics classes: Calculate Mass and isoelectric point 5.3. Sequence I/O basics, Parsing, remote pdb file access	K1-K3 K2-K4 K5-K6		1-5

BOOKS FOR STUDY

E. Balagurusamy, “*Programming with Java*”, India, Tata McGraw Hill, 5th Edition, 2014.

Sagayaraj, Denis, Karthick and Gajalakshmi, “*Java Programming for Core and advanced learners*”, India, Universities Press Private Limited 2018.

Herbert Schildt. Java – A Beginner’s Guide, 7th Edition, McGraw Hill, 2017.

Andreas Prlic, Andrew Yates, Spencer E. Bliven, et al., BioJava: an open-source framework for bioinformatics. Bioinformatics. 28(20): 2693-2695. <https://www.biojava.org>. 2012.

BOOKS FOR REFERENCE

Bert Bates , Kathy Sierra, “*Head First Java: Your Brain on Java - A Learner's Guide*”, 1st Edition, O'Reilly Media, 2022.

Herbert Schildt , “*Java: A Beginner's Guide*”, 8th Edition, McGraw Hill, 2020.

Joshua Bloch , “*Effective Java*”, 3rd Edition, Addison-Wesley Professional, 2018.

Eric Freeman , Elisabeth Robson, “*Head First Design Patterns: Building Extensible and Maintainable Object-Oriented Software*”, 2nd Edition, O'Reilly Media, 2020.

JOURNALS

Java Development Journal

Java World

Java Revisited

Journal of Bioinformatics and Computational Biology

WEB RESOURCES

<https://nptel.ac.in/courses/106105191/>

<https://www.udacity.com/course/java-programming-basics--ud282>

End semester examination

Total Marks: 100

Duration: 3 hours

Section A - 10 X 1 =10 (All questions to be answered, Objective type)

Section B - 10 X 2 =20 (All questions to be answered, Answers in about 50 words)

Section C - 4 X 10 = 40 (Internal choice - Answers in about 600 words)

Section D - 2 X 15 = 30 (2 out of 4 questions to be answered, Answers in about 1200 words)



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

**M.Sc. Degree
BIOTECHNOLOGY
(CHOICE BASED CREDIT SYSTEM)**

**OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)**

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

DEPARTMENT OF BIOTECHNOLOGY

PROGRAMME DESCRIPTION

The Master's programme in Biotechnology combines biology with technology, encompassing various branches of applied sciences. The programme emphasizes the advanced area of biotechnology involving controlled and deliberate manipulation of biological systems to develop new technology for industrial products. It is an interdisciplinary science focusing on subjects such as molecular biology, microbiology, stem cell and tissue engineering, marine biotechnology and environmental biotechnology. The programme will acquaint the student with basic and applied sciences, research skills and interpretation of biological data on an experimental approach.

VISION OF THE DEPARTMENT

The Department of Biotechnology in tune with the vision of our college combines interdisciplinary areas of science to bring out globally competent professionals from diverse backgrounds. The program is to impart quality education by fostering a spirit of learning, research and preparing students to use technology for the betterment of society. The curriculum is designed with the vision to cater to various perspectives of biotechnology to achieve both conceptual knowledge as well as hands-on training skills. To create a research environment for students, scholars and faculty to explore various provinces of science.

MISSION OF THE DEPARTMENT

The Department mission is

- to develop and build a quest in students for knowledge to serve the society
- to inculcate self-confidence, research skills and leadership qualities among students
- to maintain innovative pedagogy and supporting infrastructure for students to achieve their aspirations
- to provide an ideal milieu for scholars to conduct interdisciplinary and collaborative research
- to gain a broader perspective of the biotech industry by interacting with leading scientists, technocrats and entrepreneurs

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

PROGRAMME SPECIFIC OUTCOMES (PSOs)

On successful completion of the M.Sc. Biotechnology programme, the students will be able to

PSO 1	Gain knowledge of Biotechnology and contribute to ethical scientific advancement
PSO 2	Fostering a scientific attitude towards entrepreneurship and women empowerment in biotechnology
PSO 3	Acquire fundamental thinking to solve research problems
PSO 4	Design, execute and report scientific experiments
PSO 5	Gain technical skills, analyse biotechnology issues, and understand bioethics

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
DISTRIBUTION OF CREDITS AND HOURS
M.Sc. Biotechnology 2023-2024

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	5	4	6	4	5	4	5	16	21
	4	5	4	5	4	5	4	5	16	20
	4	5			4	5			8	10
PC Practical	3	5	4	6	3	5			10	16
	2	3			2	3			4	6
Dissertation							9	12	9	12
PE-dept.	5	5	5	5			5	5	15	15
									0	0
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PA	2	2							2	2
PN					2				2	0
Library				1		2		3	0	6
TOTAL	24	30	24	30	24	30	22	30	94	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
SEMESTER-I									
23BY/PC/BC14	Biochemistry	4	4	1	0	3	50	50	100
23BY/PC/MI14	Microbiology	4	4	1	0	3	50	50	100
23BY/PC/MR14	Molecular Biology and Recombinant DNA Technology	4	4	1	0	3	50	50	100
23BY/PC/P112	Biochemistry and Microbiology Practical	2	0	0	3	6	50	50	100
23BY/PC/P213	Molecular Biology and Recombinant DNA Technology Practical	3	0	0	5	6	50	50	100
	PA/PL								
	Department Elective I								
SEMESTER-II									
23BY/PC/AP24	Animal and Plant Biotechnology	4	4	2	0	3	50	50	100
23BY/PC/RM24	Research Methodology	4	4	1	0	3	50	50	100
23BY/PC/P324	Animal and Plant Biotechnology Practical	4	0	0	6	6	50	50	100
23BY/PK/SS22	Soft Skills	2	2	0	0	-	50	-	100
CD / ET	Value Education								
	Department Elective II								
	Common Elective I								
SEMESTER-III									
23BY/PC/IM34	Immunotechnology	4	4	1	0	3	50	50	100
23BY/PC/BF34	Bioprocess and Fermentation Technology	4	4	1	0	3	50	50	100
23BY/PC/ET34	Environmental Biotechnology	4	4	1	0	3	50	50	100
23BY/PC/P432	Immunotechnology Practical	2	0	0	3	6	50	50	100
23BY/PC/P533	Bioprocess and Fermentation Technology and Environmental Biotechnology Practical	3	0	0	5	6	50	50	100
23BY/PN/SI32	Summer Internship	2	0	0	0	-	50	-	100
CD / ET	Value Education								
	Common Elective II								
SEMESTER-IV									
23BY/PC/ST44	Stem Cell and Tissue Engineering	4	4	1	0	3	50	50	100
23BY/PC/BN44	Bio-Nanotechnology	4	4	1	0	3	50	50	100
23BY/PC/DS49	Dissertation	9	0	0	12	0	50	50	100
	Department Elective III								

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks										
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M	
Postgraduate Electives offered to Parent Department										
23BY/PE/FB15	Food Biotechnology	5	5	0	0	3	50	50	100	
23BY/PE/BI15	Bioinstrumentation	5	5	0	0	3	50	50	100	
23BY/PE/PB15	Pharmaceutical Biotechnology	5	5	0	0	3	50	50	100	
23BY/PE/IB15	IPR, Biosafety, Bioethics and Entrepreneurship	5	5	0	0	3	50	50	100	
23BY/PE/BB15	Basics of Bioinformatics	5	5	0	0	3	50	50	100	
23BY/PE/VR15	Virology	5	5	0	0	3	50	50	100	
23BY/PE/MT15	Marine Biotechnology	5	5	0	0	3	50	50	100	
Postgraduate Elective offered to Other Departments										
23BY/PE/AB23	Applications of Biotechnology	3	3	0	0	3	50	50	100	
23BY/PE/HD23	Human Diseases and Management	3	3	0	0	3	50	50	100	
The Department will offer one Social Awareness Course										
Social Awareness Courses										
23BY/PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100	
23BY/PA/CR12	Child Rights	2	2	0	0	-	50	-	100	
23BY/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100	
23BY/PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100	
23BY/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100	
23BY/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100	
23BY/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100	
23BY/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100	
23BY/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100	
Independent Elective										
23BY/PI/OY24	Oncology	4	0	0	0	3	-	100	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023–2024)

BIOCHEMISTRY

CODE: 23BY/PC/BC14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to gain knowledge on the core principles of biochemistry
- to have a biochemical insight of various components of cells and their functions
- to enumerate the functions of biomolecules and its role in the metabolism of living matters
- to demonstrate an understanding of the principles, and practical experience of biochemical techniques
- to understand the scope of biochemistry in research, and employment.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the principles of biochemistry	K1
CO2	explain the structure, function, and regulation of biomolecules in biological processes	K2
CO3	present the underlying relationship between biomolecules for homeostasis of body functions	K3
CO4	outline the importance of metabolic pathways and enzymes involved	K4-K5
CO5	integrate biomolecules in various fields of science and research	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	COs
1	Biological Foundation of Biochemistry			
	1.1 Water- Properties, Role of Water	K1-K5	3	1-4
	1.2 Maintenance of Body Fluids in Various Body Compartments and Related Disorders	K1-K4	3	1-4
	1.3 pH- Buffers, Maintenance of pH – Role of Hemoglobin, Respiratory Control, Role of Kidney	K1-K6	3	1-5
	1.4 Acidosis, Alkalosis	K2-K6	2	2-5
2	Biomolecules	K1-K4	3	1-4
	2.1 Carbohydrates - Biological importance, Classification, Monosaccharides, Hemiketal and Hemiacetal Formation, Anomers, Epimers			
	2.2 Disaccharides- Sucrose, Lactose, Polysaccharides - Cellulose, Starch, Glycogen	K2-K4	3	2-4

UNIT	CONTENT	CL	Hrs	COs
	2.3 Proteins – Biological importance, Classification of Aminoacids, Peptide Bonds	K1-K4	3	1-4
	2.4 Structural Hierarchy of Proteins	K5-K6	3	4-5
3	Biomolecules			1-3
	3.1 Lipids – Biological importance, Types Based on Structure, Fatty Acids – Types, Nomenclature	K1-K3	4	
	3.2 Classification- Simple Lipids, Complex Lipids, Derived Lipids	K1-K6	4	1-5
	3.3 Nucleic Acids – Biological Importance, Structures of Purine and Pyrimidines	K2-K6	3	2-5
	3.4 Nucleosides and Nucleotides, DNA Structural Organisation	K2-K6	4	2-5
4	Cellular Metabolism	K1-K6	4	1-5
	4.1 Concepts of Metabolism- Glycolysis, Pentose Phosphate Pathway, Citric Acid Cycle			
	4.2 Respiratory Chain and Oxidative Phosphorylation	K2-K5	3	2-4
	4.3 Oxidation and Biosynthesis Fatty Acids, Urea Cycle	K3-K5	4	3-4
	4.4 Synthesis and Catabolism – Purines and Pyrimidines	K4-K6	4	4-5
5	Enzymes	K1-K6	4	1-5
	5.1 Enzyme Nomenclature, Classification, Cofactor, Active Site, Specificity and Factors Affecting Enzyme Action			
	5.2 Enzyme Regulation- Enzyme inhibition (Competitive inhibition, Uncompetitive inhibition)	K1-K5	3	1-4
	5.3 Control of Enzyme Quantity, Altering the Catalytic Efficiency of the Enzyme	K2-K6	3	2-5
	5.4 Enzymes in Clinical Diagnosis and Pharmaceutical Industries	K2-K6	3	2-5

BOOKS FOR STUDY

Rodwell et al. *Harper's Illustrated Biochemistry*, 31e . McGraw-Hill Education, 2018.
 Elliott, W H, Elliott D. *Biochemistry and Molecular Biology*. Oxford University Press, New York, 2009.
 Albert L. *Principles of Biochemistry* U.K: Worth, 2007.
 Thomas. E. Creighton. *Proteins*. New Work: W. H. Freeman, 2005.

BOOKS FOR REFERENCE

Litwack, G. *Human Biochemistry*. First Edition. U.S.A. Academic Press, 2017.
 J L Jain et al. *Fundamentals of Biochemistry*. Seventh Edition, S Chand, 2016.
 Chhabra,N., Chhabra, S. *A Case Oriented Approach Towards Biochemistry*. First edition. India: J.P. Brothers, 2013
 Garrett, Reginald H., and Charles M. Grisham. *Biochemistry* ,Thomson – Brooks/Cole, U.S.A, 2010.
 Stryer, L. *Biochemistry*. New York: W.H. Freeman, 2005.
 Pamela, C. C., A. H. Richard, and R. F. Denise. *Lippincotts illustrated reviews biochemistry*, Williams & Wilkins, Baltimore, 2005.
 Berg , J. M. *Biochemistry*. New York: W.H. Freeman, 2001.
 Voet, D. and Voet, G. *Biochemistry*. New York: John Wiley, 2000.

JOURNALS

Journal of Biochemistry
Indian Journal of Clinical Biochemistry
Biochemistry

WEB RESOURCES

www.themedicalbiochemistrypage.org
www.biochemistry.org

MOOCs COURSE: https://onlinecourses.nptel.ac.in/noc20_cy10/preview

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment: Total Marks: 50 Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	Total	50	

Other Components: Total Marks: 50

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1 – CO2	10
	K3 - K4	CO 3 – CO 4	20
	K5 – K6	CO 4 – CO 5	20
		Total	50

End-Semester Examination: Total Marks: 100 Duration: 3 Hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/BC14												
	Course Title: BIOCHEMISTRY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	2	2	1	1	3	3	3	3	2
CO 2	3	3	3	3	3	2	1	1	3	3	3	3	2
CO 3	3	3	3	3	2	2	1	1	3	3	3	3	3
CO 4	3	3	3	3	3	3	2	1	3	3	3	3	3
CO 5	3	3	3	3	3	2	2	1	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

MICROBIOLOGY

CODE: 23BY/PC/MI14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to understand various aspects of microbiology and microscopic techniques
- to demonstrate the classification of microbes and their nutritional requirements
- to explain microbial growth, methods of control and preservation techniques
- to determine the causes of microbial diseases, prevention and control
- to know the importance of Microbial communities in extreme habitats and their applications

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	establish knowledge of discoveries, terms in microbiology and concepts of microbes	K1, K2
CO2	learn about various microbiological techniques	K3
CO3	comprehend the taxonomical nutritional and growth requirements of microbes	K4
CO4	evaluate the causes of microbial diseases, their control and prevention	K5
CO5	assess the operation of various microscopy and integrate the role of microbes in the applications of microbiology	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Microbiology 1.1 History of Microbiology- Scope, Evolution Criteria for Classification - Taxometrics, Bacterial Typing	K1-K2	3	1
	1.2 Numerical Taxonomy; Chemotaxonomy; Phylogenetic Relationships - Cladogram, Dendrogram, Universal Phylogenetic Trees	K1-K2	3	1
	1.3 Microscopy – Principles and Applications of Bright Field, Dark Field, Phase Contrast	K1-3,K6	4	1-2, 5

UNIT	CONTENT	CL	Hrs	CO
	1.4 Principles and Applications of Fluorescent and Electron Microscopy	K1-K3,K6	5	1-2, 5
2	Microbial Classification			
	2.1 Classification of Bacteria –Characterization of Bacteria	K1-K5	3	1-4
	2.2 Classification of Fungi – General Properties – Reproduction	K1-K5	3	1-4
	2.3 Classification of Viruses - General Properties – Multiplication – Reproduction	K1-K5	3	1-4
	2.4 Classification of Algae – General Characters	K1-K5	3	1-4
3	Microbial Physiology			
	3.1 Microbial Nutrition, Types of Culture Media, Pure Culture Techniques, Preservation of Cultures	K1-K4	3	1-3
	3.2 Microbial Growth-Growth Curve, Measurement of Growth-methods	K1-K4	3	1-3
	3.3 Factors Influencing the Growth of Microorganisms – Temperature, pH, Osmotic pressure, Moisture, Radiations and Different Chemicals	K3-K5	3	2-4
	3.5 Physical and Chemical Methods of Microbial Control	K3-K5	3	2-4
4	Microbial Diseases			
	4.1 Medical Microbiology-Disease Transmission, Patterns and Spread of Infection, Zoonoses	K1-K5	2	1-4
	4.2 Respiratory Tract Infection-Tuberculosis, Viral Influenza	K1-K5	4	1-4
	4.3 Gastrointestinal Infection-Typhoid-Dysentery, Gastroenteritis	K1-K5	4	1-4
	4.4 Urinary Tract Infections – Leptospirosis, Sexually Transmitted Diseases – HIV, Syphilis	K1-K5	4	1-4
5	Industrial Microbiology & Extremophiles			
	5.1 Microbial products- Biofertilisers- Mycorrhiza, Rhizobium, Azolla	K4-K6	3	3-5
	5.2 Industrial Production of Antibiotics – Streptomycin	K4-K6	3	3-5
	5.3 Extremophiles-Habitant & Classification, Halophiles, Thermophiles, Alkaliphiles, Acidophiles	K4-K6	3	3-5
	5.4 Biotechnological Applications of Extremophiles	K4-K6	3	3-5

BOOKS FOR STUDY

Ananthanarayan, R and Jayaram Paniker C.K. *Textbook of Microbiology*. Chennai: Orient Longman, 10th Edition 2017.

A.S Rao, *Introduction to Microbiology*, Prentice Hall India Learning Private Limited; 1st edition 2006.

Michael T. Madigan , John M. Martinko, Kelly S. Bender , Daniel H. Buckley , David A. Stahl *Brock biology of microorganisms* 2014.

Jawetz, Melnick, & Adelberg's *Medical Microbiology*, 28e Eds. Stefan Riedel, et al. McGraw Hill, 2019.

Joanne Willey and Linda Sherwood and Christopher J. Woolverton Prescott's *Microbiology* 10th Edition 2017.

Krasner, R.I. *The Microbial challenge*. Canada: Jones and Bartlett, 4th Edition 2020.

Patel, A.H. *Industrial Microbiology*. India: MacMillan, 2011.

Vasanthakumari. R. *Textbook of Microbiology*. New Delhi: BI, 2007.

BOOKS FOR REFERENCE

Demain, Arnold L. and Davies, Julian E. *Manual of Industrial Microbiology and Biotechnology*. U.S.A.: ASM, 3rd edition 2014.

Dimmock, N.J., Easton, A.J. and Leppard. *Introduction to Modern Virology*. U.S.A.: Blackwell, 7th edition 2016.

Glazer, A.N., and Nikaido, H. *Microbial Biotechnology*. U.K.: Cambridge, 2nd edition 2012.

Inglis, T. J. *Microbiology and Infection: A Clinical Core Text for Integrated Curricula with Self-Assessment*. U.S.A.: Elsevier Health Sciences, 2007.

JOURNALS

Journal of Applied Microbiology and Biotechnology

International Journal of Medical Microbiology

Journal of Industrial Microbiology

Nature Microbiology

WEB RESOURCES

www.asm.org

www.ncbi.nlm.nih.gov

www.sgm.org

MOOCs COURSES

Fundamentals of Microbiology – <https://www.udemy.com/course/fundamentals-of-microbiology-x/>

Medical Microbiology- https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/248

Biomass characterisation- https://onlinecourses.swayam2.ac.in/ugc19_bt17/preview

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:**Total Marks: 50****Duration: 90 Minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	Total	50	

Other Components:**Total Marks: 50**

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
		Total	50

End-Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/MI14												
	Course Title: MICROBIOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	2	3	3	3	3	2
CO 2	3	3	3	3	3	3	3	1	3	3	3	3	2
CO 3	3	3	3	3	3	2	1	1	3	3	3	3	2
CO 4	3	3	3	3	2	2	3	2	3	3	3	3	3
CO 5	3	3	3	3	2	2	3	2	3	3	3	3	2
High Correlation: 3				Moderate Correlation: 2				Low Correlation: 1					

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

MOLECULAR BIOLOGY AND RECOMBINANT DNA TECHNOLOGY

CODE: 23BY/PC/MR14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to provide knowledge in the areas of molecular biology and recombinant dna technology
- to familiarise dna replication, repair and protein synthesis
- to apprehend gene regulation including transcriptional and translational regulations
- to gain knowledge on gene cloning and molecular sequencing
- to discuss the applications of molecular biology and recombinant DNA technology

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and discuss the basic concepts in molecular biology and recombinant DNA technology	K1, K2
CO2	apply the biological processes on the aspects of molecular biology	K3
CO3	analyze the different types of vectors, molecular and cloning techniques	K4
CO4	evaluate the applications of molecular biology, and recombinant DNA technology	K5
CO5	formulate and execute research using molecular and cloning techniques	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 –Create		

UNIT	CONTENT	CL	Hrs	CO
1	Cell Structure, Function and Genetic Material			
	1.1 Structure, Organization and Function of Cells – Prokaryotes and Eukaryotes	K1, K2	2	1
	1.2 Plasma Membrane – Passive and Active Transport	K2-K6	2	1-5
	1.3 Cytoskeleton – Microfilaments, Intermediate Filaments and Microtubules	K3-K6	3	2-5
	1.4 Cell - Cell Communication –Mechanism and Types	K4-K6	3	3-5
2	Replication, Repair and Protein Synthesis	K1-K3	2	1-2
	2.1 DNA Replication - Prokaryotes and Eukaryotes			
	2.2 DNA Damage and Repair - Direct, Mismatch, Base-Excision, Nucleotide Excision	K2-K5	3	1-4

UNIT	CONTENT	CL	Hrs	CO
	2.3 Protein Synthesis - Transcription and Translation – Prokaryotes	K2-K6	3	1-5
	2.4 Protein Synthesis - Transcription and Translation – Eukaryotes	K2-K6	4	1-5
3	Gene Regulation 3.1 Transcriptional Regulation in Prokaryotes – <i>lac</i> and <i>trp</i> Operon	K1-K5	3	1-4
	3.2 Transcriptional Regulation in Eukaryotes – DNA Methylation and Histone Modification, Protein Processing, Folding, Sorting and Transport	K2-K5	4	1-4
	3.3 Regulation of Cell Cycle	K3-K5	4	2-4
	3.4 Cancer and Apoptosis - Intrinsic and Extrinsic Pathways	K3-K6	4	2-5
4	Vectors and Gene Cloning 4.1 Restriction Modification Systems - Types and Nomenclature and Restriction Enzymes TYPE I, II, III, Enzymes Used in Recombinant DNA Technology	K1-K3	3	1-2
	4.2 Plasmid Vectors and their Properties, Vectors- pBR 322, pUC, M13 Vectors, Phagemids, Shuttle Vectors	K4-K6	4	3-5
	4.3 Genomic Library and cDNA Library Construction	K4-K6	4	3-5
	4.4 Marker Genes- Recombinant Selection and Screening	K4-K6	3	3-5
5	Sequencing and Applications of rDNA Technology 5.1 DNA Sequencing, Polymerase Chain Reaction and Blotting Techniques	K1-K6	3	1-5
	5.2 Molecular Markers and its Applications - RFLP, RAPD, SSR	K2-K6	2	1-5
	5.3 CRISPR – Caspase Technology	K3-K6	4	2-5
	5.4 Applications of Recombinant DNA Technology in Vaccines, Gene Therapy	K5-K6	4	4-5

BOOKS FOR STUDY

Bernard R., Glick and Cheryl L. Patten. *Molecular biotechnology: principles and applications of recombinant DNA*. John Wiley & Sons, 2022.

Brown, Terence A. *Gene cloning and DNA analysis: an introduction*. John Wiley & Sons, 2020.

Bruce Alberts. *Molecular biology of the cell*. Garland science, 2022.

Primrose, S. B. *Principles of gene manipulation: an introduction to genetic engineering*. Blackwell, 2009.

Robert F. Weaver. *Molecular Biology*. McGraw-Hill, 2011.

Watson D., Baker T.A., Bell S.P., Gann A., Levine M., and Losick R. *Molecular biology of the gene*. Pearson, 2014.

Wolfe, Stephen L. *Molecular and Cellular Biology*. U.S.A., Wadsworth, 1999.

BOOKS FOR REFERENCE

Cooper G.M. and Hausman R.E. *The Cell – A molecular approach*. Sinauer Associates, 2018.

Dale, Jeremy W., Schantz Malcolm. *From genes to genomes: concepts and applications of DNA technology*. Wiley, 2007.

David P. Clark, Nanette J. Pazdernik and Michelle R. McGehee. *Molecular Biology*. Academic Cell, 2019

Green, Michael and Sambrook, Joseph. *Molecular cloning: a laboratory manual*. CSHL, 2012.

Lewin, Benjamin. *Genes XII*. Jones and Bartlett, 2017.

Lodish H., Berk A., Kaiser C.A., Krieger M., Bretscher A., Ploegh, H., Amon A. and Martin K. *Molecular and cell biology*. Scientific American, 2016.

JOURNALS

Journal of Molecular Cell Biology

Molecular Biology

International Journal of Cloning and Transgenesis

WEB RESOURCES

www.molbiolcell.org

www.biomedcentral.com/bmcmolbiol.

www.rpi.edu/dept/chem-emg/biotech-environ/.../rdna.html

www.web.mit.edu/hst.160

www.coursera.org/learn/synbioethics

MOOCs COURSE

<https://archive.nptel.ac.in/courses/102/106/102106025/>

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
Total		50	

Other Components:

Total Marks: 50

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
Total			50

End-Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/MR14												
	Course Title: MOLECULAR BIOLOGY AND RECOMBINANT TECHNOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	2	2	1	1	3	1	2	2	2
CO 2	3	3	3	2	3	2	1	1	3	2	2	3	1
CO 3	3	3	3	2	3	2	2	1	2	2	3	3	1
CO 4	2	3	3	3	2	2	2	2	2	3	3	2	1
CO 5	2	3	3	2	3	3	3	2	2	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

BIOCHEMISTRY AND MICROBIOLOGY PRACTICAL

CODE: 23BY/PC/P112

CREDITS: 2

L T P: 0 0 3

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to impart knowledge on good laboratory practices and safety precautionary measures for working in a biochemistry/microbiology laboratory
- to familiarize with the instruments and techniques of biochemistry/microbiological sciences
- to develop skills and proficiency in the preparation of reagents
- to design experiments in the field of biochemistry and microbiology
- to apply the practical knowledge for advanced research and employment

COURSE LEARNING OUTCOMES

- On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the basic concepts of biomolecules, and microbes	K1, K2
CO2	experiment and present the complied protocols of biochemistry and microbiology	K3
CO3	Analyze and outline the techniques and the applications of biochemistry and microbiology	K4
CO4	evaluate the principles and analytical techniques involved in the study of biomolecules and micro-organisms	K5
CO5	design and predict the outcome of biochemistry and microbiology experiments	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

Experiment	CONTENT	CL	Hrs	CO
	BIOCHEMISTRY			
1.	Preparation of Buffers	K1-K2	3	1
2.	Estimation of DNA by Diphenyl Amine Method	K1-K6	3	1-5
3.	Estimation of Carbohydrates – Anthrone Method	K1-K6	3	1-5
4.	Estimation of Protein by Bradford's Method	K1-K6	3	1-5
5.	Separation and Visualization of Proteins by SDS – PAGE	K1-K6	3	1-5
6.	Separation and visualization of phytochemicals by TLC	K1-K6	3	1-5

Experiment	CONTENT	CL	Hrs	CO
	MICROBIOLOGY			
7.	Pure Culture Techniques <ul style="list-style-type: none"> • Streak plate method • Spread plate method 	K1-K6	3	1-5
8.	Bacterial Growth Curve	K1-K6	3	1-5
9.	Staining Methods <ul style="list-style-type: none"> • Fungal Staining • Differential Staining • Spore Staining 	K1-K6	3	1-5
10.	Biochemical Tests <ul style="list-style-type: none"> • IMViC Test • TSI Agar Test • Citrate • Urease • Catalase • Oxidase 	K1-K6	9	1-5
11.	Kirby- Bauer Antibiotic Sensitivity Test	K1-K6	3	1-5

PATTERN OF ASSESSMENT:

Continuous Assessment Test:

Total Marks: 50

Duration: 6 Hours

SECTION	CONTENT	CL	CO	MARKS
A	Identify and comment on the given spotter: A, B, C, D, E	K1-K2	CO1	5 x 2= 10
B	Observation Note and Record	K3	CO2	5
	Viva Voce	K4	CO3	5
C	Minor Experiment: Explain the Principle and Procedure.	K5	CO4	1 x 10 = 10
D	Major Experiment: Principle, Procedure, Perform and Predict the outcome.	K6	CO5	1 x 20 = 20
			Total	50

End-Semester Examination:

Total Marks: 50

Duration: 6 Hours

SECTION	CONTENT	CL	CO	MARKS
A	Identify and comment on the given spotter: A, B, C, D, E	K1- K2	CO1	5 x 2= 10
B	Observation Note and Record	K3	CO2	5
	Viva Voce	K4	CO3	5
C	Minor Experiment: Explain the Principle and Procedure.	K5	CO4	1 x 10 = 10
D	Major Experiment: Principle, Procedure, Perform and Predict the outcome.	K6	CO5	1 x 20 = 20
			Total	50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/P112												
	Course Title: BIOCHEMISTRY AND MICROBIOLOGY PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	2	2	2	1	1	1	2	2	2	1	1
CO 2	3	2	2	2	3	1	1	1	3	2	2	2	1
CO 3	3	3	3	3	3	2	1	1	3	3	3	3	2
CO 4	3	3	3	3	3	2	2	1	3	3	3	3	2
CO 5	3	3	3	3	3	3	2	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

**MOLECULAR BIOLOGY AND RECOMBINANT DNA TECHNOLOGY
PRACTICAL**

CODE: 23BY/PC/P213

CREDITS: 3

L T P: 0 0 5

TOTAL HOURS: 65

OBJECTIVES OF THE COURSE

- to familiarise nucleic acid isolation techniques
- to impart practical skills for understanding the concepts of molecular biology and recombinant dna technology
- to perform, analyse, interpret and discuss the results of molecular biology and recombinant dna techniques
- to provide knowledge in gene cloning and screening of transformants
- to equip the students for industrial career

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe and relate the concepts in molecular biology and recombinant DNA technology	K1, K2
CO2	experiment and present the compiled protocols	K3
CO3	analyse and outline the techniques and applications of molecular biology and recombinant DNA technology	K4
CO4	evaluate different molecular and cloning techniques	K5
CO5	design and predict the outcome of the molecular and cloning experiments	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

Experiment	CONTENT	CL	Hrs	CO
1	Isolation of Bacterial DNA	K1 – K6	6	1-5
2	PCR Amplification	K1 – K6	6	1-5
3	RFLP and RAPD Analysis	K1 – K6	10	1-5
4	Southern Blotting	K1 – K6	8	1-5
5	Isolation of Total RNA	K1 – K6	6	1-5
6	Isolation of Plasmid DNA	K1 – K6	6	1-5
7	Cloning Technique: <ul style="list-style-type: none">• Restriction• Ligation• Bacterial Transformation (Identification of Recombinants – Antibiotic markers, Blue-White Screening)	K1 – K6	6 6 11	1-5

PATTERN OF ASSESSMENT:**Continuous Assessment Test:****Total Marks: 50****Duration: 6 Hours**

SECTION	CONTENT	CL	CO	MARKS
A	Identify and comment on the given spotter: A, B,C, D,E	K1-K2	CO1	5 x 2 = 10
B	Observation Note and Record	K3	CO2	5
	Viva Voce	K4	CO3	5
C	Minor Experiment: Explain the Principle and Procedure.	K5	CO4	1x10=10
D	Major Experiment: Principle, Procedure, Perform and Predict the outcome.	K6	CO5	1x20=20
			Total	50

End-Semester Examination:**Total Marks: 50****Duration: 6 Hours**

SECTION	CONTENT	CL	CO	MARKS
A	Identify and comment on the given spotter: A, B,C,D,E	K1- K2	CO1	5 x 2 = 10
B	Observation Note and Record	K3	CO2	5
	Viva Voce	K4	CO3	5
C	Minor Experiment: Explain the Principle and Procedure.	K5	CO4	1x10=10
D	Major Experiment: Principle, Procedure, Perform and Predict the outcome.	K6	CO5	1x20=20
			Total	50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/P213												
	Course Title: MOLECULAR BIOLOGY AND RECOMBINANT DNA TECHNOLOGY PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	2	2	1	1	3	1	2	2	2
CO 2	3	3	3	2	3	2	1	1	3	2	2	2	1
CO 3	3	2	3	2	3	2	2	1	2	2	3	3	1
CO 4	2	3	3	3	2	2	2	2	2	3	2	2	2
CO 5	2	3	3	2	3	3	3	2	2	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M. Sc DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023–2024)

ANIMAL AND PLANT BIOTECHNOLOGY

CODE: 23BY/PC/AP24

CREDITS: 4

L T P: 4 2 0

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- to understand the basic concepts of cell culture
- to gain knowledge of advances in animal/plant biotechnology
- to describe the techniques of animal/plant biotechnology
- to elaborate applications of animal and plant cell culture
- to evaluate the current scenario in transgenics

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the basics of animal/plant biotechnology	K1,K2
CO2	apply the concepts of animal/plant biotechnology	K3
CO3	analyse the various techniques of animal/plant biotechnology	K4
CO4	evaluate the developments in animal/plant biotechnology in various fields of biology	K5
CO5	create new techniques/applications in plant and animal biotechnology	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Animal Biotechnology			
	Cell Culture Technology-I			
	1.1 Type of Cell Culture Facilities, SOP, GLP	K1- K4	3	1-3
	1.2 Culture Vessels and Substrates	K3-K4	3	2-3
	1.3 Types of Cell Culture Media and Supplements	K3-K5	5	2-4
	1.4 Media Preparation and Sterilization	K3-K6	4	2-5
2	Cell Culture Technology-II	K1-K3	4	1-2
	2.1 Type of Cell Culture			
	2.2 Establishing Cell Lines and Molecular Characterization	K3-K4	4	2-3
	2.3 Quantitation, Contamination, Cryopreservation	K3-K6	4	2-5
	2.4 Scale-up, Cell Bank Preparation	K4-K6	5	3-5

UNIT	CONTENT	CL	Hrs	CO
3	Plant Tissue Culture			
	3.1 Plant Tissue Culture - Principles and Methodology, Protoplast Technology and Somatic Embryogenesis	K1-K4	3	1-3
	3.2 Somaclonal Variation, Synthetic Seeds, Screening of Secondary Metabolites	K2-K5	4	1-4
	3.3 Production of Haploid Plants, Germplasm Conservation	K3-K6	4	2-5
	3.4 Applications of Tissue Culture in Agriculture and Horticulture	K4-K6	4	3-5
4	Plant Genetic Transformation Techniques			
	4.1 Selectable and Scoreable Markers, Reporter Genes and Promoters Used in Plant Vectors	K1-K3	3	1-2
	4.2 Techniques for Plant Transformation – <i>Agrobacterium tumefaciens</i> – Mediated Gene Transfer Method	K4-K6	4	3-5
	4.3 Techniques for Plant Transformation – Direct Gene Transfer Methods	K4-K6	4	3-5
	4.4 Chloroplast Transformation	K4-K6	4	3-5
5	Application of Animal and Plant Biotechnology			
	5.1 Production and Application of Transgenic Animal: Disease Model, Biological Model, Food Source	K1-K6	4	1-5
	5.2 Manipulation of Reproduction: <i>In vitro</i> Fertilization, Embryo Transfer Technology in Farm Animals	K3-K6	4	2-5
	5.3 GM Strategies for Insect Resistance – Environmental Impact of BT Crops, Herbicide Tolerance, Delay of Fruit Ripening, Golden Rice	K1-K6	4	1-5
	5.4 Transgenics for Abiotic Stress Tolerance – Drought Salinity, Cytoplasmic Male Sterility, Edible Vaccines	K1-K6	4	1-5

BOOKS FOR STUDY

Chawla, H.S. *Introduction to Plant Biotechnology*. India: Oxford, 2020.
 Freshney, R. Ian *Culture of Animal Cells: A Manual of Basic Technique and specialized application*. John Wiley & Sons, 2021.
 Purohit, S.S. *Agricultural Biotechnology*. India: Agrobios, 2007.
 Singh B, Gautam S.K, Chauhan M.S. *Text Book of Animal Biotechnology*. The Energy and Resources Institute (TERI), Press, 2015.
 Slater, A, Scott, N, Fowler M *Plant biotechnology*. Oxford University Press, 2008.

BOOKS FOR REFERENCE

Hammond, J. McGarvey, P and Yusibov V. *Plant Biotechnology*, Springer, 2000
 Heiner Niemann, and Christine Wrenzycki. *Animal Biotechnology 1: Reproductive Biotechnologies*. Springer, 2018.
 Hopkins S. *Animal Biotechnology and Genetic Engineering*. Kaufman Press. 2022
 Masters J R W. *Animal Cell Culture*. OUP Oxford, 2000.
 Pawan Kaur. *Advances in Animal Biotechnology and its Applications*. Springer, 2018
 Prasad, B.D., Sahni, S. and Kumar, P. *Plant Biotechnology – Principles, Techniques and Applications*. CRC Press, 2021.

Sahni, S., Prasad, B.D., and Kumar, P. *Plant Biotechnology – Transgenics, stress management, and biosafety issues*. CRC Press, 2021.

JOURNALS

Plant Biotechnology Journal

Journal of Plant Biotechnology

Journal of Cloning and Transgenesis

Animal Biotechnology

Journal of Animal Science and Biotechnology

WEB RESOURCES

www.molbiolcell.org

www.biomedcentral.com/bmcmolbiol.

www.rpi.edu/dept/chem-emg/biotech-environ/.../rdna.html

[www.web.mit.edu/hst.160/www/quiz/recombinant DNA and cloning.html](http://www.web.mit.edu/hst.160/www/quiz/recombinant%20DNA%20and%20cloning.html)

<http://www.gontierlab.eu/medias/files/1-plant-biotechprinciples-techniques-and-applications1.pdf>

<https://www.youtube.com/watch?v=OmTvcACSj1s>

MOOCs COURSES

Plant Biotechnology <https://nptel.ac.in/courses/102/103/102103016/>

Cell Culture <https://nptel.ac.in/courses/102103012/34>

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	Total	50	

Other Components:**Total Marks: 50**

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
		Total	50

End-Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/AP24												
	Course Title: ANIMAL AND PLANT BIOTECHNOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	2	2	1	1	3	2	2	1	1
CO 2	3	3	2	2	3	2	1	1	3	2	2	1	1
CO 3	3	2	3	2	3	2	2	1	2	3	3	2	3
CO 4	2	3	3	3	2	2	2	2	3	2	3	3	3
CO 5	2	3	3	2	3	3	3	2	2	3	2	3	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

RESEARCH METHODOLOGY

CODE: 23BY/PC/RM24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to develop a research orientation among the students and to acquaint them with fundamentals of research methods
- to identify the overall process of designing a research study
- to develop the technical art of writing research report and presentations
- to provide an understanding of quantitative reasoning using logical and statistical methods
- to acquire knowledge on applications of statistics in research

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	tell the concepts and research design	K1
CO2	explain the steps in research and data analysis	K2
CO3	relate advanced critical thinking and assessment	K3
CO4	outline the importance of writing and statistics in research	K4
CO5	evaluate, formulate, analyze and interpret the research ideas	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	COs
1	Principles of Research	K1-K5	3	1-5
	1.1 Research Definition - Types of Research - Descriptive, Analytical, Applied, Fundamental, Quantitative, Qualitative, Conceptual and Empirical			
	1.2 Significance of Research - Methods vs Methodology	K1-K5	3	1-5
	1.3 Research Formulation - Defining and Formulating the Research Problem	K2-K6	3	2-5
	1.4 Criteria for Good Research Data, Essential Steps in the Research Collection	K3-K6	4	3-5
2	Research Communication and Proposal	K1-K6	3	1-5
	2.1 Essentials of the Scientific Report			
	2.2 Preparing Manuscripts, Cross-Referencing, Proof Reading, Plagiarism	K1-K6	3	1-5

UNIT	CONTENT	CL	Hrs	COs
	2.3 Oral and Poster Presentation, Writing Thesis	K3-K6	3	3-5
	2.4 Project Proposal Writing, Grant Application, Funding Agencies for Project	K3-K6	3	3-5
3	Biostatistics	K1-K4	3	1-4
	3.1 Introduction – Definition, Statistical Terms	K1-K4	3	1-4
	3.2 Application of Biostatistics	K1-K4	3	1-4
	3.3 Sampling Methods	K2-K5	3	2-5
	3.4 Data Collection – Classification of Data- Representation of DATA	K2-K6	3	2-5
4	Descriptive Statistics	K1-K6	4	1-5
	4.1 Measures of Central Tendency - Mean, Median, Mode	K1-K6	4	1-5
	4.2 Measures of Dispersion - Range, Quartile Deviation, Mean Deviation, Standard Deviation, Standard Error	K1-K6	4	1-5
	4.3 Correlation Analysis	K2-K6	4	2-5
	4.4 Regression Analysis	K2-K6	2	2-5
5	Inferential Statistics	K1-K6	4	1-5
	5.1 Hypothesis Testing–Null Hypothesis, Alternate Hypothesis	K1-K6	4	1-5
	5.2 Students T- Test, Chi-Square Test	K1-K6	4	1-5
	5.3 ANOVA- One Way and Two Way Classification	K2-K6	4	2-5
	5.4 MS-Excel for Data Analysis	K3-K6	2	3-5

- Unit 4,5-Concepts and Simple Problems Only. 50% theory and 50% problems

BOOKS FOR STUDY

Banerjee, P K. *Introduction to Biostatistics*. S Chand and Company, India, 2014.
 Gurumani, N. *Scientific thesis writing and Paper Presentation*. MJP Publishers, Chennai, 2010.
 Gurumani, N. *Research Methodology for Biological Sciences*. MJP Publishers, Chennai, 2006.
 Mariappan, P. *Biostatistics- An Introduction*. Pearson, Chennai, 2013.

BOOKS FOR REFERENCE

Antonisamy, B, Premkumar S P, and Christopher S. *Principles and Practice of Biostatistics- E-book*. Elsevier Health Sciences, 2017.
 Gurumani, N. *An Introduction to Biostatistics*. MJP Publishers, Chennai, 2005.
 Kothari, C R. *Research methodology, Methods and techniques*. 2nd edition New Age International (P) Ltd, Publishers, New Delhi, 2004.
 Rastogi, B V. *Biostatistics*. MedTech Publishers, India, 2015.
 Raman, A. *A Handbook on Research Processes*. S. Viswanathan Pvt Ltd, Chennai, 2003.
 Sharma, A K. *Text book of Biostatistics I*. Discovery Publishing House, India, 2005 .

JOURNALS

Journal of Mixed Methods Research
 International Journal of Qualitative Methods
 American Journal of Biostatistics International
 Journal of Biostatistics JP
 Journal of Biostatistics

WEB RESOURCES

www.nngroup.com/articles/which-ux-research-methods/

www.processresearchmethods.org.

www.ucl.ac.uk/statistics/biostatistics

MOOCs COURSE

<https://www.coursera.org/learn/research-methods>

PATTERN OF ASSESSMENT

No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
Total		50	

Other Components:

Total Marks: 50

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1 – CO2	10
	K3 - K4	CO 3 – CO 4	20
	K5 – K6	CO 4 – CO 5	20
Total			50

End-Semester Examination:

Total Marks: 100

Duration: 3 Hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
Total		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/RM24												
	Course Title: RESEARCH METHODOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	1	1	3	3	3	3	1
CO 2	3	3	3	3	3	3	2	1	3	3	3	3	2
CO 3	3	3	3	3	3	3	2	1	3	3	3	3	2
CO 4	3		3	3	3	2	2	1	3	3	3	3	2
CO 5	3	3	3	3	2	2	2	1	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

ANIMAL AND PLANT BIOTECHNOLOGY – PRACTICAL

CODE: 23BY/PC/P324

CREDITS: 4

L T P: 0 0 6

TOTAL HOURS: 78

OBJECTIVES OF THE COURSE

- to provide knowledge of cell culture
- to familiarise media preparation
- to impart practical skills for understanding the concepts of animal/plant biotechnology
- to perform, analyse, interpret and discuss the results
- to equip the students for an industrial career

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe and relate the basic concepts in animal/plant biotechnology	K1, K2
CO2	experiment and present the compiled protocols in animal/plant biotechnology	K3
CO3	analyse and outline the techniques of animal/plant biotechnology	K4
CO4	evaluate the principles and analytical techniques involved in animal/plant biotechnology	K5
CO5	design and predict the outcome of animal/plant biotechnology experiments	K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

Experiment	CONTENT	CL	Hrs	CO
1	Preparation of Cell Culture Media	K1 – K6	5	1-5
2	Development of Monolayers from Established Cell Lines	K1 – K6	10	1-5
3	Subculturing / Passaging	K1 – K6	8	1-5
4	Quantitation and Cell Viability Test of Animals Cells by Neubauer Chamber	K1 – K6	7	1-5
5	MTT Assay	K1 – K6	7	1-5
6	Basic Techniques in Plant Tissue Culture <ul style="list-style-type: none"> • Preparation of Medium, Surface Sterilization • Callus Induction • Embryo Culture 	K1 – K6	9	1-5
7	Protoplast Isolation by Enzymatic Method and Protoplast Fusion	K1 – K6	6	1-5
8	Production of Synthetic Seeds	K1 – K6	6	1-5
9	Agrobacterium culture, Reporter Gene (GUS) Assay	K1 – K6	6	1-5
10	Isolation of Plant Genomic DNA	K1 – K6	8	1-5
11	Isolation of Chloroplast	K1 – K6	6	1-5

PATTERN OF ASSESSMENT:

Continuous Assessment Test:

Total Marks: 50

Duration: 6 Hours

SECTION	CONTENT	CL	CO	MARKS
A	Identify and comment on the given spotter: A, B,C, D,E	K1-K2	CO1	5 x 2 = 10
B	Observation Note and Record	K3	CO2	5
	Viva Voce	K4	CO3	5
C	Minor Experiment: Explain the Principle and Procedure.	K5	CO4	1x10=10
D	Major Experiment: Principle, Procedure, Perform and Predict the outcome.	K6	CO5	1x20=20
			Total	50

End-Semester Examination:**Total Marks: 50****Duration: 6 Hours**

SECTION	CONTENT	CL	CO	MARKS
A	Identify and comment on the given spotter: A, B, C, D, E	K1- K2	CO1	5 x 2 = 10
B	Observation Note and Record	K3	CO2	5
	Viva Voce	K4	CO3	5
C	Minor Experiment: Explain the Principle and Procedure.	K5	CO4	1x10=10
D	Major Experiment: Principle, Procedure, Perform and Predict the outcome.	K6	CO5	1x20=20
			Total	50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/P324												
	Course Title: ANIMAL AND PLANT BIOTECHNOLOGY PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	2	1	1	1	3	2	2	2	1
CO 2	3	3	3	2	3	2	1	1	3	2	2	1	1
CO 3	3	2	3	2	3	2	2	1	2	2	3	2	1
CO 4	2	3	3	3	2	2	2	2	2	3	2	2	2
CO 5	2	3	3	3	2	3	2	1	2	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023 -2024)

SOFT SKILLS

CODE: 23BY/PK/SS22

CREDITS: 2

L T P: 2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- To empower students and create opportunities for self-development.
- To instill confidence in students to face challenges.
- To manage emotions and resolve conflicts.
- To organize activities and manage time.
- To set goals and plan ahead.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	communicate with confidence and poise	K1
CO2	accept themselves and improve on their weaknesses	K2
CO3	work more effectively and complete activities on time	K3
CO4	work more effectively and complete activities on time	K4
CO5	plan their future with clarity and focus	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Behavioural Traits 1.1 Self-Awareness 1.2 Communication Skills –Verbal and Non Verbal 1.3 Leadership Qualities 1.4 Etiquette and Good Manners 1.5 Experiential Learning –Based on activities	K1-K6	6	1-5
2	Team Work 2.1. Interpersonal Skills 2.2. People Management 2.3. Creative Thinking 2.4. Critical Thinking 2.5. Experiential Learning – Based on activities	K1-K6	5	1-5
3	Time Management 3.1. Importance of time management 3.2. Planning and Prioritizing 3.3. Organizing skills	K1-K6	5	1-5

UNIT	CONTENT	CL	Hrs	CO
	3.4. Action Plan 3.5. Experiential Learning – Based on activities			
4	Conflict Resolution 4.1. Reasons for conflict 4.2. Consequences of conflict 4.3. Managing emotions 4.4. Methods of resolving conflicts 4.5. Experiential Learning – Based on activities	K1-K6	5	1-5
5	Career Mapping 5.1. Goal Setting and Decision Making 5.2. Career Planning 5.3. Resume Writing 5.4. Handling Interviews 5.5. Experiential Learning – Based on activities	K1-K6	5	1-5

BOOKS FOR REFERENCE

Khera. Shiv. *You Can Win*. New Delhi: Macmillan India, 2002.
Mishra. Rajiv. K. *Personality Development: Transform Yourself*. New Delhi: Rupa 2004.
Newstorm, John. W. and Scannell. Edward. E. *Games Trainers Play: Experiential Learning*.
New Delhi: Tata McGraw Hill, 1980.

PATTERN OF EVALUATION

Other Components: Total Marks: 50

Categories of other components	Cognitive levels	Marks allocation
Quiz/MCQs, open book tests/ Tests	K1 - K2	10
Assignment, Mini projects, Debate.	K3 - K4	20
Critique a concept/ Seminar/ Group Presentation	K5 - K6	20

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M. Sc DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023–2024)

IMMUNOTECHNOLOGY

CODE: 23BY/PC/IM34

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to impart an understanding of the immune system
- to comprehend immune molecules and immune response
- to gain knowledge of classical and clinical immunology
- to familiarize diagnostic immunology and immunotherapy
- to evaluate the usefulness of immunology in diverse areas such as research and clinical applications

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe and discuss the study of immunology	K1,K2
CO2	apply immune-specific cells, structures, and concepts in the field of immunology	K3
CO3	categorize features unique to the immune system	K4
CO4	critically evaluate and estimate the effectiveness of the immune system	K5
CO5	begin to integrate concepts from immunity into real-world applications	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Concepts of Immune System			
	1.1 Introduction, Concepts of Innate and Adaptive Immunity	K1-K3	4	1-2
	1.2 Humoral and Cell-Mediated Immunity	K1-K4	2	1-3
	1.3 Cells of the Immune System	K1-K5	2	1- 4
	1.4 Tissues and Organs of the Immune System	K1-K6	4	1-5
2	Immune cells and Molecules			
	2.1 B Cell: Development, Activation, Differentiation, Memory Generation	K1-K4	3	1-3
	2.2 T Cell: Development, Activation, Helper Subset Differentiation, T Cell Memory	K1-K4	3	1-3
	2.3 Antigens, Epitopes, Haptens, Adjuvants, Pattern Recognition Receptors	K2-K5	4	1-4
	2.4 Immunoglobulin, Multigene Organization of Immunoglobulin Genes, Basis of Antibody Diversity	K2-K6	6	1-5

UNIT	CONTENT	CL	Hrs	CO
3	Immune Responses			
	3.1 Cytokines: Properties, Types, Receptors	K1-K4	2	1-3
	3.2 Major Histocompatibility Complex - General Organization, Structure, Antigen Processing and Presenting Pathways	K2-K4	3	1-3
	3.3 Complement System- Components- Activation Pathways, Functions	K3-K6	3	2-5
	3.4 Hypersensitivity Reactions - Type I, II, III, IV	K3-K6	4	2-5
4	Immunopathology			
	4.1 Autoimmunity, Transplantation Immunology	K1-K4	4	1-3
	4.2 Tumor Immunology	K2-K4	2	1-3
	4.3 Immunodeficiency Diseases	K2-K5	2	1-4
	4.4 Infectious Diseases and Vaccines	K2-K6	4	1-5
5	Experimental systems and methods			
	5.1 Antibody Generation: Polyclonal and Monoclonal Antibodies	K1-K4	2	1-3
	5.2 Cross-Reactivity, Precipitation Reactions, Agglutination Reactions, RIA, ELISA, Western Blotting	K2-K6	4	1-5
	5.3 Immunocytochemistry and Immunohistochemistry, Immunofluorescence, Flow Cytometry	K3-K6	3	2-5
	5.4 Animal Experimental Systems	K3-K6	4	2-5

BOOKS FOR STUDY

Abbas, Abul K., Andrew H. Lichtman, and Shiv Pillai. *Cellular and Molecular Immunology*, -South Asia Edition-E-Book. Elsevier India, 2021.

Stranford Sharon, Owen Judy, Jones Patricia and Punt Jean. *Kuby Immunology*. W. H. Freeman, 2022.

BOOKS FOR REFERENCE

Abbas, Abul K., Andrew H. Lichtman and Shiv Pillai. *Basic Immunology*. Elsevier 2019

Doan Lippincott's *Illustrated Reviews Immunology*. Wolters Kluwer 2021

Khan, Fahim Halim. *The elements of immunology*. Pearson Education India, 2009.

Male David, Brostoff Jonathan, Roth David B, and Roitt Ivan M. *Immunology*. Elsevier, 2018

JOURNALS

Infection and Immunity

Journal of Immunology

Molecular Immunology

Journal of Experimental Medicine

WEB SOURCES

<https://www.immunology.org/>

<https://www.immunology.org/public.../immunology.../immunology-resources-links>

www.library.csusm.edu/course_guides/biology

www.immunologylink.com http://

www.wiley.com/college/bio/karp12791/weblinks.html

MOOCs COURSE

https://onlinecourses.nptel.ac.in/noc22_bt40/preview

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	Total	50	

Other Components:

Total Marks: 50

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
		Total	50

End-Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/IM34												
	Course Title: IMMUNOTECHNOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	1	1	3	2	3	2	2
CO 2	3	3	3	2	2	2	1	1	3	3	3	2	1
CO 3	3	3	3	2	2	2	1	1	3	3	3	2	1
CO 4	3	3	3	3	2	2	1	1	3	3	3	2	2
CO 5	3	3	3	3	3	2	1	1	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

BIOPROCESS AND FERMENTATION TECHNOLOGY

CODE: 23BY/PC/BF34

CREDITS:4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to gain insight into the basics of media design and formulation in bioprocess technology
- to provide an understanding of bioreactors and its applications
- to develop skills for the production of bioproducts through biochemical processes
- to familiarize the mechanism of mass transfer
- to create an awareness of important industrial bio-products and the applications of enzymes in various fields

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and relate the fundamentals of bioprocess and fermentation technology	K1, K2
CO2	show the methods in bioprocess and fermentation technology	K3
CO3	analyse the different steps in upstream and downstream process of fermentation technology	K4
CO4	evaluate the principles of fermentation technology to retrieve the bioproducts	K5
CO5	design the industrially important techniques for fermentation technology	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Fundamentals of Bioprocess			
	1.1 Isolation, Screening and Maintenance of Industrially Important Microbes	K1-K3	3	1-2
	1.2 Media Design and Inoculum Development	K1-K3	3	1-2
	1.3 Sterilization Methods - Batch Sterilization, Continuous Sterilization, Filter Sterilization	K2-K6	3	1-5
	1.4 Types of Fermentation - Solid State, Submerged, Batch, Continuous and Fed Batch	K3-K6	4	2-5
2	Bioreactors			
	2.1 Basic Configuration and Ancillaries of Fermenter	K1-K4	3	1-3
	2.2 Types of Bioreactors I - Stirred tank, Air Lift, Photobioreactor	K2-K6	4	1-5
	2.3 Types of Bioreactors II - Packed Bed, Fluidized Bed Bioreactors	K2-K6	4	2-5
	2.4 Enzyme Immobilization Methods - Immobilization of Microbial Enzymes - Principles and Applications	K3-K6	4	2-5
3	Downstream Processing			
	3.1 Extraction of Enzymes - Removal of Insolubles - Filtration, Centrifugation, Sedimentation, Flocculation	K1-K4	3	1-3
	3.2 Cell Disruption – Physical and Chemical Methods	K2-K4	4	1-3
	3.3 Separation Technique - Membrane Separation, Ultrafiltration, Solvent Extraction	K3-K5	4	2-4
	3.4 Purification and Drying Techniques - Affinity and Gel Permeation Chromatography - Crystallization - Drying - Spray Dryer and Freeze Dryer	K3-K6	4	2-5
4	Mass Transfer			
	4.1 Mass Transfer - Diffusion Theory - Film Theory	K1-K4	3	1-3
	4.2 Types of Mass Transfer I - Liquid-Solid, Liquid-Liquid	K2-K6	4	1-5
	4.3 Types of Mass Transfer II - Gas-Liquid	K2-K6	3	1-5
	4.4 Microbial Growth Kinetics - Batch	K4-K6	2	3-5
5	Bioproducts from Fermentation Technology			
	5.1 Production, Harvest, Recovery and Uses - Enzymes, Vitamins	K1-K6	3	1-5
	5.2 Production, Harvest, Recovery and Uses - Aminoacids, Organic Solvents	K1-K6	3	1-5
	5.3 Production, Harvest, Recovery and Uses - Baker's Yeast, Milk Products - Probiotics	K2-K6	2	1-5
	5.4 Production, Harvest, Recovery and Uses - Single Cell Protein, Beverages - Wine	K2-K6	2	1-5

BOOKS FOR STUDY

- Doran, P M. *Bioprocess Engineering Principles*. Elsevier, 1995.
- El-Mansi, E M T, Nielsen, J, Mousdale, D, Allman, T and Carlson, R. *Fermentation Microbiology and Biotechnology*. CRC Press, 2018.
- Kalaiachelvan, P T and Pandi, I A. *Bioprocess Technology*. MJP Publishers, 2019.
- Palmer, T. *Enzymes: Biochemistry, Biotechnology and Clinical Chemistry*. Horwood, 2004.
- Stanbury, P F and Whitaker, A. *Principles of Fermentation Technology*. Pergamon, 2016.

BOOKS FOR REFERENCE

- Bailey, J and Ollis, D. *Biochemical Engineering Fundamentals*. McGraw-Hill, 2018.
- Berenjian, A. *Essentials in Fermentation Technology*. Springer, 2019.
- Duraiwamy, R, Subhabrata, S, Sudipta, D B and Ghosh, A. *Advances In Bioprocess Engineering and Technology*. Springer, 2020
- Komives, C and Zhou, W. ed *Bioprocessing Technology for Production of Biopharmaceuticals and Bioproducts*. John Wiley & Sons, 2019.
- Liu, S. ed *Bioprocess Engineering: Kinetics, Sustainability, and Reactor Design*. Elsevier, 2020.
- Sivasubramanian, V. *Bioprocess Engineering for A Green Environment*. CRC Press, 2018.
- Schuler, M L. *Bioprocess Engineering*. Prentice, 1992.

JOURNALS

Biotechnology and Bioprocess Engineering
Bioresources and Bioprocessing Enzyme and Microbial technology
Enzyme Technology and Molecular Biology

WEB RESOURCES

www.bioprocessintl.com/
www.wildfermentation.com/ John Schollar and Benedikte Watmore, Practical Fermentation-a technical guide
web.mit.edu/professional/short.../fermentation_technology.html

MOOCs COURSE

<https://www.mooc-list.com/course/introduction-industrial-bioprocess-development-coursera>

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:**Total Marks: 50****Duration: 90 Minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	Total	50	

Other Components:**Total Marks: 50**

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
		Total	50

End-Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/BF34												
	Course Title: BIOPROCESS AND FERMENTATION TECHNOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	1	1	3	3	3	3	2
CO 2	3	3	3	3	3	2	1	1	3	3	3	3	2
CO 3	3	3	3	3	3	3	2	1	3	3	3	2	2
CO 4	3	3	3	3	3	3	2	1	3	3	3	3	2
CO 5	3	3	3	3	3	3	2	2	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

ENVIRONMENTAL BIOTECHNOLOGY

CODE:23BY/PC/ET34

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to gain an understanding of the environment, and its ecosystem.
- to compare different types of pollution and wastewater treatment processes
- to apprehend waste management technologies for different industries
- to create an awareness of current technology employed in environmental sustainability
- to select and apply different bioremediation methods for recalcitrant compound removal

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	relate the fundamentals of the environment, ecological factors	K1, K2
CO2	illustrate global environmental issues and treatment methods	K3
CO3	identify the causes of industrial pollution and manage solid wastes	K4
CO4	compare diverse strategies involved in environmental management	K5
CO5	integrate different methods in the removal of the pollutants and address concerns about transformation in the environment	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Principles of Ecology			
	1.1 The Environment- Physical Environment- Biotic and Abiotic Interactions, Ecosystem-Types	K1-K3	3	1-2
	1.2 Habitat and Niche, Resource Partitioning, Character Displacement	K1, K2,K6	3	1-3,5
	1.3 Community Ecology- Nature of Communities, Community Structure and Attributes Population Ecology- Characteristics of a Population	K1-K3,K6	2	1-3,5
	1.4 Concept of Meta Population- Models of Meta Population	K1-K3, K6	2	1-3,5

2	Environmental Pollution and Management			
	2.1 Water, Soil and Air Pollution Its Sources Effects & Control, Global Climatic Changes-Management	K1-K6	4	1-5
	2.2 Principles of Conservation, Conservation Strategies: In- situ and Ex-situ Conservation -Bio-Indicators	K3,K5-6	4	2-3,5
	2.3 Remote Sensing and GIS -Applications in Ecological Mapping and Environmental Hazard Predictions	K3-K6	4	2-4
	2.4 Sewage and Wastewater Treatments Systems: Primary, Secondary and Tertiary Treatments, Biological Treatment Methods	K1-K6	4	1-5
3	Industrial Waste Management			
	3.1 Industrial Waste Management- Dairy, Paper and Pulp, Textile, Leather industry	K3-K6	4	2-5
	3.2 Biomedical and Pharmaceutical Wastes	K3-4,6	3	2-3,5
	3.3 E-waste- Radioactive and Nuclear Power Waste Management	K3-4,6	3	2-3,5
	3.4 Solid Waste: Sources and Management (Composting, Vermiculture and Methane Production)	K3-4,6	3	2-3,5
4	Recombinant DNA Technology Application in the Environment			
	4.1 Molecular Biology Tools for Environmental Management, rDNA Technology in Waste Treatment	K3-6	5	2,4,5
	4.2 Genetically Modified Organisms in Waste Management	K3,K5-6	3	2,4,5
	4.3 Metagenomics, Nanoscience in Environmental Management	K3,K5-6	3	2,4,5
	4.4 Biosensors Development to Monitor Pollution; Waste from Wealth	K3,K5-6	3	2,4,5
5	Biotechnological Applications in the Environment			
	5.1 Bioremediation of Petroleum Hydrocarbons	K3-6	3	2-5
	5.2 Biodegradation of Xenobiotics and Pesticides	K3-6	3	2-5
	5.3 Microbes in Bioleaching Process- Metal Recovery by Leaching Process, Microbial Fuel Cell	K3-6	3	2-5
	5.4 Phytoremediation - Rhizofiltration, Phytoextraction, Phytostimulation, Phytostabilization and Phytotransformation	K3-6	3	2-5

BOOKS FOR STUDY

Bailey, J. E. and Ollis, D. F. *Biochemical Engineering Fundamentals*. New York: Mac Graw, 1986.
Bruce, E., Rittman and McCarty, P *Environmental Biotechnology, Principles and Applications*. McGraw-Hill Higher education, United States, 2020.
Chakrabarty K.D. Omen G.S. *Biotechnology and Biodegradation, Advances In Applied Biotechnology*. London: Gulf, 1989.
Forster, C. F. and Waste, D.A. J. *Environmental Biotechnology*. U.S.A.: Ellis Horwood, 1987.
Ismail, S.A., *The Earthworm Book*. India: Other India, 2005.
Lutgarde Raskin. *In-situ Bioremediation*. U.S.A.: Naves, 1991.
Metcalf and Eddy. *Wastewater Engineering Treatment, Disposal and Reuse*. U.S.A.: Mc Graw, 1991.
Mohapatra P.K. *Textbook of Environmental Biotechnology*. New Delhi: I.K. International, 2007.
Rana, S.V.S. *Environmental Biotechnology*. New Delhi: Rastogi, 2010.
Thankur, I.S. *Environmental biotechnology – Basic concepts and applications*. New Delhi: IK International, 2006.

BOOKS FOR REFERENCE

APHA. *Standard Method for Examination of Water and Waste water*. American Public Health, 2022.
Daniel Vallero. *Environmental Biotechnology, A Biosystems Approach* Academic Press 2015.
Eugene Odum. *Fundamentals of Ecology*. India: Thomson, 2017.
Kaushik, Anubha and Kaushik, C.P. *Perspectives in Environmental Studies*. New Delhi: New Age, 2007.
Ram Chandra Advances in Biodegradation and Bioremediation of Industrial Waste CRC Press, 2015
Sharma P.D. *Ecology and Environment*. India: Rastogi, 2017.
Smith. *Elements of Ecology*. India: Pearson, 2017

WEB RESOURCES

www.environmentalbiotech.com/
www.waterlooenvironmentalbiotechnology.com/
www.neeri.res.in/

JOURNALS

Applied Environmental Microbiology
Journal of petroleum and environmental Biotechnology
Microbial Ecology for Environmental Biotechnology

MOOCs COURSES

Environmental Biotechnology - Course (nptel.ac.in)
Environmental Sustainability Management | Udemy
Environmental Biology MOOC and Free Online Courses

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment: Total Marks: 50 Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
Total		50	

Other Components: Total Marks: 50

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
Total			50

End-Semester Examination: Total Marks: 100 Duration: 3 Hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
Total		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/ET34												
	Course Title: ENVIRONMENTAL BIOTECHNOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	2	3	3	3	3	2
CO 2	3	3	3	3	3	3	3	2	3	3	3	3	1
CO 3	3	3	3	3	3	3	3	1	3	3	3	3	2
CO 4	3	3	3	3	2	2	3	2	3	3	3	2	3
CO 5	3	3	3	3	2	2	3	2	3	3	2	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023–2024)

IMMUNOTECHNOLOGY-PRACTICAL

CODE: 23BY/PC/P432

CREDITS: 2

L T P: 0 0 3

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to understand the interaction of immune molecules
- to impart knowledge on immunological techniques
- to perform, analyse, and interpret experiments results
- to familiarize diagnostic immunology
- to apply the practical knowledge for advanced research

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the basic concepts of immunology	K1 K2
CO2	experiment and present the complied protocols in immunology	K3
CO3	analyse and outline the techniques of the immune system	K4
CO4	evaluate the principles and analytical techniques involved in the study of the immune system	K5
CO5	design and predict the outcome of the experiments	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

Experiment	CONTENT	CL	Hrs	CO
1	Differential Counting	K1-K6	9	1-5
2	Isolation of Lymphocytes	K1-K6	3	1-5
3	Agglutination Reactions: ABO Blood Grouping, Widal Test, Latex Agglutination Test (C- Reactive Proteins)	K1-K6	5	1-5
4	Precipitation Reactions- SRID, ODD (pattern), IEP, cIEP, Rocket Electrophoresis	K1-K6	10	1-5
5	ELISA	K1-K6	6	1-5
6	Western Blotting	K1-K6	6	1-5

PATTERN OF ASSESSMENT**Continuous Assessment Test:****Total Marks: 50****Duration: 6 Hours**

SECTION	CONTENT	CL	CO	MARKS
A	Identify and comment on the given spotter: A, B, C, D, E	K1-K2	CO1	5 x 2= 10
B	Observation Note and Record	K3	CO2	5
	Viva Voce	K4	CO3	5
C	Minor Experiment: Explain the Principle and Procedure.	K5	CO4	1 x 10 = 10
D	Major Experiment: Principle, Procedure, Perform and Predict the outcome.	K6	CO5	1 x 20 = 20
			Total	50

End-Semester Examination:**Total Marks: 50****Duration: 6 Hours**

SECTION	CONTENT	CL	CO	MARKS
A	Identify and comment on the given spotter: A, B, C, D, E	K1- K2	CO1	5 x 2= 10
B	Observation Note and Record	K3	CO2	5
	Viva Voce	K4	CO3	5
C	Minor Experiment: Explain the Principle and Procedure.	K5	CO4	1 x 10 = 10
D	Major Experiment: Principle, Procedure, Perform and Predict the outcome.	K6	CO5	1 x 20 = 20
			Total	50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/P432												
	Course Title: IMMUNOTECHNOLOGY PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	1	1	1	3	3	3	2	2
CO 2	3	3	3	3	3	2	1	1	3	3	2	3	2
CO 3	3	3	3	2	3	1	1	1	3	3	3	3	2
CO 4	3	3	3	3	3	1	2	1	3	3	2	3	2
CO 5	2	2	3	3	3	2	1	1	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

**BIOPROCESS AND FERMENTATION TECHNOLOGY AND
ENVIRONMENTAL BIOTECHNOLOGY PRACTICAL**

CODE: 23BY/PC/P533

CREDITS: 3

L T P: 0 0 5

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to establish an understanding of the principles of bioprocess and environmental biotechnology
- to explore the various practical experience of bioprocess and environmental biotechnology
- to equip with the instruments of bioprocess and environmental biotechnology
- to familiarize with the technical aspects of microbial utilization for metabolite production
- to apply the practical knowledge for research in bioprocess and environmental biotechnology

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	write the practical concepts of bioprocess and environmental biotechnology	K1, K2
CO2	demonstrate experiments in fermentation and water analysis	K3
CO3	examine the samples using analytical methods in bioprocess and environmental biotechnology	K4
CO4	estimate the biological components in the samples	K5
CO5	develop the fundamental skills in bioprocess and environmental biotechnology	K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

Experiment	CONTENT	CL	Hrs	CO
BIOPROCESS AND FERMENTATION TECHNOLOGY				
1.	Production of Sauerkraut	K1-K4	5	1-3
2.	Production of Ethanol Using <i>Saccharomyces cerevisiae</i>	K1-K5	5	1-4
3.	Effect of pH on Enzyme Activity	K1-K6	5	1-5
4.	Effect of Temperature on Enzyme Activity	K1-K6	5	1-5
5.	Enzyme Immobilization using Sodium Alginate	K1-K6	5	1-5
6.	Determination of Thermal Death Point of Bacterial Culture	K1-K6	5	1-5
7.	Demonstration of Fermentor	K1-K6	5	1-5
ENVIRONMENTAL BIOTECHNOLOGY				
8.	Estimation of Chlorides and Organic Carbon in Soil	K1-K6	5	1-5
9.	Determination of Acidity, and Alkalinity of Water Samples	K1-K6	5	1-5
10.	Estimation of Phosphate in Water Sample	K1-K6	5	1-5
11.	Determination of Biological Oxygen Demand of Water Samples	K1-K6	5	1-5
12.	Detection of Coliforms for Determination of the Purity of Potable Water	K1-K6	5	1-5
13.	Determination of Chemical Oxygen Demand of Water Sample (Demonstration)	K1-K6	5	1-5

PATTERN OF ASSESSMENT:

Continuous Assessment Test:

Total Marks: 50

Duration: 6 Hours

SECTION	CONTENT	CL	CO	MARKS
A	Identify and comment on the given spotter: A, B, C, D, E	K1-K2	CO1	5 x 2 = 10
B	Observation Note and Record	K3	CO2	5
	Viva Voce	K4	CO3	5
C	Minor Experiment: Explain the Principle and Procedure.	K5	CO4	2 x 5 = 10
D	Major Experiment: Principle, Procedure, Perform and Predict the outcome.	K6	CO5	2 x 10 = 20
			Total	50

End-Semester Examination:**Total Marks: 50****Duration: 6 Hours**

SECTION	CONTENT	CL	CO	MARKS
A	Identify and comment on the given spotter: A, B, C, D, E	K1- K2	CO1	5 x 2= 10
B	Observation Note and Record	K3	CO2	5
	Viva Voce	K4	CO3	5
C	Minor Experiment: Explain the Principle and Procedure.	K5	CO4	2 x 5 = 10
D	Major Experiment: Principle, Procedure, Perform and Predict the outcome.	K6	CO5	2 x 10 = 20
			Total	50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/P533												
	Course Title: BIOPROCESS AND FERMENTATION TECHNOLOGY AND ENVIRONMENTAL BIOTECHNOLOGY PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	3	3	2	2	1	1	2	2	2	2	1
CO 2	3	3	3	3	3	2	2	1	3	3	3	2	2
CO 3	3	3	3	3	3	2	2	1	3	3	3	2	2
CO 4	3	3	3	3	3	3	3	2	3	3	3	3	2
CO 5	3	3	3	3	3	3	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023–2024)

SUMMER INTERSHIP

CODE: 23BY/PN/SI32

CREDITS: 2

OBJECTIVES OF THE COURSE

- to understand the different perspectives in the areas of biotechnology
- to transform laboratory skills with hand on experiential learning
- to impart knowledge on scientific writing skills
- to apply the research findings on various gamets of innovative technology
- to expose to a particular job and a profession or industry

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the techniques in biotechnology	K1, K2
CO2	relate the applications in different areas of biotechnology	K2
CO3	construct the methodology for the designed experiments	K3
CO4	analyze and troubleshoot the experimental outcomes	K4
CO5	conclude and combine the observed findings with scientific reasoning	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

The Summer Internship program is for a minimum period of three weeks. The students are expected to have regular attendance in their respective institutes and submit an assignment to the Department reporting the experiments they have observed/conducted. The students are expected to give a seminar presentation in the third semester of the work they have observed/conducted.

Guidelines for Evaluation:**Total Marks: 50**

Rubrics for Evaluation	Marks	Cognitive Level
Experimental methodology and assignment	10	K1 – K2
Documentation - text and images	15	K3 – K4
Experimental analysis and conclusion	10	K5- K6
Attendance	15	-

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/SI32												
	Course Title: SUMMER INTERNSHIP												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	1	1	1	1	3	3	3	2	2
CO 2	3	3	3	2	3	3	2	1	3	3	3	2	2
CO 3	3	3	3	3	3	2	1	1	3	3	3	3	2
CO 4	3	3	3	3	3	2	1	1	2	3	3	3	2
CO 5	3	3	3	3	3	2	2	2	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M. Sc DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023–2024)

STEM CELL AND TISSUE ENGINEERING

CODE: 23BY/PC/ST44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to provide an overview of fundamental concepts in stem cells and tissue engineering
- to familiarize terms and concepts in stem cell biology and tissue engineering
- to impart the potential applications of stem cells and tissue engineering
- to give an insight into the latest technological advancements in stem cells and tissue engineering
- to review the current scenario of tissue engineering applications in bioartificial organ development and transplantation

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the basics of stem cells and tissue engineering	K1, K2
CO2	relate the relationship between stem cells and tissue engineering in biology	K3
CO3	outline the use of stem cells and tissue engineering to address medical requirements	K4
CO4	evaluate the application of stem cells and tissue engineering	K5
CO5	integrate stem cells and tissue engineering concepts in regenerative medicine	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Stem Cells			
	1.1 Stem Cells – History, Classification and Types	K1-K3	3	1-2
	1.2 Isolation, Characterization Scale-Up of Stem Cells	K2-K3	4	1-2
	1.3 Stem Cell Banking	K3-K5	4	2-4
	1.4 Stem Cell-Based Products in the Market	K2-K6	2	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Basic Biology/Mechanisms			
	2.1 Stem Cell Marker	K1-K4	3	1-5
	2.2 Stem Cell Niches	K1-K4	2	1-5
	2.3 Stem Cell Regulators	K3-K6	2	1-5
	2.4 Stem Cell Signaling Pathways: JAK/STAT, Wnt, MAPK, TGFβ	K3-K6	6	1-5
3	Applications of Stem Cells			
	3.1 Parkinson's Disease	K1-K6	2	1-5
	3.2 Multiple Sclerosis	K1-K6	2	1-5
	3.3 Diabetes	K1-K6	2	1-5
	3.4 Burns	K1-K6	2	1-5
4	Tissue Engineering			
	4.1 History and Scope of Tissue Engineering	K1-K2	2	1
	4.2 Biomaterials in Tissue Engineering	K1-K4	4	1-5
	4.3 Models for Tissue Engineering, 3D Bioprinting	K2-K5	4	1-5
	4.4 Bioreactors	K2-K6	4	1-5
5	Applications of Tissue Engineering			
	5.1 Bioartificial Pancreas, Cell Transfusion (Islets)	K1-K3	2	1-5
	5.2 Red Blood Cell Substitutes	K2-K4	2	1-5
	5.3 Artificial Womb	K2-K6	2	1-5
	5.4 Breast Reconstruction	K2-K6	2	1-5

BOOKS FOR STUDY

Gearhart, John, Robert Lanza, and Brigid et al.(eds.) Hogan. *Essentials of stem cell biology*. Elsevier Science, 2009.

Khan, Firdos Alam, ed. *Advances in Application of Stem Cells: From Bench to Clinics*. Springer International Publishing, 2021.

Lanza, Robert, et al., eds. *Principles of tissue engineering*. Academic Press, 2020.

BOOKS FOR REFERENCE

Atala, Anthony, Robert Lanza, Tony Mikon, Robert Nerem. *Principles of Regenerative Medicine*. 3rd Edition, Elsevier Publications, 2018.

Eliot Lander MD, Mark Berman MD. *The Stem Cell Revolution*. Author House, 2015

Song Li, Nicolas, Jennifer. *Stem Cell and Tissue Engineering*. World Scientific, 2011

JOURNALS

International Journal of Stem Cell

Journal of Tissue Engineering and Regenerative Medicine

Journal of Biomaterials and Tissue Engineering

WEB SOURCES

<https://www.isscr.org/learning-guide>

<https://med.stanford.edu/stemcell>

stemcells.nih.gov/

www.nature.com/nature/stemcells/

www.cell.com/cell-stem-cell/

MOOCs COURSE

<https://nptel.ac.in/courses/102106036>

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
Total		50	

Other Components:

Total Marks: 50

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
Total			50

End-Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/ST44												
	Course Title: STEM CELL AND TISSUE ENGINEERING												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	2	1	3	3	3	2	1
CO 2	3	3	3	3	3	3	2	1	3	3	3	2	1
CO 3	3	3	3	3	3	2	2	1	3	3	3	3	2
CO 4	3	3	3	3	3	3	3	2	3	3	3	2	2
CO 5	3	3	3	3	3	3	2	2	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

BIO-NANOTECHNOLOGY

CODE: 23BY/PC/BN44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to introduce the fundamentals of multidisciplinary nature of bionanotechnology
- to conceive knowledge on the different classes of nanomaterials
- to have a better understanding of key design factors at the synthesis/fabrication methods of nanostructures
- to discuss the possibility of current and future applications of nanostructured materials
- to acquire a discipline-based knowledge to create an impact in commercial products and technologies

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe concepts of bionanotechnology	K1, K2
CO2	relate the structural and functional principles of nanobiotechnology	K3
CO3	analyse and characterise the nanomaterials	K4
CO4	evaluate the applications of nanomaterials in various field	K5
CO5	design new methods for the synthesis of nanomaterials and formulate their applications	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Nanotechnology			
	1.1 Concept and Definitions of Nano-biotechnology & Historical Background	K1-K3	3	1-2
	1.2 Fundamental Sciences and Broad Areas of Nano-biotechnology	K2-K3	3	1-2
	1.3 Raw Materials of Nanotechnology	K2-K3	3	1-2
	1.4 Properties of Nanoparticles: Quantum Confinement, Surface Plasmon Resonance	K2-K6	3	1-5
2	Classes of Nanomaterials			
	2.1 Classification Based on Dimensionality	K1-K3	2	1-2
	2.2 Metal Based Nanomaterials - Nanogold, Nano Silver and Metal Oxides	K4-K6	4	3-5
	2.3 Carbon Based Nano Materials – Bucky Balls, Nanotubes	K4-K6	3	3-5
	2.4 Nanocomposites, Nanopolymers, Nano ceramics, Biological Nanomaterials	K4-K6	3	3-5
3	Synthesis and Characterization of Nanoparticles			
	3.1 Nanoparticle Synthesis – Solvent Evaporation, Spontaneous Emulsification, Polymerization, Salting Out, Sol Gel, Reverse Micelle Method	K1-K4	4	1-3
	3.2 Molecular Self Assembly, Biosynthesis – Bacteria and Plant	K2-K6	4	1-5
	3.3 Characterization of Nanoparticles – UV Spectroscopy, STM, AFM, XRD	K3-K6	4	2-5
	3.4 Green Synthesis of Nanoparticles – Demonstration	K3-K6	3	2-5
4	Application of Nanotechnology – I			
	4.1 Food and Cosmetics Applications	K2-K6	4	1-5
	4.2 Textiles and Paints	K2-K6	4	1-5
	4.3 Bioremediation	K2-K6	4	1-5
	4.4 Biosensors	K2-K6	3	1-5
5	Application of Nanotechnology – II			
	5.1 Nanomaterials in Bone Substitutes	K2-K6	3	1-5
	5.1 Nanomaterials in Dentistry	K2-K6	2	1-5
	5.3 Nanoparticles for Cancer Therapy	K2-K6	3	1-5
	5.4 Nanopharmaceuticals – Nanosuspensions, Nano-encapsulation, Nanogels for Drug Therapy	K2-K6	3	1-5

BOOKS FOR STUDY

Arunava Goswami and Samrat Roy Choudhury. *Nanobiotechnology, basic and applied Aspects*. Anthem Press, 2017.

Ljiljana Fruk and Antonina Kerbs. *Bionanotechnology: Concepts and Applications*, Cambridge University Press, 2021

Madhuri Sharon, Maheshwar Sharon, Sunil Pandey and Goldie Oza. *Bionanotechnology concepts and applications*, CRC Press, 2012.

Pradeep T. *A textbook of nanoscience and nanotechnology*. Tata McGraw Hill Education, 2012.

Siddhartha Shrivastava. *Introductory nanobiotechnology*. New Central Book Agency, 2013.

BOOKS FOR REFERENCE

Anil Kumar Anal, *Bionanotechnology Principles and Applications*. CRC press, 2018.

Bhupinder Singh, Rodney JY Ho, JagatR. Kanwar. *Emerging trends in nanobiomedicine*. CRC Press, 2018.

Cato Laurencin T, Lakshmi S. Nair. *Nanotechnology and Tissue Engineering: The Scaffold*. CRCpress, 2012.

Chad A. Mirkin and Christof M. Niemeyer. *Nanobiotechnology II: More Concepts and Applications*, Wiley-VCH, 2007.

Deepak Chitkara, Anupama Mittal, Ram I. Mahato *Molecular Medicines for Cancer: Concepts and Applications of Nanotechnology*. CRC Press, 2018.

Ravishankar Rai. V and Jamuna A. Bai. *Nanotechnology Applications in the Food Industry*. CRC Press, 2018.

Shah, M.A and Tokeer Ahmad. *Principles of Nanoscience and Nanotechnology*. Alpha Science International Ltd., 2010.

Singh, Shubra, M.S., and Rao, Ramachandra. *Nanoscience and Nanotechnology: Fundamentals to Frontiers*. Wiley Publishers, 2013.

JOURNALS

Journal of Nanotechnology

International Journal of Nanotechnology

WEB RESOURCES

<http://www.zyvex.com/nano>

www.fda.gov/nanotechnology/

www.nature.com/nnano/

MOOCs COURSES

<https://www.mooc-list.com/course/nanotechnology-makers-course-coursera>

<https://www.mooc-list.com/course/nanotechnology-and-nanosensors-part-1-coursera>

<https://archive.nptel.ac.in/courses/118/107/118107015/#>

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
Total		50	

Other Components:

Total Marks: 50

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
Total			50

End-Semester Examination:

Total Marks: 100

Duration: 3 Hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
Total		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PC/BN44												
	Course Title: BIO-NANOTECHNOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	2	2	1	1	3	2	2	1	1
CO 2	3	3	3	2	3	2	1	1	3	2	3	2	2
CO 3	3	3	3	2	3	2	2	1	3	3	3	2	2
CO 4	2	3	3	3	2	2	2	2	2	3	3	2	3
CO 5	2	3	3	2	3	3	2	2	2	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023–2024)

DISSERTATION

CODE: 23BY/PC/DS49

CREDITS: 9

L T P: 0 0 12

OBJECTIVES OF THE COURSE

- to understand the concepts of various field of biotechnology
- to impart the proficiency in basic and advanced laboratory skills
- to design and interpret the research outcomes
- to inculcate problem solving and critical thinking in multidisciplinary research
- to apply the research findings for the development of innovative technology

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the principle and techniques in biotechnology	K1, K2
CO2	relate the applications in different areas of biotechnology	K2
CO3	construct the methodology for research	K3
CO4	analyze and troubleshoot the research outcomes	K4
CO5	conclude and combine the research findings with scientific reasoning	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

GUIDELINES FOR DISSERTATION

The project should be done individually. Each student will choose a topic of her interest and the student will be assigned to a supervisor.

The project will require practical work with the submission of a project report. It should include wet lab work. The duration of the project work is 3 months.

The project report should be submitted in the prescribed format containing a minimum of 50 pages. References should not be included on the main pages. The report should be enhanced with photographs.

Each candidate must give 2 periodical reviews to the internal guide on the scheduled dates prescribed by the department.

Each candidate should prepare three hard copies of the thesis. One copy for her and two copies should be submitted to the department.

The project should be submitted on the scheduled date prescribed by the department. The student should appear for Viva-voce before a panel comprising the external examiner, the supervisor, and the Head of the Department.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Rubrics for Evaluation	Marks	Cognitive Level
Research statement and methodology	10	K1 – K2
Documentation - text and images	15	K3 – K4
Research findings and analysis	10	K5
Research conclusion and arguments	15	K6

End Semester Examination:

Total Marks: 50

Rubrics for Evaluation	Marks	Cognitive Level
Research statement and methodology	10	K1 – K2
Documentation - text and images	15	K3 – K4
Research findings and analysis	10	K5
Research conclusion and arguments	15	K6

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23BY/PE/DS49												
	Course Title: DISSERTATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	1	1	1	3	2	2	2	2
CO 2	3	3	3	2	2	2	1	1	3	3	3	2	2
CO 3	3	3	3	3	3	2	1	1	2	3	3	3	2
CO 4	3	3	3	3	3	3	2	2	3	3	3	2	2
CO 5	3	3	3	3	3	3	3	2	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

FOOD BIOTECHNOLOGY

CODE: 23BY/PE/FB15

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to elaborate on the fundamental concepts related to food science
- to give an insight into food textures, additives, functional food
- to understand the techniques involved in food processing
- to familiarize preservation of food products
- to introduce components of food packaging and quality control

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the biotechnological aspects of food	K1, K2
CO2	compute the food constituents for the food industry	K3
CO3	outline the importance of the food processing sector	K4
CO4	summarise the requirements of food safety	K5
CO5	develop innovative techniques for the food industry	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Fundamentals of food science	K1-K3	5	1-2
	1.1 Composition of food– Carbohydrates, Protein, Fats, Water, Vitamins, Minerals, Antinutrients			
	1. 2 Food Microbiology – Sources of Microorganisms	K4-K5	3	3-4
	1.3 Factors Affecting Growth and Survival of Microorganisms in Foods - Intrinsic and Extrinsic Factors	K4-K6	2	3-5
	1.4 Bacterial and Fungal Toxins, Food-Borne Intoxications	K4-K6	4	3-5
2	Food constituents		2	1-5
	2.1 Food Texture-Brittleness, Chewiness, Gumminess, Oiliness, Greasiness	K1-K6		
	2.2 Food Flavours – Natural: Herbs, Spices, Aromatic Seeds, Fruits, Vegetables; Processed Flavours:	K1-K6	3	1-5

UNIT	CONTENT	CL	Hrs	CO
	Fermented, Baked, Toasted, Roasted, Caramelized; Added Flavours: Natural Extracted Flavours, Synthetic Flavours, Plant Flavours; Flavour Additives: Monosodium Glutamate (MSG), Nucleotides, Maltol, Salt, Sodium Restricted Flavouring, Herbs and Spices			
	2.3 Food Colorants- Natural: Plants and Microbes; Inorganic; Synthetic	K1-K6	2	1-5
	2.4 Functional Food – Oat Bran Fibre, Soy Protein, Fish Oil, Fatty Acids, Prebiotics-Probiotics, Plant Sterols and Stanols	K1-K6	3	1-5
3	Food Processing and Adulteration		5	1-5
	3.1. Cereals, Pulses, Spices, Plantation Crop (Cashewnut, Coconut)	K1-K6		
	3.2 Fruits and Vegetables; Flesh foods- Meat, Poultry, Seafood	K1-K6	4	1-5
	3.3 Food adulteration- Adulteration to Improve Physical and Sensory Properties	K1-K6	4	1-5
	3.4 Food Substitution, Organic and Synthetic Adulterants	K3-K6	3	2-5
4	Food Preservation	K1-K6	3	1-5
	4.1 Traditional Food Preservation Methods- Curing, Boiling, Sugaring, Pickling, Canning, Fermentation			
	4.2 Low- Refrigeration, Freezing, Cryopreservation; High Temperature- Pasteurisation, Sterilisation, Ultra Heat Treatment	K1-K6	4	1-5
	4.3 Chemicals-Benzoates, Nitrates, Sulphites; Biopreservation- Bacteriocins, Bacteriophages, Endolysins, Lactic Acid Bacteria	K1-K6	4	1-5
	4.4 Non-thermal methods- High-pressure Processing, Pulsed Electric Field, Ultrasound, Pulsed Light, Ultraviolet Light, Irradiation, Oscillating Magnetic Field, Cold Plasma Technology	K1-K6	3	1-5
5	Food Packaging and Safety		2	1-2
	5.1 Introduction – Labels and Barcodes, Shelf life, E- number	K1-K3		
	5.2 Food Packaging Materials - Biodegradable and Non- degradable	K2-K6	4	1-5
	5.3 Packaging of Fresh and Processed Foods	K4-K6	3	3-5
	5.4 Quality Assurance – BIS, AGMARK, GMP, FSSAI, FDA, HACCP	K3-K6	2	2-5

BOOKS FOR STUDY

Adams, Martin R., and Maurice O. Moss. *Food microbiology*. Royal society of chemistry, 2000.

Lee, Byong H. *Fundamentals of food biotechnology*. John Wiley & Sons, 2014.

Foster, GN. *Food Biotechnology*. CBS Publishers, 2020

BOOKS FOR REFERENCE

Bozoglu, T. Faruk, and Osman Erkmen. *Food Microbiology: Principles into Practice*. John Wiley & Sons, 2016.

Rai, V. Ravishankar, ed. *Advances in food biotechnology*. John Wiley & Sons Limited, 2016.

Stephen J. Forsythe, *The Microbiology of Safe Food*, John Wiley & Sons Limited, 2019.

Liu, Dongyou, ed. *Handbook of foodborne diseases*. CRC Press, 2018.

JOURNALS

Journal of Food Microbiology
Journal of Food Science and Biotechnology
Journal of Food Science and Technology
Food Biotechnology

WEB RESOURCES

<https://www.ifst.org/>
<https://www.ift.org/>
www.kemin.com/
<https://fmtmagazine.in/food-flavours-understanding-food-additives/>

MOOCs COURSE

Food Engineering <https://nptel.ac.in/courses/103107088> Created by IIT Roorkee

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment: **Total Marks: 50** **Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
Total		50	

Other Components: **Total Marks: 50**

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
Total			50

End-Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PE/FB15												
	Course Title: FOOD BIOTECHNOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	2	1	3	3	3	3	3
CO 2	3	3	3	3	3	2	2	1	3	3	3	3	3
CO 3	3	3	3	3	3	3	2	1	3	3	3	3	3
CO 4	3	3	3	3	3	3	2	1	3	3	3	3	2
CO 5	3	3	3	3	3	3	2	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

BIOINSTRUMENTATION

CODE: 23BY/PE/BI15

CREDITS:5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to build the basic concept and principles of bioinstruments
- to introduce components of instruments and the key considerations for biological measurements
- to familiarise the design and operation of bioinstrumentation
- to discuss the regulations related to the analytical instruments
- to describe the current developments of bioinstrumentation

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the instrumentation used in biotechnological research	K1
CO2	discuss the basic concept of qualitative and quantitative analysis	K2
CO3	present the classification of bioinstruments	K3
CO4	outline construction, and working principle of various bioinstruments	K4-K5
CO5	summarize the applications of bioinstruments in different fields of research	K6
CL – Cognitive Level K1–Remember K2–Understand K3–Apply K4–Analyse K5–Evaluate K6–Create		

UNIT	CONTENT	CL	Hrs	COs
1	Microscopy and Spectroscopy			
	1.1 Microscopy- Cryomicroscopy and Confocal Microscopy	K1-K6	5	1-5
	1.2 UV- Spectroscopy, FTIR	K1-K3	5	1-3
	1.3 Mass Spectroscopy, NMR	K2-K6	5	2-5
2	Molecular and Analytical Techniques	K1-K6	3	1-5
	2.1 PCR, Sequencer			
	2.2 FACS, Microarray	K1-K6	4	1-5
	2.3 Kjeldal Unit, Biosensors – Types and Applications	K3-K6	3	3-5

3	Separation Techniques			
	3.1 Centrifugation - Basic Principles of Sedimentation, Types of Rotors, Preparative and Analytical Ultracentrifugation	K1-K4	5	1-4
	3.2 Chromatography - TLC, Affinity Chromatography, Ion-Exchange Chromatography	K1-K4	5	1-4
	3.3 HPLC and Gas Chromatography	K4-K6	5	4-5
4	Electrophoresis			
	4.1 Electrophoresis - Basic Principles, PAGE – Native and SDS	K1-K6	5	1-5
	4.2 Agarose Gel Electrophoresis, 2- Dimensional Gels	K1-K4	5	1-4
	4.3 DGGE, Microchip Electrophoresis	K3-K6	5	3-5
5	Radiation and Preservation Techniques			
	5.1 Measurement of Radioactivity in Biological Sample- Gas Ionization (GM counter), Scintillation Counter, Safety Aspects in Handling Radioactive Isotope	K1-K6	3	1-5
	5.2 Biological Applications of Radioisotopes	K1-K6	3	1-5
	5.3 Lyophilization - Types, Spray Dyer	K3-K6	4	3-5

BOOKS FOR STUDY

Skoog, D. A, Holler, J. F and Nieman, T. A. *Principles of Instrumental Analysis*. U.S.A. 2018

Fulekar, M. H. *Bioinstrumentation*. I K International Publishing House, 2013.

Wilson, K and Walker, J. *Practical Biochemistry – Principles and Techniques*. U.S.A.:Cambridge, 2002.

Willard, H. H and Merrit, L. L. *Instrumental Methods of Analysis*. U.S.A.Prentice Hall, 2005.

BOOKS FOR REFERENCE

Arumugam , N. and Kumaresan V. *Biophysics and Bioinstrumentation* Saras Publication. 2015

Sambrook, J and Russell, D.W. *Molecular Cloning – A Laboratory Manual*. New York. ColdSpringHarbor, 2001.

Bozzola, John J. and Russel Lonnie D. *Electron Microscopy – Principles and Techniques for Biologist*. U.S.A.: Jones and Bartlett, 1992.

Herriot, Willard, Dean and Settle. *Instrumental Methods of Analysis*. U.S.A.: CBS, 1986.

Plummer, D.T. *An Introduction to Practical Biochemistry*. New Delhi: Tata McGraw – Hill, 1985.

Morris and Morris. *Separation Methods in Biochemistry*. London: Pitman, 1960.

JOURNALS

Journal of Medical and Biological Engineering

Flow Measurement and Instrumentation

International Journal of Instrumentation

WEB RESOURCES

www.medbio.utoronto.ca/

www.wiley.com.

www.surface51.com

MOOCs COURSE

<https://nptel.ac.in/courses/102103044>

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:**Total Marks: 50****Duration: 90 Minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
Total		50	

Other Components:**Total Marks: 50**

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1 – CO2	10
	K3 - K4	CO 3 – CO 4	20
	K5 – K6	CO 4 – CO 5	20
Total			50

End-Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
Total		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PE/BI15												
	Course Title: BIO INSTRUMENTATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	1	1	1	3	3	3	3	1
CO 2	3	3	3	3	3	2	2	1	3	3	3	3	2
CO 3	3	3	3	2	2	1	1	1	3	3	3	3	2
CO 4	3	3	3	3	3	2	1	1	3	3	3	3	2
CO 5	3	3	3	3	3	2	2	1	3	3	3	3	2
High Correlation: 3				Moderate Correlation: 2				Low Correlation: 1					

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023–2024)

PHARMACEUTICAL BIOTECHNOLOGY

CODE: 23BY/PE/PB15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to provide information on ideal drugs and their administration
- to design the composition, firmness, and structure of drugs
- to emphasize various, drug distribution systems and their mechanism
- to deliver manufacture of biotechnological outcomes in the pharmaceutical market
- to direct clinical research and toxicology studies of drugs

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the drugs and outline their requisites	K1, K2
CO2	implement the developmental methods for drug manufacturing and administration	K3
CO3	categorize various production processes, formulation and improve the distribution of drugs	K4
CO4	evaluate various biotechnology approaches to produce therapeutics and its applications	K5
CO5	integrate research, clinical trials of pharmaceutical commerce and toxicology	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1.	General Basics of Pharmacology	K1, K2, K5	3	1,4
	1.1 Introduction of Pharmacology; Drugs, Chemotherapeutic Agents-its Applications			
	1.2 Sources of Drugs, Routes of Administration, Drug Interactions	K1-K3	3	1-2
	1.3 Pharmacokinetics-ADMET and Pharmacodynamics	K1-K3,K6	3	1-2,5
2	Drug Discovery and Delivery			
	2.1 Drug Discovery- Process, Research and Development Perspectives	K1-K6	3	1-5
	2.2 Dosage forms - Advantages and Disadvantages	K1-K3	3	1-2
	2.3 Drug Delivery - Role of Biopolymers-Applications	K1-K3,K5	5	1-2,4

UNIT	CONTENT	CL	Hrs	CO
3	Formulation			
	3.1 Capsules – Importance of Base Absorption; Micro-encapsulation and its Types	K1-K4	5	1-3
	3.2 Tablets Manufacturing and its Types, Coating on Tablets	K1-K4	5	1-3
	3.3 Types of Parenteral Products-Oral Liquids, Injections, Transdermal	K1-K4	5	1-3
4	Therapeutics			
	4.1 Introduction and Preparation of Bacterial Vaccines, Toxoids, Viral Vaccines and Antitoxins	K1-K5	5	1-4
	4.2 Applications of r DNA Technology in the Production of Drugs	K1-K5	5	1-4
	4.3 Biotechnology Derived Therapeutic Product (i) Interferon (ii) Vaccines - Hepatitis- B (iii) Hormones	K1-K5	5	1-4
5	Clinical Research and Toxicology	K5-K6	5	4-5
	5.1 Clinical Research and its Phases			
	5.2 Clinical Trials – New Drug Approval Process-Global and Indian Perspectives	K4-K6	5	3-5
	5.3 Toxicology - General Principles and its Types	K3-K6	5	2-5

BOOK FOR STUDY

Ashish Dixit Pawan Tiwari Vivekanand Kishan Chatap, *Textbook of Pharmaceutical Biotechnology*, Studium Press (India) Pvt. Ltd, 2015.

Gary Walsh, *Pharmaceutical Biotechnology: Concepts and Applications*, Wiley India Pvt Ltd, 2011.

Kayser, O., Muller H. *Pharmaceutical Biotechnology- Drug Discovery and Clinical Applications*, U.S.A.: Wiley, 2006.

Prasan R. Bhandari *Textbook of Pharmacology*, Thieme Medical and Scientific Publishers Private Ltd, Delhi, India 2022.

BOOKS FOR REFERENCE

Crommelin, Daan J. A., Sindelar, Robert, Meibohm, Bernd. *Pharmaceutical Biotechnology*. U.S.A.: Springer, 2018.

Katzung, B. G. Masters, S. B., Trevor, A. J. *Basic and Clinical Pharmacology*. U.S.A.: McGraw, 2012.

Saurabh Bhatia and Divakar Goli, *Introduction to Pharmaceutical Biotechnology*. U.K: IOP, 2018.

WEB RESOURCES

<https://www.frontiersin.org/journals/pharmacology>

<https://www.sciencedirect.com/journal/european-journal-of-pharmacology>

<https://academic.oup.com/jpp>

MOOCs COURSES

Medicine pharmacology - <https://www.mooc-list.com/categories/medicine-pharmacology>

Fundamentals of Pharmacology- <https://www.my-mooc.com/en/mooc/pharm101/>

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:**Total Marks: 50****Duration: 90 Minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	Total	50	

Other Components:**Total Marks: 50**

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
		Total	50

End-Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PE/PB15												
	Course Title: PHARMACEUTICAL BIOTEHNOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	2	2	3	2	3	3	3	3	2
CO 2	3	3	3	3	2	2	3	2	3	3	3	3	2
CO 3	3	3	3	3	2	2	2	3	3	3	3	3	2
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	2
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

IPR, BIOSAFETY, BIOETHICS AND ENTREPRENEURSHIP

CODE:23BY/PE/IB15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to create awareness on intellectual property rights and their implications in bioproduct development
- to acquire knowledge on drafting and applying for a patent
- to learn biosafety, risk assessment, and regulations of products derived from biotechnology
- to be familiar with ethical issues in biological research
- to recognize the importance of innovation and management in entrepreneurial activity

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and discuss the basics of IPR, biosafety, bioethics and entrepreneurship	K1, K2
CO2	compile the procedures and practice of IPR, biosafety, bioethics and entrepreneurship	K3
CO3	outline the importance of IPR, biosafety, bioethics and entrepreneurship	K4
CO4	identify the policies and opportunities of IPR, biosafety, bioethics and entrepreneurship	K5
CO5	develop systematic plans for innovation, IPR, biosafety, bioethics and entrepreneurship in the biotechnology industries	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	COs
1	Intellectual Property Rights	K1-K5	5	1-4
	1.1 Introduction to IPRs - Patents, Trademarks, Copyrights, Industrial Design, Geographical Indications, Traditional Knowledge			
	1.2 IPRs – Implications for India - WTO, WIPO, GATT, TRIPS, Types of Patent Applications	K1-K5	4	1-4
	1.3 Patent Search, Drafting, Procedures Involved in the Applications for Patents, Patent infringement	K3-K6	5	2-5
2	Biosafety	K1-K5	5	1-4
	2.1 Good Lab Practices, Good Manufacturing Practices, Biological Safety Cabinets -Types			
	2.2 Biosafety Levels for Infectious Agents, Guidelines for rDNA research activities	K2-K5	4	1-4
	2.3 Cartagena Protocol	K4-K6	4	3-5
3	Bioethics	K1-K3	4	1-2
	3.1 Principles of Research Ethics			
	3.2 Ethical Issues in Clinical Trials	K2-K3	4	1-2
	3.3 Ethical Implications - Cloning, Gene Therapy	K3-K6	4	2-5
4	Entrepreneurship	K1-K4	4	1-3
	4.1 Types of Entrepreneurs			
	4.2 Project Identification, Methods of Project Appraisals	K1-K5	4	1-4
	4.3 Project Report - Content and Significance, Planning Commission's Guidelines for Formulating Project Reports	K2-K6	5	1-5
5	Entrepreneurship Strategies	K1-K3	4	1-2
	5.1 Structure of a Biotechnology Company			
	5.2 New Product Development, Market Research, Funding of Biotech Business	K2-K5	5	1-4
	5.3 Biotechnology Incubator, Biotechnology Industries in India	K3-K6	4	2-5

BOOKS FOR STUDY

Brenner, T and Patzelt ,H. *Handbook of Bio-Entrepreneurship*. Springer, U.S.A. 2008.
Gerard, M B and Antony, H. *Bioethics guide to Pharmaceutical Manufacturers*. Medicines Control Agency, U.K. 2002.
Hine, D and Kapeleris J. *Innovations and Entrepreneurship –An international perspectives*. Edward Elgar, U.K. 2006.
Verma and Agarwal. *Intellectual property Rights*. I. K. International, New Delhi. 1992.

BOOKS FOR REFERENCE

Nandan H , *Fundamentals of Entrepreneurship*, Prentice Hall India Learning Private Limited, Delhi, India, 2013.
Narayanan, P. *Intellectual Property Law*. Eastern Law House (ELH), India, 2017.
Sharma, K and Shukla V. *Intellectual Property Rights-I*, Lexis Nexis, India, 2015.
Sharma, P.D. and Agarwal P.K. *Patent Co-operation Treaty*, New Delhi: MJ, 2002.
Shimasaki, C. *Biotechnology Entrepreneurship*. Elsevier, U.S.A. 2014.
Veatch, M R. *The Basics of Bioethics*. Routledge, Taylor & Francis India, 2017.

JOURNALS

World Patent Information

Bio-Entrepreneur

Journal of Commercial Biotechnology

Journal of the Patent and Trademark Office Society

WEB RESOURCES

www.ita.ucsf.edu/

www.nature.com/bioent/

www.epo.org/

www.ipindia.nic.in

MOOCs COURSE

https://onlinecourses.nptel.ac.in/noc20_hs66/preview

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
Total		50	

Other Components:

Total Marks: 50

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
Total			50

End-Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PE/IB15												
	Course Title: IPR, BIOSAFETY, BIOETHICS AND ENTREPRENEURSHIP												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	2	2	3	3	3	3	2
CO 2	3	3	3	2	2	2	2	2	3	3	3	3	2
CO 3	3	3	3	3	3	2	2	2	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	2	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

BASICS OF BIOINFORMATICS

CODE: 23BY/PE/BB15

CREDITS:5

L T P: 5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to understand the fundamental concepts in bioinformatics
- to integrate and relate molecular mechanisms with bioinformatics
- to study the analysis and applications of biological database
- to know the research, importance, and outreach of bioinformatics
- to pursue higher studies and get employment in the pharmaceutical industries

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define and discuss the bioinformatics concepts	K1,K2
CO2	apply the methodologies for evaluating the databases and sequences	K3
CO3	investigate the genes and protein sequences	K4
CO4	recommend different databases and sequence analysis	K5
CO5	integrate bioinformatics and biotechnology	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	COs
1	Introduction to Bioinformatics			
	1.1 Definition, Scope, and Applications	K1-K6	4	1-5
	1.2 Biological Database and its Types	K2-K6	4	2-5
	1.3 Nucleic Acid Databases (NCBI, DDBJ, and EMBL), Protein Databases (Uniport, PDB, Pfam).	K3-K6	5	3-5

UNIT	CONTENT	CL	Hrs	COs
2	Sequence Alignment			
	2.1 Introduction to Sequence Alignment, Identity, Similarity, GAPS	K1-K4	4	1-4
	2.2 Pairwise Sequence Alignment - Global and Local Alignment	K2-K4	4	2-4
	2.3 Multiple Sequence Alignment – Clustal Omega	K4-K6	5	4-5
3	Basic Local Alignment Search Tool			
	3.1 General Concepts of BLAST - Search Steps	K1-K4	4	1-4
	3.2 BLAST Algorithm - Raw Score, Bit Score, E-Value	K2-K6	5	1-5
	3.3 Advanced BLAST Searching - Organism Specific Blast Sites	K3-K6	4	3-5
4	Evolutionary Bioinformatics			
	4.1 Molecular Evolution, Understanding Evolution – Homology, Xenology, Paralogy	K1-K6	4	1-5
	4.2 Types of Phylogenetic Tree Terms, Rooted and Unrooted Tree	K2-K6	4	2-5
	4.3 Methods of Phylogenetic Tree Construction – Neighbor-Joining Method and Character Based Method	K3-K6	5	3-5
5	Applications of Bioinformatics			
	5.1 Drug Discovery – Structure Based Drug Design, Molecular Docking	K1-K6	5	1-5
	5.2 Toxicity evaluation – Ligand Based Drug Design, ADMET	K2-K6	4	2-5
	5.3 Genome applications – Restriction Mapping, ORF, Primer design	K3-K6	4	3-5

BOOKS FOR STUDY

Baxeavanis, A D and Ouellette B F F. *Bioinformatics-A Practical Guide to the Analysis of Genes and Proteins*. John Wiley, New York, 2004.

Mount, D W. *Bioinformatics Sequence and Genome Analysis*. Cold Spring Harbor Laboratory Press, New York. 2004.

Jonathan P. *Bioinformatics and Functional, Genomics*. John Wiley, USA, 2009.

Xiong, J. *Essential Bioinformatics*. Cambridge University Press, New York, 2006.

BOOKS FOR REFERENCE

Baldi, P and Brunak, S. *Bioinformatics: Machine Learning Approach*. MIT Press, USA. 2003.

Chen and Phoebe Y-P. *Bioinformatics Technologies*. Springer, Germany, 2005.

Durbin, R, Eddy, S, Krogh, A and Mitchison G. *Biological Sequence Analysis: Probabilistic Models of Proteins and Nucleic Acids*. Cambridge University Press, USA, 2005.

Des, H and Taylor, W. *Bioinformatics –Sequence, Structure and Databanks – Practical Approach*. Oxford University Press, London, 2001.

Lesk, A M. *Introduction to Bioinformatics*. Oxford University Press, UK, 2014.

JOURNALS

Journal of Bioinformatics and Computational Biology

BMC Bioinformatics

Journal of Biomedical Informatics

Bioinformatics

WEB RESOURCES

www.bioinformatics.org

<https://bioinformaticsweb.net/>

<http://bioinformaticssoftwareandtools.co.in/>

<https://bio.tools/>

<https://www.ebi.ac.uk/>

MOOCs COURSE

<https://www.coursera.org/specializations/bioinformatics>

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
Total		50	

Other Components:

Total Marks: 50

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
Total			50

End-Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PE/BB15												
	Course Title: BASICS OF BIOINFORMATICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	1	1	2	3	3	3	2
CO 2	3	3	3	3	3	2	2	1	2	3	3	3	2
CO 3	3	3	3	3	3	3	2	2	3	3	3	3	2
CO 4	3	3	3	3	3	3	2	1	3	3	3	3	2
CO 5	3	3	3	3	3	3	2	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M. Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023–2024)

VIROLOGY

CODE: 23BY/PE/VR15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- to provide an understanding of the structure and classification of viruses
- to understand the viral life cycle and pathogenesis
- to comprehend the molecular mechanism of viruses with host immune response
- to give insights on human viral diseases, diagnosis and control
- to explain viral vaccine strategies for disease prevention

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the terms in virology and virus-host interactions	K1-K2
CO2	relate virus replication and its diseases	K3
CO3	investigate the mechanism of disease transmission	K4
CO4	evaluate various viral diseases, growth, symptoms prevention, and control	K5
CO5	integrate concepts in virology to viral diseases	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1.	Introduction to Viruses			
	1.1 Viruses – Properties and Importance	K1-K2, K6	2	1,5
	1.2 Classification of Viruses – Baltimore Classification and Taxonomy	K1-K2	3	1
	1.3 Identification of Viruses - Methods and Detection techniques – Immunological and Molecular Methods	K1-K3, K6	2	1-2,5
2	Virus Growth and Interaction with Host			
	2.1 Multiplication Cycle, Virus Attachment, and Entry into Cells	K1-K6	4	1-5
	2.2 Viral Nucleic Acid-Synthesis-RNA Synthesis-DNA- Genome Replication in DNA Viruses	K1-K6	4	1-5
	2.3 Viral replication in Host Cells	K1-K6	3	1-5

UNIT	CONTENT	CL	Hrs	CO
3	Mechanism of Viral Interaction			
	3.1 Acutely Cytopathic Infection- Persistence, Latent, Transforming, Abortive, Null Infections	K1-K6	4	1-5
	3.2 Host Interactions- Transmission of Viruses- Horizontal, Vertical	K1-K6	4	1-5
	3.3 Mechanism of Virus Latency- Switch On and Off Viral Genes	K1-K6	3	1-5
4	Human Viruses and Diseases			
	4.1 Gastrointestinal, Respiratory and Sexually transmitted viral infections – Common Signs and Symptoms	K1-K6	4	1-5
	4.2 Carcinogenesis (Papilloma and Herpes Virus) and Tumor Viruses- Hepatitis B and Herpes Virus	K1-K6	4	1-5
	4.3 Prion Diseases- Spectrum of Disease, Etiology, Pathogenesis	K1-K6	3	1-5
5	Diagnosis			
	5.1 Diagnosis Techniques for Viral Infections – Serological and Molecular Techniques	K1-K6	2	1-5
	5.2 Cultivation of Viruses (Embryonated Eggs, Organ Cultures, Primary and Secondary Cell Cultures)	K1-K6	3	1-5
	5.3 Introduction to Vaccines, Production and Types of Viral Vaccines	K1-K6	3	1-5

BOOK FOR STUDY

Alan Cann. *Principles of Molecular Virology*, Academic Press, USA, 2015.

Jane Flint, Vincent R. Racaniello, Glenn F. Rall *Principles of Virology, Volume 1: Molecular Biology* (ASM Books) 2020.

Se Luria. *General Virology*, Andesite Press, UK, 2017.

BOOKS FOR REFERENCE

Dimmock N.J, Easton A.J and Leppard K.N. *Introduction to Modern Virology*. U.S.A.: Blackwell, 2007.

Erik Lycke, Erling Norrby, *Textbook of Medical Virology* Butterworth-Heinemann.UK. 1981.

Flint S.J, Enquist L.W, Racaniello V.R and Skalka A.M. *Principles of Virology*. U.S.A.: ASM, 2014.

Teri Shors. *Understanding Viruses*. U.S.A.: Jones and Bartlett, 2009.

Vinod Singh. *Text Book of Virology*, Ibdc Publishers, 2010.

WEB RESOURCES

www.asm.org

www.ncbi.nlm.nih.gov

JOURNALS

Journal of Virology

Journal of General Virology

Antiviral Research

MOOCs COURSES

Fundamentals of Microbiology – <https://www.udemy.com/course/fundamentals-of-microbiology-x/>

Medical Microbiology- https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/248

Virology- <https://www.classcentral.com/course/swayam-virology-20019>

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	Total	50	

Other Components:

Total Marks: 50

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
		Total	50

End-Semester Examination:

Total Marks: 100

Duration: 3 Hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PE/VR15												
	Course Title: VIROLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	3	3	2	3	2	2
CO 2	3	3	3	3	3	3	2	2	3	3	3	2	2
CO 3	3	3	3	3	2	3	3	3	3	3	2	2	3
CO 4	3	3	3	3	3	3	3	2	3	3	3	3	2
CO 5	3	3	3	3	3	3	2	3	3	2	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

MARINE BIOTECHNOLOGY

CODE: 23BY/PE/MT15

CREDITS:5

L T P: 5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- to understand the essential facts and concepts related to marine biotechnology
- to get acquainted with the marine flora and fauna, their basic functions and role in the ecosystem
- to acquire the ability to determine marine pollutants and their interaction
- to gain insights into marine bio products
- to apply biotechnology methodologies to the marine environment betterment

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe and compare the structure of marine ecosystems	K1,K2
CO2	present the function of marine environment	K3
CO3	research the ecological significance and impacts of the marine environment	K4
CO4	evaluate the importance of marine environment and resources	K5
CO5	integrate marine-related habitats, techniques and products	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	COs
1	Introduction to Marine Biotechnology			
	1.1 Marine Environment - Marine, Estuaries, Coral Reefs	K1-K6	4	1-5
	1.2 Marine Flora - Classification of Plankton, Methods of Collection, Preservation	K1-K6	4	1-5
	1.3 Sea Weeds, Mangroves - Classification, Distribution and Ecological Role	K2-K6	5	1-5
2	Extreme Marine Environment and Microbial Diversity	K1-K5	4	1-4
	2.1 Hydrothermal Vents			
	2.2 Hyperthermophilic Microorganisms and their Applications	K1-K5	4	1-4
	2.3 Biotechnological Applications of Extremozymes from Marine Environment	K3-K6	5	2-5
3	Marine Pollution		5	
	3.1 Effects of Pollutants to Marine Organisms - Bio Concentration Bioaccumulation and Bio Magnification - Role of GESAMP	K1-K4		1-3
	3.2 Pollution- Impact of Sewage, Oil and Radioactive	K2-K4	4	1-3
	3.3 Biofouling – Marine Fouling and Boring Organisms	K3-K6	4	2-5
4	Monitoring of Marine Environment		4	
	4.1 Light and Water Sampling Devices	K1-K4		1-3
	4.2 Salinity and Dissolved Oxygen	K1-K4	4	1-3
	4.4 Heavy Metals and Petroleum Carbon Analysis	K3-K6	5	2-5
5	Marine Bioactive Products		4	
	5.1 Pharmaceutical products	K1-K5		1-4
	5.2 Flavour Modifiers, Food Colouring Agents, Food Supplements	K1-K6	5	1-5
	5.3 Other Marine Products - Agarose, Carrageenan, Alginates	K3-K6	4	2-5

BOOKS FOR STUDY

Atlway, D H. *Marine biotechnology- Vol I. Pharmaceutical and bioactive natural products*. Springer, U.S.A, 2000.

Kim, S-K. *Hand book of marine biotechnology*. Springer, U.S.A, 2015.

Levinton, J S. *Marine Biology: Function, Biodiversity, Ecology*. OUP Publishers, U.S.A, 2001.

Werner, E G and Müller, H C. *Blue Biotechnology: From Gene to Bioactive Product*. Springer, Switzerland, 2017.

BOOKS FOR REFERENCE

Fingerman et al., *Recent Advances in Marine Biotechnology Volume 3*, Taylor and Francis, 1999.

Lee, Y K and Salminen, S. *Handbook of probiotics and prebiotics*. Wiley, U.S.A, 2009.

LeGal, Y and Ulber, R. *Advances in Biochemical Engineering/Biotechnology- Marine Biotechnology I & II*. Springer, U.S.A, 2005.

Rampelotto, P H. *Grand Challenges in Marine Biotechnology*. Springer, Switzerland, 2018.

JOURNALS

Journal of marine Biotechnology

Journal of Marine Science: Research and Development

Advances and New perspectives in Marine Biotechnology

WEB RESOURCES

[www. marinebiotech.eu](http://www.marinebiotech.eu)

www.ecmb.org

<https://www.marinebiotech.eu/>

MOOCs COURSES

<https://www.coursera.org/learn/oceanography>

https://onlinecourses.swayam2.ac.in/cec23_bt22/preview

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
	K4	10	$2 \times 5 = 10$ (2 questions to be set with internal choice)
D	K5	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	K6	10	$1 \times 10 = 10$ (1 question to be set with internal choice)
	Total	50	

Other Components:**Total Marks: 50**

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1	10
	K3 - K4	CO 2 – CO 3	20
	K5 – K6	CO 4 – CO 5	20
		Total	50

End-Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 questions to be set and all questions to be answered)
B	K2	10	$5 \times 2 = 10$ (5 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
	K4	20	$2 \times 10 = 20$ (2 questions to be set with internal choice)
D	K5	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	K6	20	$1 \times 20 = 20$ (1 question to be set with internal choice)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23BY/PE/MT15												
	Course Title: MARINE BIOTECHNOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	2	1	1	1	3	3	2	1	1
CO 2	3	2	2	3	3	2	1	1	3	3	2	1	1
CO 3	3	3	3	3	3	2	1	1	3	3	3	2	1
CO 4	3	3	3	3	3	3	2	1	3	3	3	3	2
CO 5	3	3	3	3	3	3	2	2	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

**Postgraduate Elective Course Offered by Department Biotechnology of to students of
M.A. / M.Sc./ M. Com Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

APPLICATIONS OF BIOTECHNOLOGY

CODE: 23BY/PE/AB23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to understand the basics of biotechnology
- to provide an insight into the trends of bio-techniques
- to apply the methods in research, medicine, and industries
- to familiarize the applications of biotechnology in everyday life

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the basics of biotechnology	K1
CO2	apply bio-products in various fields of biotechnology	K2
CO3	assess the methods involved in research, medicine, and industries	K3
CO4	integrate biotechnological implications in agriculture, food and medicine	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Biotechnology			
	1.1 Fundamentals of Fermentation-Fermenter-Process-Upstream and Downstream Fermentation Technology	K1-K2	4	1-2
	1.2 Production -Bread, Wine- Applications of Enzymes in the Food Industry	K1- K4	3	1-4
	1.3 Introduction –Antibiotics -Antibiotic Production – Penicillin-Using microbes	K1-K4	3	1-4
2	Bioproducts			
	2.1 Bio-fertilizers, Composting and Vermicomposting	K1-K4	4	1-4
	2.2 Mushroom – Types and Cultivation	K1-K4	3	1-4
	2.3 Genetically Modified Microbes-Applications	K2-K4	3	2-4

UNIT	CONTENT	CL	Hrs	CO
3	Bioconversions	K1-K4	2	1-4
	3.1 Biofuels			
	3.2 Ethanol Production	K2-K4	2	2-4
	3.3 Biogas production	K2-K4	1	2-4
4	Genetic Engineering	K1-K4	2	1-4
	4.1 Introduction to Cloning			
	4.2 Production of Transgenic - Animals (Mouse, Sheep, Cattle)	K2-K4	2	2-4
	4.3 Transgenic Plants (BT cotton, Edible Vaccines)	K2-K4	2	2-4
5	Applications			
	5.1 DNA Fingerprinting in Forensic Science, Genetic Diseases	K3-K4	4	3-4
	5.2 Cancer Therapy	K3-K4	2	3-4
	5.3 Marine Products from Microbes	K1-K4	2	1-4

BOOK FOR STUDY

Chawla, H.S. *Introduction to Plant Biotechnology*. India: Oxford, 2009.

Michael T. Madigan, John M. Martinko, Thomas D. Brock *Brock biology of microorganisms* 11th edition 2010.

Horwood, Patel, A.H. *Industrial Microbiology*. India: MacMillan, 2011.

Purohit, S.S. *Agricultural Biotechnology*. India: Agrobios, Slater, A. Scott, N and Fowler, 2021.

BOOKS FOR REFERENCE

Demain, Arnold L., and Davies, Julian E. *Manual of Industrial Microbiology and Biotechnology*. U.S.A.: ASM, 2010.

Glick, B.R., and Pasternak, J.J. *Molecular Biotechnology – Principles and Applications of Recombinant DNA*. New Delhi: Panima, 2010.

Kishna, G.K. *Plant Biotechnology*. India: New Vishal, 2016.

Satyanarayana, U. *Biotechnology*. India: Allied, 2018

WEB RESOURCES

www.asm.org

www.ncbi.nlm.nih.gov

<https://www.geeksforgeeks.org/application-of-biotechnology/>

JOURNALS

Journal of Biotechnology

Nature Biotechnology

Biotechnology Advances

MOOCs COURSES

Microbiology- https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/248

Molecular Biology <https://www.udemy.com/course/molecular-biology/?kw=molecular+biology&src=sac>

Medical Microbiology <https://www.udemy.com/course/infectious-and-communicable-disease/Medical>

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (4 questions to be set and 2 questions to be answered)
D	K4	20	$1 \times 20 = 20$ (2 questions to be set and 1 question to be answered)
	Total	50	

Other Components:

Total Marks: 50

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1 – CO2	10
	K3	CO 3	20
	K4	CO 4	20
		Total	50

End-Semester Examination:

Total Marks: 100

Duration: 3 Hours

Section	Cognitive Level	Marks	Pattern
A	K1	8	$8 \times 1 = 8$ (8 questions to be set and all questions to be answered)
B	K2	12	$6 \times 2 = 12$ (6 questions to be set and all questions to be answered)
C	K3	40	$4 \times 10 = 40$ (6 questions to be set and 4 questions to be answered)
D	K4	40	$2 \times 20 = 40$ (4 questions to be set and 2 question to be answered)
	Total	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Postgraduate Elective Course Offered by Department Biotechnology of to students of
M.A. / M.Sc./ M. Com Degree Programme**

SYLLABUS

(Effective from the academic year 2023–2024)

HUMAN DISEASES AND MANAGEMENT

CODE: 23BY/PE/HD23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- to understand of pathogenic spectrum of human diseases
- to gain knowledge on the underlying causes of human diseases
- to describe disease prevention and diagnosis
- to familiarise management of various diseases

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the basic concepts of diseases	K1
CO2	explain the mechanisms of diseases	K2
CO3	predict diagnosis and treatment of diseases	K3
CO4	outline the management of various diseases	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Bacterial and Viral Diseases			
	1.1 Bacterial Diseases I - Typhoid	K1-K4	3	1-4
	1.2 Bacterial Diseases II - Tuberculosis	K1-K4	3	1-4
	1.3 Viral Diseases - AIDS	K1-K4	3	1-4
2	Parasitic and Fungal Diseases	K1-K4	3	1-4
	2.1 Parasitic Diseases I - Malaria			
	2.2 Parasitic Diseases II - Amoebiasis	K1-K4	3	1-4
	2.3 Fungal Diseases – Candidiasis	K1-K4	3	1-4
3	Pathology I	K1-K4	3	1-4
	3.1 Parkinson's Disease			
	3.2 Atherosclerosis	K1-K4	3	1-4
	3.3 Bronchial Asthma	K1-K4	3	1-4
4	Pathology -II	K1-K4	3	1-4
	4.1 Peptic Ulcer			
	4.2 Urinary Tract Infection	K1-K4	3	1-4
	4.3 Cancer of Breast	K1-K4	3	1-4

UNIT	CONTENT	CL	Hrs	CO
5	Immunopathology	K1-K4	3	1-4
	5.1 Allergy			
	5.2 Auto-immune disorders I – Type I Diabetes	K1-K4	3	1-4
	5.3 Auto-immune disorders II – Rheumatoid Arthritis	K1-K4	3	1-4

BOOKS FOR STUDY

Carol D Tamparo. *Diseases of the Human Body*. 6th Edition, Philadelphia.: F A Davis Publishing. 2016.

Mark Zelman, Elaine Tompary, Jill Raymond, Paul Holdaway, Mary Lou E. Mulvihill. *Human Diseases: A Systemic Approach*. US.: Pearsons. 2015.

BOOKS FOR REFERENCE

Margaret Schell Frazier, RN, CMA, BS and Jeanette Drzymkowski, RN, BS. *Essentials of Human Diseases and Conditions*. 6th Edition. Philadelphia.: Saunders. 2016

Patton Kevin T. *The Human Body in Health & Disease*. Canada.: Elsevier. 2017

JOURNALS

Genes and Diseases

Journal of Infectious Diseases and Medicine

Infection, Disease & Health Diseases

WEB RESOURCES

<https://www.publichealth.org/resources/infectious-disease/>

<https://www.cdc.gov/diseasesconditions/index.html>

<https://healthfinder.gov/FindServices/SearchContext.aspx?topic=250&show=1>

<https://medicalsciences.med.unsw.edu.au/community/museum-human-disease/education>

MOOCs COURSE

<https://www.coursera.org/courses?query=infectious%20disease>

PATTERN OF ASSESSMENT

No Unit should be left out

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Section	Cognitive Level	Marks	Pattern
A	K1	4	$4 \times 1 = 4$ (4 questions to be set and all questions to be answered)
B	K2	6	$3 \times 2 = 6$ (3 questions to be set and all questions to be answered)
C	K3	20	$2 \times 10 = 20$ (4 questions to be set and 2 questions to be answered)
D	K4	20	$1 \times 20 = 20$ (2 questions to be set and 1 question to be answered)
	Total	50	

Other Components:**Total Marks: 50**

Quiz/MCQ/Assignment/Open book test/Seminar/Group Discussion/presentation/take home test/panel discussion/debate/group presentation

Categories of other components	Cognitive Level	Course outcomes	Marks
Quiz/MCQ/ Assignment/Seminar etc.,	K1 – K2	CO 1 – CO2	10
	K3	CO 3	20
	K4	CO 4	20
		Total	50

End-Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level	Marks	Pattern
A	K1	8	$8 \times 1 = 8$ (8 questions to be set and all questions to be answered)
B	K2	12	$6 \times 2 = 12$ (6 questions to be set and all questions to be answered)
C	K3	40	$4 \times 10 = 40$ (6 questions to be set and 4 questions to be answered)
D	K4	40	$2 \times 20 = 40$ (4 questions to be set and 2 questions to be answered)
	Total	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M. Sc. DEGREE: BIOTECHNOLOGY

SYLLABUS

(Effective from the academic year 2023–2024)

ONCOLOGY

CODE: 23BY/PI/OY24

CREDITS: 4

OBJECTIVES OF THE COURSE

- to understand basic aspects of cancer biology
- to familiarise the mechanisms involved in tumors
- to learn the immunological perspectives of tumors
- to give an insight into models available for cancer research
- to review the cancer treatments available

UNIT I

Introduction

- 1.1 Introduction, Types and Causes of Cancer
- 1.2 Molecular Mechanism of Cancer
- 1.3 Cancer Biomarkers

UNIT II

Cancer Metastasis

- 2.1 Overview of Metastasis
- 2.2 Primary Tumor Growth and Neoangiogenesis, Survival in Circulation
- 2.3 Dormancy and Secondary Tumor Growth, Morbidity and Mortality

UNIT III

Cancer Immunology

- 3.1 Tumors of the Immune System
- 3.2 Tumor Antigens, Immune Response to Tumors
- 3.3 Tumor Evasion of the Immune System

UNIT IV

In vitro and In vivo Studies

- 4.1 *In vitro* and *Ex vivo* Models for Cancer Research
- 4.2 *In vivo* Models
- 4.3 Cell Culture

UNIT V

Cancer Diagnosis and Therapy

- 5.1 Cancer Diagnosis
- 5.2 Chemotherapy, Radiotherapy
- 5.3 Immunotherapy

BOOKS FOR REFERENCE

Mirza Qaiser Baig and Shilpa Vahikar. *Concepts of Molecular Oncology*, Walnut Publication, India, 2018.

Palladino, Michael Angelo, Dorothy Lobo, and Randall W. Phillis. *Biology of Cancer*. Pearson Education, 2012.

Pezzella, Francesco, Mahvash Tavassoli, and David J. Kerr, eds. *Oxford textbook of cancer biology*. Oxford University Press, 2019.

JOURNALS

Journal of Clinical Oncology

Journal of Oncology

WEB RESOURCES

www.asco.org/

www.esno.org/

PATTERN OF ASSESSMENT

No Unit should be left out

End-Semester Examination:

Total Marks: 100

Duration: 3 Hours

Section A – $10 \times 2 = 20$ Marks (All questions to be answered)

Section B – $4 \times 10 = 40$ Marks (4 out of 7 to be answered)

Section C – $2 \times 20 = 40$ Marks (2 out of 4 to be answered)



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

**M.Com. Degree
COMMERCE
(CHOICE BASED CREDIT SYSTEM)**

**OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)**

SYLLABUS
(Effective from the academic year 2023 – 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI

DEPARTMENT OF COMMERCE

MASTER OF COMMERCE

PROGRAMME DESCRIPTION

The two years Masters in Commerce is intended to develop teaching and research skills among students to create academic expertise to meet the contemporary needs of society. The programme imparts professional education and training in various aspects of business and its environment. It provides the students with opportunities to develop managerial and analytical skills in order to meet the challenges of business at the national and global level. The programme equips the students with necessary conceptual, business and analytical skills required for handling the business operations. The programme enables students to gain a comprehensive understanding of business practices through practical internships, real-time research projects and participation in seminars and case-study discussions.

VISION OF THE DEPARTMENT

In consistent with the vision of the College, we are in pursuit of excellence in Commerce , by providing a vibrant and innovative Centre of Learning for the students to realize their potential and facilitate them to become business leaders and entrepreneurs with essential virtues of 'Truth and Charity' thereby upholding the motto of the College.

MISSION OF THE DEPARTMENT

Our mission is to excel as a transformational leader in Commerce, by equipping the students with sound theoretical knowledge and application skills to surge ahead in their career, adequately moulding them to meet the challenges of the emerging "Knowledge Society" besides inculcating humane values in them for the well-being of the society

PROGRAMME SPECIFIC LEARNING (PSOs)

On successful completion of the M.Com. Commerce Programme, the students will be able to

PSO 1	identify the need for a balance between financial and non-financial information in decision making and control
PSO 2	enhance the ability to analyse issues involved in managing business globally
PSO 3	apply the analytical tools and techniques for research in varied functional areas of business
PSO 4	understand the role of government policies and their interventions towards corporate social responsibility of a business concern by applying the recent trends in Commerce
PSO 5	evaluate ethical and environmental issues affecting global business

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
DISTRIBUTION OF CREDITS AND HOURS
Master of Commerce 2023-2024

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	5	4	5	4	5	4	5	16	20
	4	5	4	5	4	5	4	5	16	20
	4	5	4	5	4	5	4	5	16	20
	4	5	4	5					8	10
Dissertation							7	9	7	9
PE-dept.	5	5			5	6	5	5	15	16
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PA	2	2							2	2
PN					2				2	0
Library		3		3		4		1	0	11
TOTAL	23	30	23	30	24	30	24	30	94	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Com. Degree

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks										
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M	
SEMESTER-I										
23CM/PC/AD14	Accounting for Decision Making	4	4	1	0	3	50	50	100	
23CM/PC/GB14	Global Business Environment	4	4	1	0	3	50	50	100	
23CM/PC/ME14	Managerial Economics	4	4	1	0	3	50	50	100	
23CM/PC/OB14	Organisational Theory and Behaviour	4	4	1	0	3	50	50	100	
	PA/PL									
	Department Elective I									
SEMESTER-II										
23CM/PC/RB24	Regulatory Aspects of Business	4	4	1	0	3	50	50	100	
23CM/PC/MM24	Marketing Management	4	4	1	0	3	50	50	100	
23CM/PC/CT24	Corporate Taxation	4	4	1	0	3	50	50	100	
23CM/PC/FM24	Financial Markets	4	4	1	0	3	50	50	100	
23CM/PK/SS22	Soft Skills	2	2	0	0	-	50	-	100	
CD / ET	Value Education									
	Common Elective I									
SEMESTER-III										
23CM/PC/PM34	Project Management	4	4	1	0	3	50	50	100	
23CM/PC/AC34	Advanced Corporate Accounting	4	4	1	0	3	50	50	100	
23CM/PC/DR34	Data Analysis for Research	4	1	0	4	3	50	50	100	
23CM/PN/SI32	Summer Internship	2	0	0	0	-	50	-	100	
CD / ET	Value Education									
	Department Elective II									
	Common Elective II									
SEMESTER-IV										
23CM/PC/SF44	Strategic Financial Management	4	4	1	0	3	50	50	100	
23CM/PC/MT44	Management of Transformation	4	4	1	0	3	50	50	100	
23CM/PC/RM44	Retail Marketing	4	4	1	0	3	50	50	100	
23CM/PC/DS47	Dissertation	7	0	0	9	-	-	50	100	
	Department Elective III									
Postgraduate Elective Courses Offered to Parent Department										
23CM/PE/AM15	Advertising Management	5	5	0	0	3	50	50	100	
23CM/PE/CR15	Customer Relationship Management	5	5	0	0	3	50	50	100	
23CM/PE/IP15	Investment Analysis and Portfolio Management	5	5	0	0	3	50	50	100	
23CM/PE/EC15	E-Commerce	5	5	0	0	3	50	50	100	
23CM/PE/TD15	Training and Development	5	5	0	0	3	50	50	100	
23CM/PE/SM15	Service Marketing	5	5	0	0	3	50	50	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Com. Degree

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks										
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M	
Postgraduate Elective Courses Offered to Other Departments										
23CM/PE/EF23	Entrepreneurship and Family Business	3	3	0	0	3	50	50	100	
23CM/PE/HR23	Human Resource Management	3	3	0	0	3	50	50	100	
The Department will offer one Social Awareness Course										
Social Awareness										
23CM/PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100	
23CM/PA/CR12	Child Rights	2	2	0	0	-	50	-	100	
23CM/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100	
23CM/PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100	
23CM/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100	
23CM/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100	
23CM/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100	
23CM/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100	
23CM/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100	
Independent Elective Courses										
23CM/PI/RB24	Retail Banking	4	0	0	0	3	-	100	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023-2024)

ACCOUNTING FOR DECISION MAKING

CODE: 23CM/PC/AD14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To enable students to understand the applications of accounting tools, techniques and concepts in managerial decision-making process
- To develop competencies in managerial decision making and control
- To educate students to apply the key concepts in short term and long-term decision making
- To expose students to skills necessary for performance evaluation
- To acquaint students with the concept of budgeting and preparation of budgets

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify the relevant accounting standards in the preparation of financial statements	K1
CO2	explain the concepts in accounting for performance evaluation	K2
CO3	apply the accounting techniques in the decision making process	K3
CO4	analyse the cost and financial data for effective cost control and profit planning	K4
CO5	evaluate the tools of management accounting in performance measurement	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Role of Accounting in Decision Making – Financial, Cost and Management Accounting 1.2 Accounting Information for Decision Making 1.2.1 Cost Statement 1.2.2 Corporate Financial Statement – Contents and Formats as per Schedule 6 of Companies Act 2013 1.2.3 Accounting Standard 1.3 An Overview of Accounting Standards and Indian Accounting Standards	K1-2 K1-4 K1-2 K 1-2 K 1-2	2 3 1 1 3	1-2 1- 4 1-2 1-2 1-2
2	Cost Analysis for Managerial Decision 2.1 Cost-Volume-Profit (CVP) Analysis 2.2 Application of CVP in Decision Making 2.2.1 Pricing Decision for Domestic and Export Order 2.2.2 Key Factor Utilisation Decision 2.2.3 Shut Down Decision 2.2.4 Input and Sales Mix Decision 2.2.5 Make or Buy Decision 2.3 Life Cycle Costing – Meaning, Features and Importance 2.4 Other Costing Techniques for Cost Ascertainment and Decision Making – BackFlush Costing, Target Costing – Meaning, Features and Application	K1-4 K1-5 K1-5 K1-5 K1-5 K1-5 K1-2 K1-5	2 2 2 1 1 2 2 3	1-4 1- 5 1- 5 1- 5 1- 5 1- 5 1-2 1-5
3	3.1 Performance Evaluation and Analysis 3.1.1 Ratio Analysis 3.1.2 Cash Flow Analysis 3.2 Performance Measurement 3.2.1 Activity Based Costing 3.2.2 Throughput Accounting 3.2.3 Value Added Statements 3.2.4 Balance Scorecards	K1-5 K1-5 K1-5 K1-2 K1-2 K1-2	4 4 2 2 2 1	1-5 1-5 1- 5 1- 2 1- 2 1- 2
4	Cost Analysis for Control 4.1 Standard costing as a Management Tool. 4.2 Determination of Standard Costs-Types of Standards 4.3 Variance Analysis – Material, Labour and Overhead Variances	K1-2 K1-2 K1-5	1 1 8	1-2 1-2 1-5

UNIT	CONTENT	CL	HRS	CO
5	Cost Control and Profit Planning			
	5.1 Budgetary Control and Profit Planning – Meaning, Role and Objectives	K1-2	3	1-2
	5.2 Types of Budget - Production, Purchases, Sales, Cash, Flexible and Master Budget	K1-5	7	1-5
	5.3 Zero Base Budget and Performance Budgeting- Requisites and Steps in Implementation	K1-5	5	1-5

BOOKS FOR STUDY

R.L. Gupta, Radhaswamy, *Corporate Accounting*, Sultan Chand & Sons, New Delhi, 2016
 Ravi.M. Kishore, *Cost and Management Accounting*, TaxMann Publishers, 2016
 Sachin Gupta, *Cost and Management Accounting*, TaxMann Publishers, 2018

BOOKS FOR REFERENCE

B.Sarvana Prasath, *A Ready Reference on Advanced Management Accounting*, Wolters Kluwer India Pvt Ltd., 2018
 Tulsian, *Introduction to Cost Accounting*, S.Chand, 2012
 R.Palaniappan, N.Hariharan, *Cost Accounting Problems and Solutions*, I.K.International Publishing House Pvt Ltd., 2014
 MN Arora, *Management Accounting*, Himalaya Publishers, 2010
 Khan & Jain, *Management Accounting*, Tata McGraw Hill, 2013
 Jain and Narang, *Cost Accounting*, Kalyani Publishers, 2012
 Maheswari, S.N. *Principles of Management Accounting*. New Delhi: Sultan Chand and Sons, 2012

JOURNALS

Journal of Management Accounting
 Research. Management Accountant Journal
 Journal of Cost Accounting Research.

WEB RESOURCES

www.icsi.org
www.elsevier.c

PATTERN OF ASSESSEMENT

Continuous Assessment Test: **Total Marks: 50** **Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 = 10 (No choice) Only Theory (one K1 question and one K2 question)
B	K3, K4	20	2 x 10 = 20 Only Problems (internal choice for one K3 question and one K4 question)
C	K5	20	1 x 20 = 20 Only Problems (internal choice)
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) Only Theory (two K1 question and two K2 question)
B	K3, K4	40	4 x 10 = 40 Only Problems (internal choice for two K3 questions and two K4 questions)
C	K5	40	2 x 20 = 40 Only Problems (From a choice of 3 questions)
		100	

Mapping of Course Outcomes (COs)

to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23CM/PC/AD14												
	Course Title: Accounting for Decision Making												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	3	3	3	1	1	1	2	3	3	1	1
CO 2	3	2	3	2	2	1	1	1	3	2	3	1	1
CO 3	3	3	1	1	2	1	1	1	3	2	2	2	1
CO 4	3	3	3	2	2	2	1	1	3	2	3	2	2
CO 5	3	3	2	1	2	2	1	1	3	3	2	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023-2024)

GLOBAL BUSINESS ENVIRONMENT

CODE: 23CM/PC/GB14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To introduce students to the contemporary issues in global business environment
- To enable students to understand the trading strategies and trade protection methods
- To expose students to the role and significance of regional cooperation
- To acquaint students with the international trade environment
- To familiarise students with the functions of international organisations that promote and regulate global business

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	relate the concepts of indian business environment and the global business environment	K1,K2
CO2	present the internal and external environmental factors and its influence on global business	K3
CO3	analyse the impact of cultural differences on global business operations	K4
CO4	appraise the business strategies employed in global business operations	K5
CO5	create a plan for incorporating technology into global business operations	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Objectives and Significance of Business Environment - Micro and Macro Environment 1.2 Nature and Scope of Global Business Environment 1.3 Social, Cultural, Economic, Political and Ecological Environment of Global Business 1.4 Ethics in International Business	K1-2 K1-2 K1-6 K1-5	2 2 7 4	1 1 1-5 1-4
2	Global Environment and Human Development Index 2.1 Global Business Environment-Strategic Decisions in Global Business 2.2 Concepts of Human Development Index-Significance and Components 2.3 Trends in Human Development Index, Human Development Indicators, Important Aspects of Human Development Index 2.4 Global Development Index-World Bank Human Development Index	K1 -2 K1- 2 K1-4 K5	6 4 3 2	1 1 1-3 4
3	International Trading Environment 3.1 Balance of Payments 3.2 Trade Protection Methods-Methods of Trade Protection Policy 3.3 International Commodity Agreements International Coffee Agreement, International Timber Agreement	K1,K2 K1-4 K4 K 1-6	2 3 2 3	1 1-3 3 1-5
4	Economic Integration and Co-operation 4.1 Regional Grouping-European Union, SAARC, NAFTA, ASEAN 4.2 Role of WTO-GATT, TRIMS, TRIPS, World Economic Forum 4.3 Anti-Dumping Measures	K 1-3 K1- 3 K1-4	5 5 5	1-2 1-2 1-3
5	Organizations impacting International Business Environment 5.1 Role and Functions of International Organizations in Promoting and Regulating Global Business 5.2 International Organizations-IMF, World Bank, IDA, IFC, UNCTAD, UNIDO 5.3 BRICS Development Bank	K1-6 K 1-6 K1-5	3 4 3	1-5 1-5 1-4

BOOKS FOR STUDY

Francis Cherunilam, *Business Environment*, Mumbai, 2017 Himalaya publishing House,
John D. Daniels, Lee H. Radebaugh, Daniel P. Sullivan *International Business Environments and Operations* Pearson Education

BOOKS FOR REFERENCE

Ghosh.P.K., and Kapoor, G.K., *Business Policy and Environment*, New Delhi, Sultan Chand & Sons, 2017
Mamoria and Mamoria, *Business Planning and Policy*, Mumbai, Himalaya Publishing House, 1999
Sankaran, S., *Business Environment*, Chennai, Margham Publications, 2017
Bhalla V.K S. Shiva Ramu *International Business Environments* Anmol Publications New Delhi

JOURNAL

International Journal of Business and Globalisation *Global Business* and Economics
Review International Journal of Business Environment

WEB RESOURCES

<https://enterslice.com/learning/international-business-environment-ibe/>
<https://www.civilserviceindia.com/subject/.../international-business-environment.html>
<https://study.com/academy/.../what-is-business-environment-definition-factors-quiz.ht..> www.economicsdiscussion.net/business-environment/business-environment.../10095

PATTERN OF ASSESSEMENT

Continuous Assessment Test:			Total Marks: 50	Duration: 90 minutes
Section	Knowledge Level	Marks	Pattern	
A	K1, K2	10	2 x 5 =10 (No choice) 300 words (one K1 question and one K2 question)	
B	K3, K4	20	2 x 10 = 20 (internal choice for one K3 question and one K4 question) 600 words	
C	K5, K6	20	2 x 10 = 20 (internal choice for one K5 question and one K6 question) 1200 words	
		50		

Other Components:

Quiz, MCQ, Seminar, Presentation

Total Marks: 50

End Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) 300 words (two K1 question and two K2 question)
B	K3, K4	40	4 x 10 = 40 (internal choice for two K3 questions and two K4 questions) 600 words
C	K5, K6	40	2 x 20 = 40 (internal choice for one K5 question and one K6 question) 1200 words
		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CM/PC/GB14												
	Course Title: GLOBAL BUSINESS ENVIRONMENT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	2	2	1	3	2	2	3
CO 2	3	2	3	2	2	2	3	2	2	3	2	2	3
CO 3	2	2	3	2	2	2	2	2	1	2	2	2	3
CO 4	2	3	2	2	2	2	2	2	2	3	3	3	3
CO 5	3	2	2	2	2	3	2	2	2	2	2	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023-2024)

MANAGERIAL ECONOMICS

CODE: 23CM/PC/ME14

CREDITS: 4

L T P : 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To familiarize students with the concepts and techniques in Managerial Economics
- To enable students to apply managerial concepts in determining demand and supply forces
- To expose students to the demand, supply and pricing strategies based on consumer behaviour
- To enable student to critically examine the market forces and its influence in business decisions
- To equip students with techniques to evaluate the managerial decisions for demand forecasting

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the fundamental concepts in managerial economics for decision making	K1, K2
CO2	relate the effect of government policies and its interventions in business decisions	K3
CO3	analyse the techniques for demand forecasting	K4
CO4	evaluate the market forces and macro-economic aspects influencing business	K5
CO5	formulate the optimal price and output for firms under different market structures	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Managerial Economics 1.1 Managerial Economics – Definition – Nature and Scope 1.2 Fundamental concepts in Managerial economics for decision making: Incremental Principle, Opportunity Cost, Discounting Principle, Time Concept, Equi- Marginal Principle – Illustrations, 1.3 Decision Making – Process and Conditions – Difference between Risk Uncertainty	K1 K1 K1-6	2 4 4	1-5 1-4 1-5
2	Demand Analysis and Forecasting 2.1 Meaning of Demand – Types of Demand – Law of Demand and its Exceptions, Elasticity of Demand – Price Elasticity, Income Elasticity, Cross Elasticity, Promotion Elasticity, Applications of the concepts of Elasticity 2.2 Demand Forecasting – Process – Statistical and Non-Statistical Techniques, 2.3 Utility Analysis and Consumer Behaviour – Equilibrium of the consumer using Cardinal and Ordinal Utility (Indifference Curve) Theories.	K1-3 K1-4 K1-4	5 5 5	1-2 1-3 1-3
3	Supply and Production Theory 3.1 Meaning of Production Function, Production Function with one Variable input – Law of Variable Proportions – Returns to Scale, Production Function with two Variable Inputs – Iso-quants – Producers' Equilibrium 3.2 Economies of Scale – Types – Economies of Scope 3.3 Theory of Costs – Classification of Costs - Short Run and Long Run Cost Curves, Revenue Curves	K1- 3 K1-4 K1 -4	4 2 4	1 -2 1-3 1-3
4	Market Structure 4.1 Meaning and Elements, Classification of Markets – Markets based on Competition, Theory of Firm – Profit Maximization Rules, 4.2 Price and Output Determination under Perfect Competition 4.3 Price and Output Determination under Monopoly – Monopoly Price Discrimination 4.4 Price and Output Determination under Monopolistic Competition 4.5 Price and Output Determination under Oligopoly – Game Theory, Kinky Demand Curve Model	K1 - 2 K1-5 K1-6 K1-6 K1-6	3 3 3 3 3	1 1-4 1-5 1-5 1-5

UNIT	CONTENT	CL	HRS	CO
5	Macro Aspects of Economics			
	5.1 Macro Economic Concepts National Income Concepts – Measurement of National Income, Economic Indicators	K1-5	3	1-4
	5.2 Business cycles: Phases and Management	K1 -6	3	1-5
	5.3 An overview of Financial System in India, An overview of Fiscal and Monetary Policies in India	K1 -2	4	1
	5.4 Need for Government Intervention – Role and Reforms that impact Business, Public-Private Participation (PPP) , Viability Gap Funding	K1-5	5	1-4

BOOKS FOR STUDY

Mehta PL – *Managerial Economics* – Sultan Chand and Sons, 2016
K.K. Dewett, *Modern Economic Theory: Micro and Macro Analysis* – Orient Book Distributors, New Delhi
Gaurav Dutt and Aswani Mahajan, Dutt and Sundaram - *Indian Economy* – Sultan Chand and Sons - 2016
Varshney and Maheshwari – *Managerial Economics*, Sultan Chand and Sons, New Delhi, 2014

BOOKS FOR REFERENCE

Adhikary, M., '*Business Economics*'. Excel Books, New Delhi, 2000.
Baumol, W.J. *Economic Theory and Operations Analysis*, 3rd Ed., Prentice Hall Inc., New Delhi, 2000
Chopra, O.P '*Managerial Economics*', Prentice Hall Inc., New Delhi, 2001
Dwivedi D.N, *Managerial Economics*, Vikas Publications, 8 edition.
V.L. Mote, *Managerial Economics* – Tata McGraw Hill, New Delhi , 2017

PATTERN OF ASSESSEMENT

Continuous Assessment Test:

Total Marks: 50

Duration: 90 minutes

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Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) 300 words (two K1 question and two K2 question)
B	K3, K4	40	4 x 10 = 40 (internal choice for two K3 questions and two K4 questions) 600 words
C	K5, K6	40	2 x 20 = 40 (internal choice for one K5 question and one K6 question) 1200 words
		100	

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23CM/PC/ME14												
	Course Title: Managerial Economics												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	3	3	2	2	3	2	3	2
CO 2	2	1	2	1	2	2	3	2	3	2	3	3	2
CO 3	3	3	3	2	2	3	3	2	2	2	3	3	2
CO 4	3	2	3	2	2	2	3	2	1	2	2	3	3
CO 5	3	2	3	2	1	2	3	2	2	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023-2024)

ORGANISATIONAL THEORY AND BEHAVIOUR

CODE: 23CM/PC/OB14

CREDITS: 4

L T P : 4 1 0

TOTAL TEACHING HOURS :65

OBJECTIVES OF THE COURSE

- To enable students to understand the human interactions and behaviour in an organisation
- To acquaint students with the mechanisms governing employees' interaction
- To develop an understanding of team dynamics
- To expose students to the significance of organisational culture
- To sensitise students to the need for a work-life balance

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	define the factors influencing individual behaviour	K1
CO2	explain the relevance of group behaviour	K2
CO3	relate theories and concepts around work-life balance to workplace stress management	K3
CO4	examine relevant theories to solve problems of change and conflict within an organisation	K4
CO5	develop programmes to reduce conflicts and stress of employees in an organisation	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Meaning, Definition, Determinants, Nature and Concepts 1.2 Organisational Theories- Classical, Neo-Classical and Contemporary 1.3 Models of Organisational Behaviour 1.4 Challenges and Opportunities for Organizational Behaviour 1.5 International Dimensions of Organisational Behaviour	K1-K2 K2 K3-K4 K5-K6 K4	2 2 2 2 2	1- 2 2 3-4 5 4
2	Individual Behavior and Personality 2.1 Factors Influencing Individual Behaviour - Environmental, Personal and Other Factors 2.2 Personality – Determinants, Personality Traits, The Big Five Personality Traits 2.3 Theories of Personality-Types, Major Personality Attributes Influencing Organisational Behaviour 2.4 Attitudes-Formation of Attitude, Key Work related Attitude 2.5 Perception- Factors influencing Perception	K3-K4 K5-K6 K3-K4 K3-K4 K2-K3	3 3 3 3 3	3-4 5 3-4 3-4 2-3
3	Individual Dynamics 3.1 Perception – Meaning and Definition, Factors influencing Perception, Perceptual Process 3.2 Perceptual Biases/Errors – Honing Perceptual Skills 3.3 Learning – Theories of Learning, Principles of Learning 3.4 Motivation – Theories of Motivation – Maslow’s, Herzberg’s, Alderfer’s and McClelland’s Theory, Motivation and Organisational Effectiveness 3.5 Case Studies on Individual Dynamics	K1 - 4 K2-K3 K2-K3 K2-K3 K5-K6	3 3 3 3 3	1- 4 2- 3 2-3 2-3 5
4	Group Dynamics 4.1 Group Dynamics – Meaning and Types, Stages of Group Development and Group Effectiveness 4.2 Team Building –Ingredients of Effective Team, Process and Skills in Team Building 4.3 Stress – Nature of Stress, Causes of Stress, Consequences of Stress, Managing Stress in the Work Place, Work Life Balance	K1-K4 K3-K4 K3- 6	3 5 7	1- 4 3-4 3-5

UNIT	CONTENT	CL	HRS	CO
5	Organisational Culture, Change and Development			
	5.1 Concept and Determinants of Organizational Culture	K1-K3	2	1- 3
	5.2 Creating, Sustaining and Impact of Culture on Organizational Effectiveness	K5-K6	2	5
	5.3 Conflict in Organisation- Nature of Conflict, Functional and Dysfunctional Conflict, the Process of Conflict and Managing Conflict	K1 - 4	2	1-4
	5.4 Organisational Change – Significance and Types	K3,K4	2	3-4
	5.5 Organisational Development – Concept, Process, Values and Intervention Techniques	K3 -6	2	3-5

BOOKS FOR STUDY

Robbins, P. Stephen. *Organisational Behaviour – Concepts, Controversies and Applications*, New Delhi: Prentice Hall, 2005.

Aswathappa, K. *Organizational Behaviour*. New Delhi: Himalaya, 2007.

BOOKS FOR REFERENCE

Davis, Keith and Weratom, John W. *Human behaviour at Work, Organisation behavior*. Madras: Mc Graw Hill,

Luthans, Fred. *Organizational Behaviour*. Singapore: McGraw Hill International ed, 2010.

Mishra, M. N. *Organizational Behaviour*. New Delhi: Vikas, 2010.

Prasad, L.M. *Organisational Behaviour*. New Delhi: Sultan Chand, 2007.

Sekaran Uma, *Organizational Behaviour – Text and Cases*. New Delhi: Tata Mc Graw Hill, 2006.

PATTERN OF ASSESSEMENT

Continuous Assessment Test:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 =10 (No choice) 300 words (one K1 question and one K2 question)
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C	K5, K6	20	2 x 10 = 20 (internal choice for one K5 question and one K6 question) 1200 words
		50	

Other Components:

Quiz, MCQ, Seminar, Presentation

Total Marks: 50**End Semester Examination:****Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) 300 words (two K1 question and two K2 question)
B	K3, K4	40	4 x 10 = 40 (internal choice for two K3 questions and two K4 questions) 600 words
C	K5, K6	40	2 x 20 = 40 (internal choice for one K5 question and one K6 question) 1200 words
		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code:23CM/PC/OB14												
I	Course Title: Organisational Theory and Behaviour												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	3	3	2	3	2	3	3	3	3
CO 2	3	2	3	2	3	3	3	3	2	3	3	3	3
CO 3	3	2	3	2	3	3	3	3	3	3	3	3	2
CO 4	3	2	2	3	3	3	2	3	2	3	2	2	3
CO 5	3	2	2	1	2	3	2	3	2	3	2	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE(AUTONOMOUS), CHENNAI -600086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023 – 2024)

REGULATORY ASPECTS OF BUSINESS

CODE: 23CM/PC/RB24

CREDITS: 5

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To acquaint the students with the concepts, terms & provisions which govern and regulate business Entities
- To expose the students to the legal perspective and its practices.
- To provide conceptual knowledge about the framework of Laws relating to Business in India
- To educate the need for awareness of and sensitivity to business in the business environment.
- To develop the application skill to relate the provisions and practice

COURSE LEARNING OUTCOMES

On successful completion of the course. the students will be able to

COs	DESCRIPTION	CL
CO1	exhibit a strong conceptual knowledge about the legal provisions relating to business operations	K1
CO2	comprehend the features and importance of laws relating to Business	K2
CO3	apply the legal provisions relating to Business laws	K3
CO4	analyze the consequences, relevance and applicability of laws on various business situations	K4
CO5	develop critical thinking through the use of case laws	K5
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1.	Introduction 1.1 Introduction to Legal Systems in India and its Administration 1.2 Law relating to Money Laundering 1.2.1 Important Definition and Objectives 1.2.2 Offences and Punishment for Money Laundering 1.2.3 Attachment, Adjudication and Confiscation 1.2.4 Obligation of Banking and Non-Banking Institutions	K1-K5	10	1-5
2.	The Limited Liability Partnership Act 2008 (LLP) 2.1 Salient Features of LLP 2.2 LLP Agreement - Nature of LLP- Partners and Designated Partners; 2.3 Incorporation by Registration 2.4 Extent and Limitation of Liability of LLP and Partners 2.5 Financial Disclosures, Annual Return, Taxation of LLP 2.6 Conversion to LLP - Winding up and Dissolution	K1-K5	15	1-5
3.	Depositories Act 1996 3.1 Rights and Obligations of Depositories and Beneficial Owners 3.2 Enquiry and Inspection 3.3 Penalty	K1-K5	15	1-5
4.	Law Relating to Information Act 2005 4.1 Right to Information, Obligations of Public Authorities, Request for obtaining information and disposal of request 4.2 Exemption from disclosure of information, grounds for rejection to access 4.3 Central information commission-Powers and Functions.	K1-K5	12	1-5

UNIT	CONTENT	CL	HRS	CO
5.	Other Related Laws 5.1 Law relating to Transfer of Property 5.1.1 Types of properties- movable and immovable property 5.1.2 Properties which cannot be transferred 5.1.3 Provisions relating to sale, mortgage, charge, lease, gift and actionable claim 5.2 Information Technology Act 2000 Provisions relating to E-contract, E-form, Electronic record, Digital signature and Data security 5.3 Credit Information of Companies (Regulation) Act 2005 5.3.1 Objectives – Types of transactions 5.3.2 Registration of Credit Information Companies 5.3.3 Functions of Credit Information Companies 5.3.4 Offences and Penalties	K1-K5	13	1-5

BOOKS FOR STUDY

Pillai, R.S.N Bagavathi. *Legal aspects of Business*, S.Chand company, New Delhi
R.K. Sinha, *The Transfer of Property Act*, Central Law Agency, 2018

BOOKS FOR REFERENCE

Bhandari, Munish Professional. *Approach to Corporate Laws and Practice*, New Delhi: Bharat Law House,
Sharma, J. P. and Sunaina Kanojia . *Business Laws*, New Delhi: Ane Books Pvt. Ltd,
Singh, Avtar. (2011) *The Principles of Mercantile Law*, Lucknow: Eastern Book.Co
Wadehra, B. L. (2000) *Law Relating to Patents, Trade Marks, Copyright, Designs & Geographical Indications*, India: Universal law

JOURNALS

Journal of Intellectual Property Rights 2007 and 2009
Indian journal of law and technology
Symbiosis contemporary law journal

WEB RESOURCES

www.unesco.org/new/en/unesco/
www.lawctopus.com/
www.indialawworld.Co

PATTERN OF ASSESSEMENT

Continuous Assessment Test:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 = 10 (No choice) (one K1 question and one K2 question 300 words)
B	K3, K4	20	2 x 10 = 20 (internal choice for K3 question and K4 question 600 words)
C	K5	20	1 x 20 = 20 (internal choice 1200 words)
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) (K1 question and K2 question 300 words)
B	K3, K4	40	4 x 10 = 40 (internal choice for K3 questions and K4 questions 600 words)
C	K5	40	2 x 20 = 40 (From a choice of 3 questions 1200 words)
		100	

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23CM/PC/RB24												
	Course Title: Regulatory Aspects of Business												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	1	3	2	1	3	2	3	2
CO 2	3	2	3	1	2	3	3	2	3	1	1	3	2
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CO 4	2	2	3	3	3	2	1	3	3	3	3	3	3
CO 5	3	3	3	1	2	1	1	1	3	3	1	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE(AUTONOMOUS), CHENNAI -600086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023–2024)

MARKETING MANAGEMENT

CODE:23CM/PC/MM24

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To impart knowledge on the theoretical and practical concepts of marketing.
- To understand the behavioral pattern of consumers.
- To identify marketing problems in the complex and fast changing business environment.
- To familiarize students with the process of building loyal consumer relationships.
- To know the recent developments in the field of marketing management.

COURSE LEARNING OUTCOMES

On successful completion of the course. the students will be able to

COs	DESCRIPTION	CL
CO1	recognize the functions and process of marketing.	K1
CO2	describe the opportunities and strategies in market research.	K2
CO3	prepare strategies for designing products, goods and services for evolving market needs.	K3
CO4	evaluate the marketing functions, pricing and distribution strategies.	K4
CO5	assess the recent developments in marketing.	K5
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	Understanding Marketing Management 1.1 Marketing in the 21 st century- Core Concepts 1.2 Marketing Management Process-A Strategic Perspective 1.3 Customer Quality, Value and Satisfaction, Planning and Control	K1-K5	10	1-5
2	Opportunities in the Marketplace 2.1 Scanning the Marketing Environment 2.2 Market Information System to measure demand 2.3 Market Research	K1-K5	15	1-5
3	Market Oriented Strategies 3.1 Product Concept- Customer Driven Market Strategy 3.2 PLC- Marketing Strategy 3.3 New Product Development Decision Process 3.4 Promotional Mix- Elements of Promotional Mix and Benefits	K1-K5	15	1-5
4	Pricing and Channel Strategy 4.1 Pricing- Factors Affecting Price Determination, Pricing Policies and Strategies, Discounts and Rebates. 4.2 Distribution Channels- Functions and Types of Distribution Channels, Intermediaries, Channel Management Decision, Wholesaler and Retailer	K1-K5	12	1-5
5	Marketing and Artificial Intelligence 5.1 Meaning and Importance of AI in marketing. 5.2 AI technologies used in marketing 5.3 Benefits and challenges of using AI in marketing 5.4 Future of AI in marketing	K1-K5	13	1-5

BOOKS FOR STUDY

Kotler Philip, *Marketing Management*, New Delhi, Prentice Hall of India, 2017

BOOKS FOR REFERENCE

John, Wilmhurst, *Fundamentals and Practice of Marketing*, New Delhi, Viva Books, 2011

Johansson J.K, *Global Marketing*, New Delhi, Tata McGraw Hill, 2010

Keegan W.J. *Global Marketing Management*. New Delhi, Prentice Hall of India, 2013

JOURNALS

International Journal of Research in Marketing

Indian Journal of Marketing

Journal of Marketing Education

WEB RESOURCES

www.managementstudiesguide.com/marketing

<http://productlifecyclestages.com>

www.marketing-schools.org

www.innovationcoach.com

PATTERN OF ASSESSEMENT

Continuous Assessment Test:

Total Marks: 50

Duration: 90 minutes

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Duration: 3 hours

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		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CM/PC/MM 24												
II	Course Title: Marketing Management												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	3	2	2	2	3	1	2	2
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CO 3	3	3	3	3	2	2	1	2	3	3	2	2	3
CO 4	3	3	2	1	2	1	2	2	2	3	3	3	2
CO 5	3	2	3	2	2	3	2	2	2	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023-2024)

CORPORATE TAXATION

CODE: 23CM/PC/CT24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To equip the students with the provisions for computation of business income.
- To provide a broad conceptual framework for determining the tax liability for a corporate assesses.
- To expose the students with the constitutional provisions relating to corporate taxation.
- To familiarize the students with comprehensive knowledge required for GST computation.
- To develop skills required to assess and file GST returns.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	comprehend the basic principles underlying the levy of corporate tax.	K1
CO2	explain the concepts in computation of business income.	K2
CO3	apply the taxation provisions for computation of tax liability.	K3
CO4	analyse the GST provisions.	K4
CO5	evaluate the tax implications on GST.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Constitutional Background of Corporate Taxation 1.2 Overview of basic concepts and provisions relating to companies under the Income-tax Act, 1961 1.3 Submission of Returns and Procedure of Assessment - Tax Payments - E – TDS, TCS, Advance Payment of Tax 1.4 Residential Status of a Company and Incidence of Tax. 1.5 Determining tax base of corporate income- Taxable Income- Revenue Receipts and Capital Receipts- 1.6 Receipt of Compensation towards damages, - cancellation of indebtedness- Undisclosed incomes- Unexplained incomes	K1-K5	10	1-5
2	Computation of Business Income 2.1 Losses and Expenditure - Revenue and Capital 2.2 Allowed and Disallowed Expenses. 2.3 Depreciation. 2.4 Set off and Carry Forward of Losses. 2.5 Computation of Business Income. 2.6 Deductions - 80 G, 80GA, 80GGB, 80IA,80IB, 80ID,80IE, 80JJA, 80JJAA, 80LA 2.7 Tax Liability – Minimum Alternate Tax	K1-K5	15	1-5
3	Goods and Services Tax 3.1 Goods and Service Tax –Evolution of GST and Basic Concepts in GST 3.2 Classification of Goods and Services- Composite and Mixed Supplies, IGST, & SGST/UGST 3.3 Registration procedures - Cancellation and Revocation, E-Way Bills 3.4 Determination of Taxable Value of Goods	K1-K5	15	1-5
4	Levy and Collection of GST 4.1 Taxable Event- ‘Supply’ of Goods and Services, Place of Supply, Within State, Interstate, Import and Export, Time of Supply 4.2 Input Tax Credit- Computation, Distribution and Claim 4.3 Tax Invoice, Credit and Debit notes and other Document 4.4 GSTN - Technology Framework enabling GST	K1-K5	15	1-5
5	Customs Duty 5.1 Definition and Basic Concepts in Customs Duty 5.2 Levy, Collection and Exemptions of Customs Duty 5.3 Demand of Duties and Refund, Duty Drawback	K1-K3	10	1-5

BOOKS FOR STUDY

Gaur, V.P. and Narang D.B., Income Tax Law and Practice, New Delhi: Kalyani Publishers,
Vinod K., Singhania, Taxman's Students Guide to Income Tax, New Delhi: Taxman's
Publications Pvt. Ltd.,.

BOOKS FOR REFERENCE

Girish Ahuja, Simplified approach to Corporate tax planning and management, Bharat
house private ltd,

Kushal Kumar Agarwal, Corporate tax planning, Atlantic Publishers,
Mehrothra, H.C, Sahithya Bhavan Publications, 2014.

Sulphey & Basheer, Laws for Business, 4th ed. Delhi, PHI Learning Private Ltd

SULPHEY & BASHEER

NOTE: Latest edition of the readings may be used

JOURNALS

Journal of Taxation Management

National Tax Journal

Journal of Taxation Investment

WEB RESOURCES

www.taxmanagementindia.com

www.taxinstitute.com

www.incometaxmanagement.com

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 =10 (No choice) (One K1 question and one K2 question) only Theory
B	K3, K4	20	2 x 10 = 20 (Internal choice for one K3 question and one K4 question) one Theory and one problem
C	K5	20	1 x 20 = 20 (Internal choice) Problem
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) (Two K1 question and two K2 question) only Theory
B	K3, K4	40	4 x 10 = 40 (Internal choice for two K3 questions and two K4 questions) 2 Theory and 2 Problem
C	K5	40	2 x 20 = 40 (From a choice of 3 questions) 1 Theory and 2 Problem
		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CM/PC/CT24												
	Course Title: Corporate Taxation												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	2	2	2	2	2	2	3	3
CO 2	3	2	3	2	2	2	2	2	2	3	2	3	3
CO 3	3	2	3	3	3	2	2	2	2	2	3	3	3
CO 4	3	2	3	3	2	2	2	3	3	2	3	3	3
CO 5	3	2	3	2	2	2	2	2	3	2	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE(AUTONOMOUS), CHENNAI –600086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023 – 2024)

FINANCIAL MARKETS

CODE: 23CM/PC/FM24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To provide an understanding of the Indian financial system.
- To give an overview on the functioning and importance of financial markets.
- To enhance students with the knowledge of financial instruments
- To provide an adequate insight on the various aspects of the regulatory and promotional institutions.
- To enlighten on the significance of derivative markets in India.

COURSE LEARNING OUTCOMES

On successful completion of the course. the students will be able to

COs	DESCRIPTION	CL
CO1	comprehend the importance of the concepts of Indian financial system.	K1
CO2	gain an understanding on the various aspects of financial market	K2
CO3	apply the relevant concepts in the secondary market transactions	K3
CO4	analyze the scope and operations of the various financial instruments.	K4
CO5	evaluate the functioning of the Indian derivatives market.	K5
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1.	Introduction 1.1 Indian Financial System - Meaning Characteristics and Significance 1.2 Components - An overview of financial services, financial institutions and financial instruments 1.3 Challenges and Growth. 1.4 Financial Markets – Importance and Classification. 1.5 Role of Financial system in the Economic Development.	K1-K5	10	1-5
2.	Money Market 2.1 Money Market – Significance, Functions, Types, and Characteristics 2.2 Money Market Instruments 2.2.1 Call/Notice Money Market 2.2.2 Commercial Bills Market 2.2.3 Treasury Bills Market 2.2.4 Certificates of Deposit 2.2.5 Gilt Edged Securities, 2.2.6 REPO and Reverse Repo (An Overview). 2.3 Money market in India -Reforms 2.4 RBI regulation on money market	K1- K5	15	1-5
3.	Capital Market: 3.1 Capital Market - meaning, importance and characteristics 3.2 Capital market Instruments 3.2.1 Shares - Equity, Preference and Hybrid 3.2.2 Debentures and Bonds - Features and Types 3.2. 3. Exchange Traded Fund 3.3 DFIs in India: IFCI, SFCs, IDFC, ICICI, SIDBI and NBFCs	K1-K5	15	1-5

UNIT	CONTENT	CL	HRS	CO
4.	Securities markets 4.1 -Primary Market - Concept, Features, Functions, Instruments, 4.1.1 Organization and Mechanism. 4.1.2 Initial Public Offer - Rights Issue, Private Placement, Preferential Issues, Bonus Issues, Book- Building, 4.1.3 Global Depository Receipt (GDR) 4.1.4 Role and Importance of Primary Market in Economic Development. 4.2 Secondary Market – Functions, Methods of Issue Players, Management and Listing of Securities. 4.2.1 National Securities Depository Limited (NSDL), Central Depository Services Limited (CDSL), The Stock Holding Corporation of India Limited (SHCIL) 4.2.2 SEBI- Role and Functions	K1-K5	15	1-5
5.	Derivative Market: 5.1 Derivative Market: Financial derivatives: meaning and functions 5.2 Classification of derivative instruments – Forwards and Futures, Options and swaps 5.3 Derivative markets in India	K1-K5	10	1-5

BOOKS FOR STUDY

M Y Khan, *Indian Financial System*, Tata McGraw Hill Education, 2017

Jeff Madhura, *Financial Institutions and Markets*, Cengage Learning India Private Limited, New Delhi, 2016

BOOKS FOR REFERENCE

Jayadeb Sarkhel, Seikh Salim, *Indian Financial System*, Tata McGraw Hill Education, 2018

Sujatra Bhattacharyya, *Indian Financial System*, Oxford University Press, 2017

Machiraju, *Indian Financial System*, Vikas Publishing House, 2nd Edition, 2010.

Srivastava R M and Divya Nigam, *Dynamics of Financial Markets and Institutions in India*, Excel Books, New Delhi, 2010

Bharati V.Pathak, *Indian Financial System*, Pearson Education, 2018.

JOURNALS

International Journal of Banking and Finance Research

IOSR Journals

WEB RESOURCES

www.sebi.gov.in

www.nism.ac.in

www.rbi.org.in

PATTERN OF ASSESSEMENT

Continuous Assessment Test: Total Marks: 50 Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 = 10 (No choice) (one K1 question and one K2 question 300 words)
B	K3, K4	20	2 x 10 = 20 (internal choice for K3 question and K4 question 600 words)
C	K5	20	1 x 20 = 20 (internal choice 1200 words)
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) (K1 question and K2 question 300 words)
B	K3, K4	40	4 x 10 = 40 (internal choice for K3 questions and K4 questions 600 words)
C	K5	40	2 x 20 = 40 (From a choice of 3 questions 1200 words)
		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CM/PC/FM24												
	Course Title: FINANCIAL MARKETS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	1	2	2	3	3	3	3	3	3
CO 2	3	2	2	2	1	2	2	3	3	3	3	3	3
CO 3	3	2	2	2	2	3	2	2	3	3	3	3	3
CO 4	3	2	2	2	2	3	2	2	3	3	3	3	3
CO 5	3	2	2	2	2	2	2	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Com. DEGREE:

SYLLABUS

(Effective from the academic year 2023 -2024)

SOFT SKILLS

CODE: 23CM/PK/SS22

CREDITS: 2

L T P: 2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- To empower students and create opportunities for self-development
- To instill confidence in students to face challenges
- To manage emotions and resolve conflicts
- To organize activities and manage time
- To set goals and plan ahead

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- Communicate with confidence and poise
- Accept themselves and improve on their weaknesses
- Strengthen their relationships through confronting and solving problems
- Work more effectively and complete activities on time
- Plan their future with clarity and focus

Unit 1

Behavioural Traits

(6 Hours)

- 1.1 Self- Awareness
- 1.2 Communication Skills –Verbal and Non-Verbal
- 1.3 Leadership Qualities
- 1.4 Etiquette and Good Manners
- 1.5 Experiential Learning –based on activities

Unit 2

Team Work

(5 Hours)

- 2.1. Interpersonal Skills
- 2.2. People Management
- 2.3. Creative Thinking
- 2.4. Critical Thinking
- 2.5. Experiential Learning – based on activities

Unit 3

Time Management

(5 Hours)

- 3.1. Importance of time management
- 3.2. Planning and Prioritizing
- 3.3. Organizing skills
- 3.4. Action Plan
- 3.5. Experiential Learning – based on activities

Unit 4**Conflict Resolution****(5 Hours)**

- 4.1. Reasons for conflict
- 4.2. Consequences of conflict
- 4.3. Managing emotions
- 4.4. Methods of resolving conflicts
- 4.5. Experiential Learning – based on activities

Unit 5**Career Mapping****(5 Hours)**

- 5.1. Goal-setting and Decision-making
- 5.2. Career Planning
- 5.3. Resume Writing
- 5.4. Handling Interviews
- 5.5. Experiential Learning – based on activities

BOOKS FOR REFERENCE

Khera, Shiv. *You Can Win*. Macmillan India, 2002.

Mishra, Rajiv. K. *Personality Development: Transform Yourself*. Rupa, 2004.

Newstorm, John. W. and Scannell, Edward. E. *Games Trainers Play: Experiential Learning*. Tata McGraw Hill, 1980.

PATTERN OF EVALUATION**Internal Assessment:****Total Marks: 50**

Quiz / Group Presentation /Assignment

No End Semester Examination.

STELLA MARIS COLLEGE(AUTONOMOUS), CHENNAI -600086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023-2024)

PROJECT MANAGEMENT

CODE: 23CM/PC/PM34

CREDITS:4

LTP:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To understand the concept and meaning of project.
- To provide an overview of the different projects.
- To assess and understand project selection process.
- To familiarize student's in project planning and scheduling
- To develop practical knowledge for starting a business.

COURSE LEARNING OUTCOMES

On successful completion of the course. the students will be able to

COs	DESCRIPTION	CL
CO1	identify the importance of entrepreneurship in new business ventures.	K1, K2
CO2	explain key strategies for project development in business.	K3
CO3	analyze the business environment in order to identify business opportunities.	K4
CO4	generate and evaluate ideas for new business ventures.	K5
CO5	explore the possibility of setting up a business.	K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Concepts of Project Management 1.1 Project-Meaning, Need, Nature and Types. 1.2 Project Lifecycle-Phases. 1.3 Project Management - Processes and Principles 1.4 Internal and External constraints of a Project	K1-K4	15	1-3
2	Project Identification and Selection 2.1 Project Environment-Identification of Investment Opportunities. 2.2 Idea Generation– Sources, SWOT Analysis 2.3 Project Screening-Pre-Feasibility and Feasibility Study 2.4 Stages in Project Formulation, Project Report Preparation 2.5 Planning Commission’s Guidelines for Project Formulation	K1-K6	15	1-5
3	Project Appraisal 3.1 Objectives, Essentials of Project Methodology. 3.2 Market, Technical, Financial, Commercial and Managerial Appraisal. 3.3 Social Cost Benefit Analysis –L and M approach and UNIDO approach-SCBA in India. 3.4 Project Appraisal Techniques-NPV, IRR, ARR, BCC, Payback Period.	K1-K6	10	1-5
4	Project Planning and Scheduling 4.1 Project planning-objectives, process and components. 4.2 Project designing and project scheduling. 4.3 Estimation of cost of project and means of financing. 4.4 Tools for planning and scheduling– PERT, CPM, Decision Tree Analysis.	K1-K6	15	1-5
5	Project Execution and Administration 5.1 Project contracting. 5.2 Project direction, communication and co-ordination. 5.3 Project monitoring and control techniques –PERT, CPM. 5.4 Project review and audit.	K1– K6	10	1-5

BOOKS FOR STUDY

Prasana Chandra – *Project Preparation, Appraisal and Implementaion* ,Tata Mcgraw Hill,New Delhi
Chaudhary.S – *Project Management*, Tata Mcgraw Hill, New Delhi

BOOKS FOR REFERENCE

Meredith.J.R and Mantel.S.J – *Project Management- A Managerial Approach*,John Wiley,New Delhi,2010
Grey.C.F and Larson E.W and Desai.G.V –*Project Management-the Managerial Process*, Tata Mcgraw Hill,New Delhi,2014
N.P.Agarwal, P.K.Mishra – *Project Management*, Ramesh Book Depo, Jaipur,2006

JOURNALS

International Journal of Managing Projects in Business
International Journal of Project Management
International Journal of Information Technology Project Management

WEB RESOURCES

www.projectmanager.com
www.gantt.com
www.smartsheet.com

PATTERN OF ASSESSEMENT

Continuous Assessment Test:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 =10 (No choice) 300 words (One K1 question and one K2 question)
B	K3, K4	20	2 x 10 = 20 (Internal choice for one K3 question and one K4 question) 600 words
C	K5, K6	20	2 x 10 = 20 (Internal choice for two K5 question and two K6 question) 1200 words
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) 300 words (Two K1 question and two K2 question)
B	K3, K4	40	4 x 10 = 40 (Internal choice for two K3 questions and two K4 questions) 600 words
C	K5, K6	40	2 x 20 = 40 (Internal choice for two K5 question and two K6 question) 1200 words
		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CM/PC/PM34												
	Course Title: Project Management												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	3	2	2	2	2	3	2	3	3
CO 2	3	3	2	3	3	3	1	1	3	2	1	3	3
CO 3	3	3	3	3	3	3	1	1	2	2	2	2	2
CO 4	3	3	3	3	3	2	1	1	2	2	1	3	3
CO 5	3	3	2	2	3	3	1	1	2	2	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023–2024)

ADVANCED CORPORATE ACCCOUNTING

CODE: 23CM/PC/AC34

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To expose students to the accounting practices in specific industries
- To provide comprehensive knowledge about corporate accounting concepts
- To acquaint students with the accounting procedures for mergers and acquisitions
- To equip in preparation of consolidated financial statements.
- To provide an understanding of the provisions relating to liquidation of a company

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	comprehend the accounting procedures for mergers and acquisition	K1
CO2	prepare the consolidated financial statements of holding companies	K2
CO3	solve problems relating to the final accounts of banking companies	K3
CO4	categorize and prepare final statements of and insurance companies.	K4
CO5	summarize accounts pertaining to liquidation of companies	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Mergers and Acquisitions 1.1 Legal provisions relating to mergers and acquisitions 1.2 Calculation of purchase consideration 1.3 Accounting treatment in the books of the purchasing company and vendor company for merger and purchase excluding inter- company holdings	K1-K5	14	1-5
2	Holding Company Accounts 2.1 Preparation of Consolidated Balance Sheet – Calculation of Minority Interest, Capital Profit and Goodwill or Cost of Control 2.2 Intercompany Owings with One Subsidiary Company 2.3 Dividend Received and Bonus Shares	K1 – K5	15	1-5
3	Insurance Company Accounts 3.1 Accounts of General Insurance 3.2 Accounts of Life Insurance Companies 3.3 Accounting Entries and Preparation of Balance Sheet	K1-K5	13	1-5
4	Bank Accounts 4.1 Treatment of Rebate on bills discounted. 4.2 Computation of provision to be made for advances 4.3 Preparation of Profit and Loss account with schedules 4.4 Preparation of Balance Sheet with schedules	K1-K5	13	1-5
5	Liquidation 5.1 Legal Provisions of Companies Act and Insolvency and Bankruptcy Code 5.2 Statements relating to winding up 5.3 Statements relating to IBC	K1-K5	10	1-5

BOOKS FOR STUDY

Reddy, T.S. Murthy, A., *Corporate Accounting Vol II Revised*, Chennai: Margham Publications, 2023
 Maheshwari, S.N., Maheshwari, Suneel K., and Maheshwari, Sharad K., *Corporate Accounting*, Vikas Publishing House, 2018

BOOKS FOR REFERENCE

Goyal , V.K. and Goyal, Ruchi, *Corporate Accounting*, Prentice Hall Learning, 2012 Shukla, S.M. and Gupta, K.L., *Corporate Accounting*, Sahitya Bhawan Publications, 2018 Gupta, R.L. and Radhaswamy, M., *Corporate Accounting Vol. I and II*, Sultan Chand & Sons, 2013
 Jain, S.P. Narang, K.L, *Advanced Accountancy Corporate Accounting Vol. II*, Kalyani Publishers, 2014
 Hanif, M. and Mukherjee, A., *Corporate Accounting*, McGraw-Hill Education, 2017

JOURNALS

Advances in Accounting Journal of Finance
Indian Journal of Commerce
Journal of Corporate Accounting and Finance

WEB RESOURCES

www.icaai.org
www.emeraldgrouppublishing.com
www.journals.elsevier.com

PATTERN OF ASSESSMENT

Continuous Assessment: **Total Marks: 50** **Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1 &K2	10	5 x 2 = 10 No choice (2 Theory)
B	K3 &K4	20	2 x 10 = 10 (out of 3 problems)
C	K5	20	1x20=20 (out of 2 problems)
		50	

Other Components: **Total Marks: 50**

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: **Total Marks: 100** **Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1&K2	10	5 x 4= 10 (No choice theory only)
B	K3 &K4	20	4 x 10 = 40 ((internal choice between two K3 problems and two K4 problems)
C	K5	40	2 x 20 = 40 (internal choice)
		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CM/PC/AC34												
	Course Title: Advanced Corporate Accounting												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	3	1	3	3	1	1	3	3	3	1	1
CO 2	3	1	1	1	3	1	1	1	2	2	3	1	1
CO 3	3	2	3	1	3	1	1	1	3	2	3	1	1
CO 4	3	2	3	1	3	1	1	1	3	2	3	1	1
CO 5	3	3	3	1	3	1	1	1	3	2	3	1	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023-24)

DATA ANALYSIS FOR RESEARCH

CODE: 23CM/PC/DR34

CREDITS: 4

L T P: 1 0 4

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- Comprehend on the basic concepts and the need to develop a research.
- It enables students to learn on usage of excel spreadsheet for measuring descriptive statistics.
- To compute inferential statistics using excel and SPSS.
- Familiarize on the usage of SPSS environment for data extraction and defining variables.
- To familiarize students, the application of SPSS to test hypothesis for both Parametric and Non-Parametric statistics.

COURSE LEARNING OUTCOMES

On successful completion of the course. the students will be able to

COs	DESCRIPTION	CL
CO1	overview about the importance of taking up a research	K1
CO2	acquire knowledge about data analysis using excel and spss for basic statistical measures.	K2
CO3	develop computing skill about inferential statistics using excel spreadsheet	K3
CO4	assess knowledge on the usage of spss for analyzing data	K4
CO5	construct a research reports using statistical tools to arrive at statistical decisions using parametric and non-parametric test.	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Research Methodology 1.1 Types of Research and Research Design 1.2 Review of Literature 1.3 Defining Research problem and formulation of hypothesis 1.4 Steps and types in sampling design 1.5 Scaling techniques and measurement of scale 1.6 Data collection	K1 – K5	10	1- 5
2	Introduction to Excel 2.1 Processing questionnaire and understanding the Data 2.2 Construction of data frequency table 2.3 Descriptive statistical analysis using spreadsheet 2.4 Presenting data using charts	K1 – K6	10	1- 5
3	Statistical Data Analysis using Excel 3.1 Moving Average 3.2 Correlation and Regression Analysis 3.3 ANOVA – Single factor and two factor 3.4 t-test and z-test	K1 – K6	15	1- 5
4	Introduction to SPSS (Statistical Package for Social Sciences) 4.1 Importing Data and Defining Variables 4.2 Descriptive Statistics Analysis and Inference 4.3 Correlate and regression Analysis 4.4 Data Classification	K1 – K5	15	1- 5
5	Parametric and Non- Parametric test 5.1 Parametric Test - t test and ANOVA 5.2 Non-Parametric Test - Chi-square test, Binomial, Kolmogorov – Smirnov test, Run Test. 5.3 Data Reduction	K1 – K6	15	1- 5

BOOKS FOR STUDY

Andy Field - *Discovering Statistics using SPSS*, Sage Publications Ltd.

A. Rajathi, P. Chandran - *SPSS For You*

Sabine Landau and Brain - *Handbook of Statistical Analysis using SPSS*

Thomas J. Quirk - *Excel 2019 for Social Science Statistics*, Springer.

BOOKS FOR REFERENCE

Neil J. Salkind - *Excel Statistics: A quick guide*, Sage Publication

Sharon Lawner Weinberg and Sarah Knapp Abramowitz - *Statistics using SPSS*, Cambridge University Press.

JOURNALS

International journal of social research methodology. (Taylor and Francis)

Journal of Business Research (Elsevier)

Social Science Research (Elsevier)

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Total Marks: 50

Duration: 90 minutes

Theory 20 Marks – 30 mins (5 X 4 = 20 from a choice of 6)

Practical 30 Marks - 60 mins (10 x 3 = 30 from a choice of 4)

Other Components:

Total Marks: 50

Project on application of statistical software/Assignment /Problem Solving

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Theory 40 Marks – 60 mins (10 X 4 = 40 from a choice of 12)

Practical 60 Marks - 120 mins (10 x 6 = 60 from a choice of 7)

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1, K2, K3	20	4 X 5 = 20 No choice (Theory)
B	K4, K5, K6	30	3 x 10 = 10 (Practical's)
		50	

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1, K2, K3	40	8 x 5 = 40 (Theory)
B	K4, K5, K6	60	6 x 10 = 60 (Practical's)
		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CM/PC/DR34												
	Course Title: Data Analysis for Research												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	1	3	2	1	3	3	3	1	1
CO 2	3	3	3	3	1	3	2	1	3	3	3	1	1
CO 3	3	3	3	3	1	2	2	1	3	3	3	1	1
CO 4	3	3	3	3	1	2	2	1	3	3	3	1	1
CO 5	3	3	3	3	1	2	2	1	3	3	3	1	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2019-2020)

SUMMER INTERNSHIP

CODE:19CM/PN/SI32

CREDITS:2

OBJECTIVES OF THE COURSE

- To provide an opportunity to gain practical knowledge in different aspects of business
- To familiarize the student with the latest trends in business practices
- To enable students to appreciate the theatrical knowledge gained

COURSE LEARNING OUTCOMES

On successful completion of the course. the students will be able to

COs	DESCRIPTION	CL
CO1	communicate a practical understanding of business operations	K1
CO2	demonstrate the ability to integrate and apply theoretical knowledge and skills developed in various courses to real-world situations	K2
CO3	exhibit the ability to effectively work in a professional environment and demonstrate work ethic and commitment in a work-based environment	K3
CO4	reflect on personal and professional development needs and set strategic goals for progressing towards an intended career.	K4 – K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

The Students required to

- Undergo practical training in a reputed organisation for 100 hours
- Maintain a log book duly countersigned by the supervisor of the organisation
- The log book to contain the following details
 - a. Hours worked
 - b. Nature of work
- A final consolidated report with a minimum of 50 pages, to be submitted at the end of the Internships detailing the work assigned and performed in the Organisation.

Evaluation

Log book	- 20 marks
Project report	- 50 marks
VIVA	- 30 marks

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023-2024)

STRATEGIC FINANCIAL MANAGEMENT

CODE: 23CM/PC/SF44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To understand the need, importance and sources of finance.
- To impart with the conceptual framework of financial management.
- To equip students with knowledge of tools and techniques for managing finance.
- To familiarise on various approaches for financial decision making.
- To encourage students to apply financial theory and concepts in real life situation.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	comprehend the fundamental theory and concept of finance function for management of funds and decision making.	K1
CO2	develop the knowledge of fundamental valuation concepts.	K2
CO3	apply the techniques to determine the cost of raising finance and design an optimum capital structure.	K3
CO4	analyse and determine the working capital requirement.	K4
CO5	evaluate the alternative investment proposals and determine the best proposal and dividend policy of the business entity.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Definition, Nature and Scope of Financial Management 1.2 Definition, scope of corporate finance. 1.3 Functions of financial management. 1.4 Methods and sources of raising short term and long term finance. 1.5 Objectives of firm- profit maximization, wealth maximization, value maximization. 1.6 Time value of money – overview of the concept. 1.7 Valuation of securities and bonds.	K1-K5	10	1-5
2	Cost of Capital and Capital Structure 2.1 Cost of Capital 2.1.1 Weighted average cost of capital (WACC). 2.1.2 Cost of equity under capital asset pricing model (CAPM). 2.2 Capital Structure 2.2.1 Designing capital structure – EBIT- EPS Approach, valuation approach, cash flow approach. 2.2.2 Leverage analysis-operating, financial and combined.	K1-K5	15	1-5
3	Working Capital Management 3.1 Working capital cycle-estimation of working capital requirement. 3.2 Cash management – motive of holding cash – cash budgeting; cash collections and disbursement –options and strategies for investing and managing surplus cash. 3.3 Inventory management – benefits of holding inventory, risk and cost of holding inventories - objectives of inventory management, tools and techniques of inventory management. 3.4 Credit management – cost of maintenance of accounts receivables, forecasting the receivables, terms of payments - credit policy, credit evaluation, credit granting, collection policy – controls of account receivables	K1-K5	15	1-5
4	Capital Investment Decision 4.1 Nature and types of investment decisions 4.2 Investment evaluation criteria 4.2.1 Non-discounted cash flow techniques 4.2.2 Discounted cash flow techniques 4.3 Capital rationing and mutually exclusive projects. 4.4 Risk analysis in capital budgeting. 4.4.1 Probability assignment 4.4.2 Certainty equivalent 4.4.3 Sensitivity analysis	K1-K5	15	1-5

UNIT	CONTENT	CL	HRS	CO
5	Dividend Policy 5.1 Factors determining the dividend policy of a firm. 5.2 Theories of dividend policy – Walter’s model, Gordon’s model, MM Hypothesis. 5.3 Legal procedures and tax aspects of dividend.	K1-K5	10	1-5

BOOKS FOR STUDY

Khan, M.Y. and Jain P.K. *Theory and Problems in Financial Management*. New Delhi: TMH, 2012.
 Ravi, M. Kishore. *Taxmann’s Financial Management*. New Delhi: K. L., Taxmann Allied Services, 2012.

BOOKS FOR REFERENCE

James, C. Van Horne. *Financial Management and Policy*. Prentice Hall of India.
 Maheshwari, S. N. *Financial Management*. New Delhi: Vikas, 2011.
 Pandey, I. M. *Financial Management*. New Delhi: Vikas, 2012.
 Thulsian, P.C. and Bharath Thulsian C.A. *Financial Management*. New Delhi: S.Chand, 2013

JOURNALS

Journal of Financial and Quantitative Analysis
 Indian Journal of Finance
 Journal on Risk and Financial Management

WEB RESOURCES

www.niptp.or.in
www.icmrindia.org

PATTERN OF ASSESSEMENT

Continuous Assessment Test: **Total Marks: 50** **Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 = 10 (No choice) (One K1 question and one K2 question) only Theory
B	K3, K4	20	2 x 10 = 20 (Internal choice for K3 question and K4 question) 1 Theory 3 Problems
C	K5	20	1 x 20 = 20 (Internal choice) Problems only
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) (Two K1 question and Two K2 question) only Theory
B	K3, K4	40	4 x 10 = 40 (Internal choice for K3 question and K4 question) Three Theory five Problems
C	K5	40	2 x 20 = 40 (Internal choice) Problems only
		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CM/PC/SF44												
	Course Title: Strategic Financial Management												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	1	2	1	1	1	3	3	3	2	1
CO 2	3	2	3	1	1	2	1	1	3	3	3	2	2
CO 3	3	1	1	1	3	2	2	1	3	3	3	2	2
CO 4	3	2	3	1	1	1	1	1	3	3	3	2	2
CO 5	3	2	2	1	1	1	1	1	3	2	3	1	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.COM DEGREE

SYLLABUS

(Effective from the academic year 2023-2024)

MANAGEMENT OF TRANSFORMATION

CODE: 23CM/PC/MT44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To enable students to understand the dynamics in management.
- To provide an understanding of Internal and External Management
- To familiarizes on importance and benefits of turnaround management.
- To develop management framework through business process re-engineering
- To facilitate students to appreciate the importance of practicing transformational leadership approach in organizations.

COURSE LEARNING OUTCOMES

On successful completion of the course. the students will be able to

COs	DESCRIPTION	CL
CO1	relate the emerging horizons of management in changing environment.	K1-K2
CO2	execute effective strategies in business process reengineering for managing transformation.	K3
CO3	analyze the operational importance and benefits of turnaround management.	K4
CO4	appraise the complexities of organizational change management.	K5
CO5	formulate programmed schedule for transformational leadership.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Concept, nature and process of planned change and resistance to change. 1.2 Emerging horizons of management in changing environment. 1.3 Concepts of transformation vs. change – transformational leadership – transactional leadership, charismatic vs. non- charismatic leadership. 1.4 Simulating change, navigating political dimensions in change.	K1-K6	12	1-5
2	Leadership 2.1 Leadership from within: Concept, need and importance of developing leadership from within 2.2 Distinction between leadership from without and leadership from within 2.3 Steps for developing leadership from within 2.4 Importance of different leadership styles, comparison between transformational and transactional leadership approaches	K1-K6	13	1-5
3	Turnaround Management 3.1 Turnaround management - definition of sickness - causes and symptoms of sickness – prediction of sickness – quantitative and qualitative models. 3.2 Behavioral, economic and technical issues in turnaround management. 3.3 Role of IBC, DRT, financial institutions. 3.4 Case studies in turnaround management.	K1-K6	13	1-5
4	Business Process Reengineering 4.1 Introduction to process design, process redesign, process reengineering. 4.2 BPR as a tool for managing transformation. 4.3 Implementation of BPR. 4.4 Case Studies in BPR.	K1-K6	15	1-5
5	Organizational Change and Change Management 5.1 Concepts, forces and types of organizational change – external and internal 5.2 Recognizing the need for change – the six box organizational model 5.3 Organizational change framework 5.4 Managing change – planning and creating the support system, managing transition, organization restructuring – strategies	K1-K6	12	1-5

BOOKS FOR STUDY

Whittaker, D.H., *Managing Innovations*, Cambridge University Press, Cambridge, Reprint 2011
Bender, Peter Urs, *Leadership from Within*, Macmillan India Ltd., Delhi, Reprint 2011

BOOKS FOR REFERENCE

Sawhney, Mohan and Jeff Zabin, *The Seven Steps to NIRVANA: Strategic Insights into e- Business Transformation*, Tata McGraw Hill, New Delhi, 2001
Hammer, M. and J. Champy, *Reengineering the Corporation: A Manifesto for Business Revolution*, Nicholas Brealey Publishing., Reprint 2010
Khandwalla Pradip, *Turnaround excellence: In sights from 120 cases, Response Book* (A Division of Sage Publication, Newbook)
Noori, H. and Radford, *Readings and Cases in Management of New Technology*, Prentice Hall, New York.

JOURNALS

Indian Journal of Human Resource Management
South Asian Journal of Management

WEB RESOURCES

www.iosr.org

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 =10 (No choice) 300 words (One K1 question and one K2 question)
B	K3, K4	20	2 x 10 = 20 (Internal choice for one K3 question and one K4 question) 600 words
C	K5, K6	20	2 x 10 = 20 (Internal choice for two K5 question and two K6 question) 1200 words
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) 300 words (Two K1 question and two K2 question)
B	K3, K4	40	4 x 10 = 40 (Internal choice for K3 questions and K4 questions) 600 words
C	K5, K6	40	2 x 20 = 40 (Internal choice for two K5 question and two K6 question) 1200 words
		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CM/PC/MT44												
	Course Title: Management for Transformation												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	3	3	3	3	1	1	1	3	2	3	2
CO 2	3	1	3	3	3	3	1	1	1	3	2	3	2
CO 3	3	1	3	3	3	3	1	1	1	3	2	3	2
CO 4	3	1	3	3	3	3	1	1	1	3	2	3	2
CO 5	3	1	3	3	3	3	1	1	1	3	2	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI — 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023-2024)

RETAIL MARKETING

CODE:23CM/PC/RM44

CREDITS:4

L T P: 4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To understand the conceptual and organizational aspects in retailing.
- To assess the retail environment.
- To familiarize students with the key elements in planning the retail marketing mix.
- To provide an insight in retail operations.
- To expose the students on the use of technology in retailing.

COURSE LEARNING OUTCOMES

On successful completion of the course. the students will be able to

COs	DESCRIPTION	CL
CO 1	to understand the importance of retailing and to comprehend on the process of retail management decision	K 1
CO 2	to apply and design the retail strategy	K2
CO 3	comprehend on retail location, layout and merchandise management.	K3
CO 4	to outline the customer relationship process in retailing and to create a promotion mix for a retail outlet	K4
CO 5	to demonstrate the conceptual impact of technology in modern retailing	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Retailing-Meaning, Economic Significance of Retailing 1.2 Retailing Management Decision Process, Product Retailing vs. Service Retailing 1.3 Types of Retailers, Retailing Environment, Indian vs. Global Scenario	K1-K5	10	1-5
2	Retail Marketing Environment 2.1 Understanding the Retail Customer Behavior– Factors Influencing Retail Shopper, Customer Decision Making Process 2.2 Market Research– Tools for Understanding Retail Market and Customer 2.3 Retail Strategy-Steps Involved in Designing Retail Strategy	K1-K5	15	1-5
3	Stores Location, Layout and Retail Merchandising 3.1 Retail Location- Types and Steps involved in Choosing the Retail Location 3.2 Stores Lay out –Importance of Exterior and Interior Stores Design and Types of Layout. 3.3 Retail Merchandising Management -Process, Activities of a Merchandiser, Process of Merchandise Planning and Methods of Merchandise Procurement	K1-K5	15	1-5
4	Retail Marketing and Communication 4.1 Retail Marketing Mix– The STP Approach 4.2 Retail Communication Mix 4.3 Servicing the Retail Customer- Importance of Service, CRM in Retail and Retail Selling Process	K1-K5	15	1-5
5	E-Tailing 5.1 Introduction to E-tailing, Role of Technology in Satisfying Market Demand 5.2 Technology in Retail Marketing Decisions 5.3 Factors Influencing the Growth of E-Tailing – Advantages, Disadvantages and Future of E-Tailing.	K1-K5	10	1-5

BOOKS FOR STUDY

Swapna Pradhan, *Retailing Management – Text and Cases*, McGraw-Hill Companies 2017
 Natarajan L Retail Marketing Margham

BOOKS FOR REFERENCE

Gawand M.K *Retail Business Management* Chandralok Prakasan, Kanpur 2012
Dhruv Grewal, retail Marketing Management – The 5Ecs of Retailing , Sage Publication .2018
Claudia Buhamra Abreu Romero, Retail Marketing Management: Concepts, Guidelines, and Practices, Author House 2013
H. M. Chandrashekar, C. Murthy, Retail Marketing Management, Lap Lambert Academic Publishing, 2012

JOURNALS

International Journal on Retail and Distribution management
Journal of Retailing – Elseiver
Journal of Direct Marketing

WEB RESOURCES

us.sagepub.com
www.tutorialspoint.com/retail_management/retail_management_marketinghttps://joe.org

PATTERN OF ASSESSEMENT

Continuous Assessment Test: **Total Marks: 50** **Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 =10 (No choice) (one K1 question and one K2 question 300 words)
B	K3, K4	20	2 x 10 = 20 (internal choice for K3 question and K4 question 600 words)
C	K5	20	1 x 20 = 20 (internal choice 1200 words)
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination: **Total Marks: 100** **Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) (K1 question and K2 question 300 words)
B	K3, K4	40	4 x 10 = 40 (internal choice for K3 questions and K4 questions 600 words)
C	K5	40	2 x 20 = 40 (From a choice of 3 questions 1200 words)
		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CM/PC/RM44												
	Course Title: RETAIL MARKETING												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	3	2	1	1	3	1	1	1	1
CO 2	3	2	2	2	2	3	2	2	1	3	3	3	2
CO 3	2	2	3	2	2	2	1	2	2	3	3	2	2
CO 4	3	2	2	2	2	2	2	2	2	2	2	3	2
CO 5	3	2	2	2	2	2	2	1	2	2	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023 -2024)

DISSERTATION

CODE: 23CM/PC/DS47

CREDITS :7

Project should be the independent work of the student. Each student will choose a topic of her interest and the student will be assigned to a supervisor.

The student can use Quantitative or Qualitative/Descriptive or both methods.

- **Page Limit:**

The Dissertation report should be submitted in the prescribed format having a maximum of 100 pages, typed in font Times New Roman -size 12, with 1.5 line spacing on A4 Size paper.

- **Contents of the Report:**

- Contents Page
- The report copy will include Certificate of the Supervisor, Declaration,
- and Acknowledgement
- Five chapters

- **Presentation of the Report – format**

Chapter 1 - Introduction - to include background of the study, objectives, Methodology, limitation of the study and chapter scheme

Chapter 2 – Review of literature

Chapter 3 – Theoretical aspects of the study

Chapter 4 – Data analysis

Chapter 5 – Suggestion and conclusion

□ At the end of the project ‘Bibliography’ must be given in alphabetical/chronological order and necessary appendix may be added.

- **Submission:**

Each student may prepare two soft bound copies of the report, one for her and one copy to be submitted to the Head of the Department duly signed by the supervisor, on the scheduled date.

- **Guidelines for Evaluation:**

There will be double valuation for the Dissertation by the supervisor and an external examiner. The student will appear for viva -voce before a panel comprising External Examiner, Supervisor and Head of the Department.

PATTERN OF EXAMINATION

Rubrics for Evaluation	Marks	Cognitive Level
Documentation	10	K1
Formulating topic statement	10	K2
Explaining the conceptual framework	10	K3
Statistical analysis	25	K4
Research Recommendation and Conclusion	20	K5, K6

Viva Voce – 25 marks

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23CM/PC/DS47												
	Course Title: Dissertation												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	1	1	1	3	2	3	1	1
CO 2	3	3	3	3	2	1	1	1	3	2	3	1	1
CO 3	3	3	3	3	2	1	1	1	3	2	3	1	1
CO 4	3	3	3	3	2	1	1	1	3	2	3	1	1
CO 5	3	3	3	3	2	1	1	1	3	2	3	1	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023 -2024)

ADVERTISING MANAGEMENT

CODE: 23CM/PE/AM15

CREDITS: 5

LTP: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To provide an understanding about advertising as a promotional tool.
- To offer an insight into the creative strategies used in advertising
- To enable students to comprehend on the various medias and Ad- agency perspective of advertising.
- To offer an understanding of the campaign execution strategies used in advertising
- To identify the evaluation process and ethical issues in advertising.

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO 1	to assess the effectiveness of the promotional tool	K1
CO 2	to creatively design an ad, using the elements of ad copy.	K2
CO 3	to apply the comprehensive knowledge on various medias of advertising and the ad agency.	K3
CO 4	to outline the ad campaign process and budgeting strategies.	K4
CO 5	to evaluate the unethical aspects of advertising	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Advertising – Meaning, Importance, Functions and the Relationship and Differences between Advertising and Marketing 1.2 The Role of advertising and Advertising as a Communication Process. 1.3 Advertising as a Promotional Tool – Pros and Criticism of Advertising.	K1- K5	10	1-5

UNIT	CONTENT	CL	HRS	CO
2	Creative Strategy 2.1 Ad Copy- Meaning and Types of Copy Form 2.2 Elements of an Ad Copy and Creative Ad Design 2.3 Ad Layout- Structure of an Ad Layout and Principles of Ad Layout 2.4 Advertising Appeals	K1- K5	15	1-5
3	Advertising Media 3.1 Role of Media and Types of media - Indoor and outdoor, Electronic, online and Social media marketing – Advantages and Disadvantages 3.2 Media Planning Selection and Scheduling Strategies - factors affecting choice of media 3.3 Role of Agencies – Types and Functions of Ad Agencies – Client and Agency Relationship – Selection of Advertising Agency	K1- K5	12	1-5
4	Planning and Executing Ad Campaign 4.1 Preparation of Campaign – Stages in the Campaign Process 4.2 Advertising Budgets– Importance, Factors influencing Budget Setting, 4.3 Budgeting Methods- affordable rate method, Percentage of sales method Competitive parity method and objective and task method	K1- K5	13	1-5
5	Evaluation of Advertising 5.1 Valuation and Measurement of Advertising Effectiveness - Measures to Study Effectiveness – Direct and Indirect Measures 5.2 Ethics in advertising – Perceived Role of Advertising, The Advertising Standards Councils of India(ASCI) 5.3 Forms of Ethical Violations – Misleading Advertising, Advertising to Children, Product Endorsements, Stereotyping, Cultural, Religious and Racial Sensitivity in Advertising, Obscenity in Advertising	K1- K5	15	1-5

BOOK FOR STUDY

Belch. *Advertising and Promotion*. New Delhi: Tata McGraw Hill, 2014

Wells. *Advertising Principles and Practice*. New Delhi: Prentice Hall of India, 2007

BOOKS FOR REFERENCE

Bovee, John. Courtland, L.George, Dovel, P. and Wood, Marian Burk. *Advertising Excellence*. New Delhi: Tata McGraw Hill , 1999.
Christina Spurgeon. *Advertising & New Media*. USA : Taylor & Francis, 2008.
Jaishree Jethwaney, Shruti Jain, *Advertising Management*, New Delhi: Oxford University Press.
Kenneth, E. Clow & Donald E. Baack. *Integrated Advertising Promotion & Marketing Communication*. New Delhi: Prentice Hall, 2003.
Sabyasachi Chatterjee. *Media and Advertising Management : New Trends*. New Delhi: ICAI, 2007

JOURNALS

Journal for advertising research and new insights on marketing issues
Journal of interactive advertising
International Journal of Internet marketing and Advertising

WEB RESOURCES

<http://www.smallfuel.com/blog/entry/the-8-steps-of-an-advertising-campaign/>
<http://www.brickmarketing.com/define-ad-copy.htm>
<http://letspeaktogether.blogspot.in/2013/02/elements-of-advertisement-copy.html>
<http://kalyan-city.blogspot.com/2013/08/eleven-major-functions-of-advertising.html>

PATTERN OF ASSESSEMENT

Continuous Assessment Test: **Total Marks: 50** **Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 =10 (No choice) (one K1 question and one K2 question 300 words)
B	K3, K4	20	2 x 10 = 20 (internal choice for K3 question and K4 question 600 words)
C	K5	20	1 x 20 = 20 (internal choice 1200 words)
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) (K1 question and K2 question 300 words)
B	K3, K4	40	4 x 10 = 40 (internal choice for K3 questions and K4 questions 600 words)
C	K5	40	2 x 20 = 40 (From a choice of 3 questions 1200 words)
		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CM/PE/AM15												
	Course Title: ADVERTISING MANAGEMENT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	2	1	1	2	2	2	2	2
CO 2	3	2	2	3	3	2	2	2	2	3	2	1	2
CO 3	3	2	3	2	2	2	2	2	2	3	2	2	2
CO 4	2	2	2	3	3	2	2	1	3	2	3	2	2
CO 5	3	2	2	2	2	2	3	2	2	2	2	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE(AUTONOMOUS), CHENNAI –600086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023 – 2024)

CUSTOMER RELATIONSHIP MANAGEMENT

CODE: 23CM/PE/CR15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To provide students an insight into the realm of relationship marketing concepts and applications.
- To give a clear understanding on the concepts of relationship marketing.
- To create an understanding of the measures adopted in satisfying customers and retaining them.
- To enlighten on the significance of integrated marketing strategies.
- To familiarize on customer relationship strategies.

COURSE LEARNING OUTCOMES

On successful completion of the course. the students will be able to

COs	DESCRIPTION	CL
CO1	elaborate and apply the relationship marketing concepts .	K1
CO2	demonstrate an understanding of customer acquisition practices.	K2
CO3	appraise the loyalty based relationship strategies of firm.	K3
CO4	analyze the customer retention adopted by different organizations.	K4
CO5	design the relationship marketing strategy.	K5
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	Fundamental concepts in Relationship Marketing 1.1 Defining relationship marketing concepts 1.2 Relationship marketing programs- types 1.3 Steps involved in building customer-based brand equity	K1-K5	10	1-5
2	Customer Acquisition 2.1 Customer life cycle. 2.2 Acquisition tactical management (ACTMAN). 2.3 Customer profiling.	K1-K5	15	1-5
3	Customer Loyalty 3.1 Loyalty effect. 3.2 Building loyalty through customer retention. 3.3 Devising a loyalty based relationship building Strategy.	K1-K5	15	1-5
4	Customer Satisfaction and Retention 4.1 Significance of customer retention. 4.2 Major customer retention stages. 4.3 Customer satisfaction- factors and levels.	K1-K5	15	1-5
5	Integrated Marketing Strategies 5.1 Preparing for a Relationship Marketing Strategy 5.2 Strategy for improvement 5.3 Guidelines for implementation	K1-K5	10	1-5

BOOK FOR STUDY

Shahjahan.S , *Relationship Marketing- text and cases*, New Delhi, TMH, latest edition
Francis Buttle and Stan Maklan, *Customer Relationship Management: Concepts and Technologies*, Routledge, 2015

BOOKS FOR REFERENCE

Mark Godson, *Relationship Marketing*, Oxford University Press, 2009
Kristin Anderson and Carol Kerr, *Customer Relationship Management*, New Delhi, Tata Mc Graw Hill, New Delhi
V.Kumar and Werner Reinartz, *Customer Relationship Management: Concept, Strategy and Tools*, Springer Heidelberg, New York
Mukesh Chaturvedi, Abhinav Chaturvedi, *Customer Relationship Management – An Indian Perspective*, Excel Books, New Delhi, 2008

JOURNALS

Customer Relationship Management as a business process- Emerald Insight
International Journal of Electronic Customer Relationship Management
Indian Journal of Marketing
Journal of Marketing Education

WEB RESOURCES

[www.managementstudyguide.com/customer relationship management](http://www.managementstudyguide.com/customer-relationship-management)

crmbook.powerobjects.com

www.marketing-schools.org

PATTERN OF ASSESSEMENT

Continuous Assessment Test:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 = 10 (No choice) (one K1 question and one K2 question 300 words)
B	K3, K4	20	2 x 10 = 20 (internal choice for K3 question and K4 question 600 words)
C	K5	20	1 x 20 = 20 (internal choice 1200 words)
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) (K1 question and K2 question 300 words)
B	K3, K4	40	4 x 10 = 40 (internal choice for K3 questions and K4 questions 600 words)
C	K5	40	2 x 20 = 40 (From a choice of 3 questions 1200 words)
		100	

Mapping of Course Outcomes (COs)

to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23CM/PE/CR 15												
	Course Title: Customer Relationship Management												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	3	1	2	3	3	3	1	3	2	3	2
CO 2	3	1	3	2	2	2	2	1	1	3	2	3	3
CO 3	2	1	2	2	2	3	1	2	1	3	3	2	2
CO 4	3	2	2	1	2	3	2	3	1	3	2	2	2
CO 5	3	3	2	2	3	2	3	3	1	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023 – 2024)

INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT

CODE: 23CM/PE/IP15

CREDITS: 5

L T P : 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- Enable students to build conceptual knowledge on investment and securities analysis
- To develop constructive frame work on wealth maximization and risk minimization using securities and portfolio analysis techniques.
- To develop computational knowledge on investment alternatives that maximize the returns and minimize the risk.
- To develop computational knowledge through fundamental analysis using financial statements of the company.
- To study the movements and fluctuation through technical charts and patterns.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	build conceptual knowledge and understanding on investment and securities analysis	K1
CO2	acquire knowledge on portfolio analysis and models to determine risk and return for proper portfolio construction	K2
CO3	build computational knowledge on investment alternatives like bonds and equities for proper investment decisions	K3
CO4	learn eic approaches that give clear understanding to investor regarding investment decision and portfolio construction	K4
CO5	study the movements and fluctuation through technical charts and patterns	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Investment – Meaning, Definition, Objectives and Process 1.2 Systematic Investment Plan (SIP) 1.3 Difference between Investor and Speculator 1.4 Portfolio Management – Definition, Meaning, Principles and Steps. 1.5 Risk – Types and Factors 1.6 Return – Components and Factors 1.7 Risk – Return trade -off	K1-K4	10	1
2	Portfolio Analysis and Management 2.1 Modern Portfolio Theory – Markowitz Model and Single Index Model (SIM) 2.2 CAPM – Capital Asset Pricing Model 2.3 Portfolio Performance Evaluation – Sharpe’s Measure, Treynor’s Measure and Jensen’s Measure	K1-K6	15	2
3	Investment Alternatives – Equity Valuation and Bond Valuation 3.1 Equity Valuation Based on Dividend 3.2 Equity Valuation Based on Earnings – Gordon Model, Walter’s Model, PE Ratio and ERP (Explicit Resale Price Methods) 3.3 Bond Valuation – Bond Pricing, Yield to Maturity (YTM), Yield to Call (YTC)	K1-K5	15	3
4	Approaches to Security Analysis – Fundamental Analysis 4.1 Economic Analysis – Theory 4.2 Industry Analysis – Theory 4.3 Company Analysis	K1-K6	15	4
5	Technical Analysis 5.1 Basic Assumptions of Technical Analysis 5.2 Theories, Techniques and Methods of Movement of Stock Prices 5.3 Important Charts and Patterns in technical Analysis	K1-K5	10	5

BOOKS FOR STUDY

Dr. L. Natarajan - *Security Analysis and Portfolio Management* , Margham Publications. Subrata Mukherjee - *Security Analysis and Portfolio Management*, Vikas Publishing House Prasanna Chandra - *Investment Analysis and Portfolio Management*, McGraw Hill
 Dr. R.P. Rustagi - *Investment Analysis and Portfolio Management* , Sultan Chand & Sons

BOOK FOR REFERENCE

Punithavathy Pandian - *Security Analysis and Portfolio Management* , Vikas Publishing House
 V.K. Bhalla - *Investment Management* , S. Chand Publications

JOURNALS

Security Analysis and Portfolio Management – A Primer (Springer)
 Securities Analysis and Portfolio Management using Artificial Neural Networks (SSRN)

PATTERN OF ASSESSEMENT

Continuous Assessment Test: Total Marks: 50 Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 =10 (No choice) (One K1 question and one K2 question) only Theory
B	K3, K4	20	2 x 10 = 20 (Internal choice for K3 question and K4 question) 1 Theory 3 Problems
C	K5	20	1 x 20 = 20 (Internal choice) Problems only
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination: Total Marks: 100 Duration: 3 hours

SECTION	Knowledge Level	MARKS	Pattern
A	K1, K2	20	4 x 5 =20 (No choice) (Two K1 question and Two K2 question) only Theory
B	K3, K4	40	4 x 10 = 40 (Internal choice for K3 question and K4 question) Three Theory five Problems
C	K5	40	2 x 20 = 40 (out of 3 choice) Problems only
		100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CM/PE/IP15												
	Course Title: Investment Analysis and Portfolio Management												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	1	3	1	1	3	3	3	1	1
CO 2	3	3	3	2	1	2	1	1	3	3	3	1	1
CO 3	3	3	3	2	1	2	1	1	3	3	3	1	1
CO 4	3	3	3	2	1	1	1	1	3	3	3	1	1
CO 5	3	3	3	2	1	1	1	1	3	3	3	1	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023 – 2024)

E-COMMERCE

CODE: 23CM/PE/EC15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To impart knowledge about e-commerce and familiarize students with the modern applications of e-commerce services.
- To help the students identify the recent trends in e-commerce services.
- To provide in-depth knowledge of the security threats involved in e-commerce businesses.
- To enable the students to explore the opportunities and challenges faced by the e-commerce sector.
- To bestow the students with knowledge on the role of websites in e-commerce sector

COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	recall the concepts of e-commerce and all its business-related applications	K1
CO2	explain the significance of e-commerce and its utility in recent times	K2
CO3	apply the facts of e-commerce in identifying the potential technological challenges and its precautionary measures	K3
CO4	examine the forces driving e-commerce in electronic trading and payment system	K4
CO5	evaluate e-business models to identify the opportunities and the challenges for industries	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to e-commerce 1.1 Meaning, Definition, Need, Functions and Scope for E-commerce 1.2 Electronic commerce versus traditional commerce 1.3 Benefits of e-commerce to businesses, consumers and society and its limitations 1.4 Drivers of e-Commerce, E-commerce as an Electronic Trading System- special feature 1.5 e-commerce opportunities and challenges for Industries	K1 –K5	10	1-5
2	E-commerce application and strategies 2.1 Models of e-commerce- B2B, B2C, C2C, C2B, B2G and G2B and other models 2.2 Recent New Technologies used in E-commerce. 2.3 E-Governance- Meaning, Advantages, challenges and solutions 2.4 Digital Commerce, Mobile Commerce 2.5 Strategies for Business over Web, Internet based Business Models	K1 –K5	15	1-5
3	Website Design 3.1 Websites as Marketplace 3.2 Role of web site in B2C e-commerce 3.3 Website strategies, Web site design Principles 3.4 Push and pull approaches 3.5 Alternative methods of customer communication e-mail, web chat, social media , video messaging	K1 –K5	15	1-4
4	Electronic Payment System 4.1 Types of E - payment systems –e-cash and currency servers, e-cheques, credit cards, smart cards; debit cards and electronic fund transfer 4.2 E- Payment Process, Components of effective E-payment system, Pros & Cons of E-Payment System 4.3 Operational, credit and legal risk of e- payment and risk management options for e- Payment Systems 4.4 Digital Signature, Data Capture by Bar Code, RFID and QR Code. 4.5 Case Studies related to current E- commerce and E - Payment systems (only for discussion)	K1 –K5	10	1-5

UNIT	CONTENT	CL	HRS	CO
5	Security Issues in E-commerce 5.1 Risks of E-commerce –Types and sources of threats. 5.2 Protecting electronic commerce assets and intellectual property 5.3 Firewalls; Client server network security; Data and message security 5.4 Security tools; Digital identity and electronic signature; encryption and concepts of public and private key infrastructure 5.5 Risk management approach to e- commerce security	K1 –K5	15	1-5

BOOKS FOR STUDY

P.T. Joseph, S.J.(2009), *E-commerce: An Indian Perspective* (PHI learning Pvt. Ltd. New Delhi)
 Agarwala,K.N. and Deeksha Agarwala: *Business on the Net: What's and How's of E-Commerce* : Macmillan, New Delhi.
 Awad, Elias M. (2007), *Electronic Commerce: From Vision to Fulfillment* (New Delhi : Pearson Education).

BOOKS FOR REFERENCE

Laudon, Kenneth C. and Carol Guercio Traver (2016) *E-commerce: business, technology, society.* (New Delhi : Pearson Education).
 David Whiteley (2017) *E - Commerce: Strategy, Technologies and Applications.* McGraw Hill Education .
 Diwan, Prag and Sunil Sharma: *Electronic Commerce-A Manager's Guide to E-Business*, Vanity Books International, Delhi.
 Awad, Elias M. (2007), *Electronic Commerce: From Vision to Fulfillment* (NewDelhi : Pearson Education).

JOURNALS

International Journal of Electronic Commerce
 Electronic Commerce Research – Springer
 Journal of Theoretical and Applied Electronic Commerce

PATTERN OF ASSESSEMENT

Continuous Assessment Test: Total Marks: 50 Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 = 10 (No choice) (one K1 question and one K2 question 300 words)
B	K3, K4	20	2 x 10 = 20 (internal choice for K3 question and K4 question 600 words)
C	K5	20	1 x 20 = 20 (internal choice 1200 words)
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) (K1 question and K2 question 300 words)
B	K3, K4	40	4 x 10 = 40 (internal choice for K3 questions and K4 questions 600 words)
C	K5	40	2 x 20 = 40 (From a choice of 3 questions 1200 words)
		100	

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23CM/PE/EC 15												
	Course Title: E-COMMERCE												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	3	3	1	1	1	3	3	2	3
CO 2	3	1	2	1	2	3	2	1	1	3	3	2	1
CO 3	3	2	2	1	3	3	2	1	1	3	3	2	2
CO 4	3	2	3	2	3	3	2	1	1	3	3	2	1
CO 5	3	2	3	2	3	3	2	1	1	3	3	2	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMUS), CHENNAI-600086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023–2024)

TRAINING AND DEVELOPMENT

CODE:23CM/PE/TD15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To enlighten the students on the importance and need for training and development
- To familiarise students with the pedagogy for training and development
- To enhance the ability of students to positively contribute towards superior performance
- To expose student to the effectiveness of teamwork and group performance
- To enable students to identify and analyse the dominant values and training needs in today's workplace

COs	DESCRIPTION	CL
CO1	describe the need, process and techniques of training and development	K1
CO2	explain the pedagogy of training and development from trainer and trainee perspective	K2
CO3	implement appropriate techniques for effective training programmes and evaluate its impact on trainees	K3
CO4	analyse the process of designing a training programme corporate environment to assess the training needs	K4
CO5	evaluate the effectiveness of a training programme in an organisation	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Training and development 1.1 Definition, Meaning and Objectives of Training and Development 1.2 Need for Training and Development 1.3 Difference Between Training and Development	K1-2 K1-3 K4	2 4 2	1-2 1-3 4
2	Prerequisites to Effective Training 2.1 Creating a climate for Training 2.2 Learning Styles of the Trainees- Classification of Learned Capabilities - Bloom's Taxonomy and Basic principles of Learning 2.3 Resistance to Training and Steps to overcome	K2-4 K2-4 K2-4	4 4 4	2-4 2-4 2-4
3	Designing a Training Programme 3.1 Meaning and Significance of Need Analysis 3.2 Types of Need Analysis, Components of Need Analysis 3.3 Design and Development of a Training Program	K1-3 K1-3 K 1-5	5 5 5	1- 3 1-3 1-5
4	Training Methods and Technique 4.1 On the Job Training -Type 4.2 Executive Development 4.3 Types of Training Aids	K1-5 K1 -5 K1 -5	5 5 5	1-5 1-5 1-5
5	Training Implementations 5.1 Implementations -Meaning and Significance of Training Implementations 5.2 Approaches to Training Implementation 5.3 Training Evaluation- Need and significance 5.4 Donald Kirk Patricks Evaluation Model	K1- 5 K1-5 K1-5 K5	2 3 5 5	1-5 1-5 1-5 5

BOOK FOR STUDY

Pandu Naik.G, *Training and Development*, Exceel Book, 2010

BOOKS FOR REFERENCE

Udai Pareek, *Training and Development in HRD*, New Delhi, Tata McGraw Hill

Lynton P Rolf, *Training and Development*, New Delhi, Vistaar

Vasudeva, *Training and Development*, Common Wealth

Kumar KBS, *Training and Development*, ICFAI University Press

PATTERN OF ASSESSEMENT

Continuous Assessment Test: **Total Marks: 50** **Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 = 10 (No choice) 300 words (one K1 question and one K2 question)
B	K3, K4	20	2 x 10 = 20 (internal choice for one K3 question and one K4 question) 600 words
C	K5	20	1 x 20 = 20 (internal choice) 1200 words
		50	

Total Marks: 50

Other Components:

Quiz, MCQ, Seminar, Presentation

Total Marks: 100

Duration: 3 hours

End Semester Examination:

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) 300 words (two K1 question and two K2 question)
B	K3, K4	40	4 x 10 = 40 (internal choice for two K3 questions and two K4 questions) 600 words
C	K5	40	2 x 20 = 40 (From a choice of 3 questions) 1200 words
		100	

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23CM/PE/TD15												
	Course Title: TRAINING AND DEVELOPMENT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	1	2	2	3	3	3	3
CO 2	3	3	3	3	3	3	3	3	2	2	2	2	2
CO 3	3	3	3	3	3	3	3	3	2	2	2	2	2
CO 4	3	3	3	3	3	3	3	3	2	2	2	2	2
CO5	3	3	3	3	3	3	3	3	2	2	2	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI –600086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023 – 2024)

SERVICE MARKETING

CODE: 23CM/PE/SM15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To familiarise with the services sector operations and its diversity.
- To impart students with the knowledge of extended marketing mix.
- To create an awareness about the role of service sectors for growth in the economy.
- To acquaint with the challenges and dynamic environment of service sector.
- To enable them to develop strategies for marketing in service sector.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the unique features and concept of service marketing.	K1
CO2	assessing the demand and apply marketing mix concepts in the service industry to increase the profitability.	K2
CO3	analyse service gaps and develop competitive positioning strategy in service marketing.	K3
CO4	design the process of managing the service encounter.	K4
CO5	evaluate and appreciate the multiple service aspects and their impact on customer satisfaction and customer grievance redressal.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Special Global Feature and Services 1.2 Marketing Management for Services – Expanding the Marketing Mix 1.3 An Integrated Approach to Services Marketing – Servuction Model	K1- K5	10	1- 5
2	Managing Demand and Capacity 2.1 Nature of Demand and Patterns of Demand for Services 2.2 Using Marketing Mix to Manage Demand 2.3 Balancing Capacity to Demand	K1-K5	15	1- 5
3	Positioning Service 3.1 Creating a Competitive Positioning 3.2 Steps in Developing a Positioning Strategy – Mission, Vision, Strategic Goals 3.3 The Service Gaps – Quality Gap, Performance Gap, Delivery Gap, Customer gap	K1- K5	15	1- 5
4	Managing the Service Encounter 4.1 Designing the Interactive Process – Blue Printing 4.2 Designing the Physical Environment 4.3 Roles of People in the Process	K 1-K5	15	1- 5
5	Customer Satisfaction 5.1 Customer Expectation – Expectation Hierarchy, Satisfaction Process 5.2 Servqual Dimensions – Key Drives of Quality 5.3 Principle of Complaint Management and Service Recovery	K1- K5	10	1- 5

BOOKS FOR STUDY

Andrey, Gilmor E. *Service Marketing and Management*. New Delhi : Sage Publishing, 2003.
Jha S.M. *Services Marketing*. Mumbai: Himalaya, 1998.

BOOKS FOR REFERENCE

Lovelock, Christopher. H. *Services Marketing*. USA: Prentice Hall, 2004.
Promod, Batra. *Simple Ways to Manage your Service Customers*. New Delhi: Think Inc, 1997.
Rampal, M.Kand Gupta S.L. *Services Marketing Concepts, Application and cases*. New Delhi: Galgotia , 2003.
Roland, T. Rust, Anthony J, Zahovik, Timothy L. Keinigham. *Services Marketing*. USA: Addison – Wesley Longman Inc, 1999.
Shajahan S. *Services Marketing Concepts, Practices and cases*. Mumbai: Himalaya, 2001
Sinha, P.K Sahoo S.C. *Services Marketing – Text and Readings*. Mumbai: Himalaya, 1994.

JOURNALS

International Journal of Research in Marketing
Journal of Services Marketing
Journal of Professional Services Marketing

WEB RESOURCES

<http://www.managementstudyguide.com/>
<http://blog.clientheartbeat.com/>

PATTERN OF ASSESSEMENT

Continuous Assessment Test:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 = 10 (No choice) (one K1 question and one K2 question 300 words)
B	K3, K4	20	2 x 10 = 20 (internal choice for K3 question and K4 question 600 words)
C	K5	20	1 x 20 = 20 (internal choice 1200 words)
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) (K1 question and K2 question 300 words)
B	K3, K4	40	4 x 10 = 40 (internal choice for K3 questions and K4 questions 600 words)
C	K5	40	2 x 20 = 40 (From a choice of 3 questions 1200 words)
		100	

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23CM/PE/SM15												
	Course Title: SERVICE MARKETING												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	3	2	2	1	2	2	2	2
CO 2	3	3	3	2	2	3	1	2	3	3	3	3	3
CO 3	3	3	3	3	2	2	1	2	3	3	3	3	3
CO 4	3	3	2	1	2	1	2	2	3	3	3	3	3
CO 5	3	3	3	2	2	3	2	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023–2024)

ENTREPRENEURSHIP AND FAMILY BUSINESS

CODE: 23CM/PE/EF23

CREDITS:3

L T P:3 0 0

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- To understand the dynamics of a family business and the opportunities within business
- To expose students to the governance issues and conflict in family business
- To acquaint with the growth and sustainability of family business
- To familiarize on strategic planning for the family business

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	outline the growth in business and relationship in family	K1
CO2	prepare modes of succession planning in family business	K2
CO3	comprehend the need for conflict resolution in family business	K3
CO4	appreciate the parallel strategic planning for the family and business	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Overview of the Family Enterprise –Distinction between Family and Non- FamilyBusiness 1.2 Entrepreneur - Functions and Characteristics 1.3 Complexity of Family Business, Managing the Family Business 1.4 Strength and Weakness of Family Firm	K1- K4	5	1- 4
2	Economic Contribution of Family Business 2.1 Size of Family Firm 2.2 Contribution to Employment and GDP 2.3 Industry Affiliation of Family Firms	K1-K4	5	1- 4
3	Governance in Family Business 3.1 Corporate Governance- Role and Involvement of Board of Directors 3.2 Family Governance- Family Involvement, Ownership, Management and Family Values and Goals 3.3 Wealth Governance	K1- K4	10	1- 4
4	Strategic Management in Family Business 4.1 Strategic Decision Making in Family Firms 4.2 Competitive Advantage of Family Firms 4.3 Family as Resource Provider 4.4 Succession Planning	K1- K4	10	1- 4
5	Relationship and Conflict in Family Business 5.1 Social Structure of the Family Business 5.2 Interpersonal Dynamics in Family 5.3 Conflict and Lifecycle of the firm 5.4 Conflict Resolution, Case Studies	K1- K4	9	1- 4

BOOKS FOR STUDY

Thomas Zellweger, *Managing the Family Business*, Edward Elgar Publication, 2017
 Gersick, K.E., Davis, J.A., Hampton, M.M., & Lansberg, *Generation to Generation: Life Cycles of the Family Business*, Harvard Business School Press, 1997

BOOKS FOR REFERENCE

Collier, C.W, *Wealth in Families*. Harvard University, 2002.
 Fleming, Q.J. *Keeping the Family Baggage Out of the Family Business*. New York: Simon & Shuster, 2002.
 Hilburt-Davis J. and Dyer Jr. W.G, *Consulting to Family Business: Contracting, Assessment, and Implementation (organizational development)*. Pfeiffer Publishing, 2002.

WEB RESOURCES

us.sagepub.com
<http://www.frscsa.org/>
<https://joe.org>

PATTERN OF ASSESSEMENT**Continuous Assessment Test:****Total Marks: 50****Duration: 90 minutes**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 = 10 (No choice) 300 words (One K1 question and one K2 question)
B	K3, K4	20	2 x 10 = 20 (Internal choice for K3 question and K4 question) 600 words
C	K4	20	2 x 10 = 20 (Internal choice for K4 questions) 1200 words
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) 300 words (Two K1 question and two K2 question)
B	K3, K4	40	4 x 10 = 40 (Internal choice for K3 questions and K4 questions) 600 words
C	K4	40	2 x 20 = 40 (out of 3 choices) 1200 words
		100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023-2024)

HUMAN RESOURCE MANAGEMENT

CODE: 23CM/PE/HR23

CREDITS:3

L T P:3 0 0

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- To understand the HRM concepts
- To acquaint students with the various training and performance appraisal methods
- To familiarize students with stress and conflict management
- To demonstrate the various employee training programme

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify the human resources requirement in an organization	K1
CO2	define the process of job analysis and discuss its importance	K2
CO3	compare and contrast the methods used for selection and placement of human resources	K3
CO4	explain the steps required to develop and evaluate an employee training programme	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Human Resource Planning – Importance, Objectives and Process 1.2 Job Analysis and Design 1.3 Meaning - Recruitment, Selection and Placement 1.3.1 Sources of recruitment and recruitment process 1.3.2 Process of Selection and Placement	K1- K4	5	1- 4
2	Training and Performance Appraisal 2.1 Introduction to Training 2.1.1 Techniques or Methods. 2.1.2 Identification of the training needs 2.2 Performance appraisal - Methods	K1-K4	5	1- 4
3	Stress and Conflict Management 3.1 Conflict Management - Levels, Sources, Resolution strategies, Negotiation 3.2 Stress -Nature, Causes, Measures to Manage Stress	K1- K4	10	1- 4
4	Controlling 4.1 The System and Process of Controlling 4.2 Control Techniques and Information Technology 4.3 Global Controlling and Global Challenges	K1- K4	10	1- 4
5	Organisational Change and Culture 5.1 Organisational Change – Meaning- Factors influencing Change –Approaches 5.2 Organisational Culture and Development –Meaning of Organisational Culture 5.3 Role and Types of Culture	K1- K4	9	1- 4

BOOKS FOR STUDY

L.M.Prasad , *Human Resource Management.*, Sultan chand & Sons, 2018

Ashwathappa , *Human Resource Management Text and Cases*, Mcgraw Hill Education, 2017

BOOKS FOR REFERENCE

Gary Dessler, Biju Varkkey, *Human Resource Management*, Pearson Education, 2017

Stephen P. Robbins, Timothy A Judge, Neharika Vohra, *Organisational Behaviour*, Pearson Education, 2016

Tripathi , *Human Resource Management*, Sultan Chand.

PATTERN OF ASSESSEMENT

Continuous Assessment Test:

Total Marks: 50

Duration: 90 minutes

Section	Knowledge Level	Marks	Pattern
A	K1, K2	10	2 x 5 = 10 (No choice) (one K1 question and one K2 question 300 words)
B	K3, K4	20	2 x 10 = 20 (internal choice for K3 question and K4 question 600 words)
C	K5	20	1 x 20 = 20 (internal choice 1200 words)
		50	

Other Components: Total Marks: 50

Quiz, MCQ, Seminar, Presentation

End Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) (K1 question and K2 question 300 words)
B	K3, K4	40	4 x 10 = 40 (internal choice for K3 questions and K4 questions 600 words)
C	K5	40	2 x 20 = 40 (From a choice of 3 questions 1200 words)
		100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Com. Degree

SYLLABUS

(Effective from the academic year 2023– 2024)

RETAIL BANKING

CODE: 23CM/PI/RB24

CREDITS: 4

OBJECTIVES OF THE COURSE

- To acquaint students with the role and importance of retail banking
- To expose the students to the retail banking products
- To provide knowledge and understanding of the current trends in retail banking

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explain the functions of retail banking operations	K1
CO2	appreciate the importance of effective customer relationship management in retail banking	K2
CO3	comprehend the recent trends in retail banking	K3
CO4	gain an understanding of effective marketing of the different retail products	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	CO
1	Introduction 1.1 History, Definition, Role within the Bank Operations 1.2 Applicability of Retailing Concepts - Distinction between Retail and Corporate / Wholesale Banking	K1- K4	1- 4
2	Retail Products 2.1 Overview – Retail Products and Customer Requirements Products development process 2.2 Liabilities and Assets Products 2.3 Home Loans, Auto / Vehicle Loans, Personal Loans, Educational Loans - Eligibility, Purpose, Amounts, Margin, Security, Disbursement, Moratorium, Prepayment issues, Repayments 2.4 Credit Vs Debit Cards, Eligibility, Purpose, Amounts, Margin, Security, Process of using the cards, Billing Cycle, Credit Points	K1-K4	1- 4

UNIT	CONTENT	CL	CO
3	Marketing of Retail Products 3.1 MIS and Accounting 3.2 Retail Strategies 3.3 Tie-up with Institutions 3.4 Delivery Channels	K1- K4	1- 4
4	Customer Relationship Management 4.1 Role and Impact of Customer Relationship Management 4.2 Stages in Customer Relationship Management Process 4.3 Regulations and compliance	K1- K4	1- 4
5	Trends in Retail Banking 5.1 Technology for Retail Banking 5.2 Issues related to Retail Banking 5.3 Securitisation, Mortgage Based Securities 5.4 Trends in Retailing - Insurance, Demat Services, Online and Phone Banking	K1- K4	1- 4

BOOKS FOR REFERENCE

Ramamurthy Natarajan, *Retail Banking*, CreateSpace Independent Publishing Platform, 2016
 Agarwal O P, *Retail Banking in India*, Skylark Publications
 Keith Pond, *Retail Banking*, Gosbrook Professional Publishing, 2017
 Indian Institute of Banking and Finance, *Retail Banking*, Macmillan Publication, 2015

JOURNALS

Journal of Intellectual Property Rights 2007 and 2009
 Indian journal of law and technology
 Symbiosis contemporary law journal

WEB RESOURCES

www.unesco.org/new/en/unesco/
www.lawctopus.com/
www.indialawworld.Co

PATTERN OF ASSESSEMENT

End Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Knowledge Level	Marks	Pattern
A	K1, K2	20	4 x 5 = 20 (No choice) 300 words (Two K1 question and two K2 question)
B	K3, K4	40	4 x 10 = 40 (Internal choice for K3 questions and K4 questions) 600 words
C	K4	40	2 x 20 = 40 (out of 3 choices) 1200 words
		100	



STELLA MARIS COLLEGE

(AUTONOMOUS), CHENNAI - INDIA

M.Sc. Degree
Branch - III - PHYSICS
(CHOICE BASED CREDIT SYSTEM)

OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF PHYSICS

PROGRAMME DESCRIPTION

The M.Sc. Physics programme focusses on providing a solid foundation in the advanced physics concepts of Mathematical Physics, Electronics, Statistical Mechanics, Classical Mechanics, Quantum Mechanics, Electrodynamics, Solid State Physics, Nuclear Physics etc. through theoretical lectures, practical learning, seminars, workshops and research experiences. The programme offers elective courses of wide branches such as astrophysics, reactor physics, medical physics and ultrasonics, crystal physics and nanoscience, geophysics etc. concentrating on the recent trends of advancements in the subject which also enables the students to pursue their career in their field of interest. The curriculum ensures the students in enhancing their technical skills and industry experiences through the internship programme and research projects to take up a career either in academia, research, industry and other frontiers of science and technology.

VISION

- To create an eagerness for lifetime learning among the students and an ability to put their learning into practice.
- To develop knowledge in the subject and to create an interest and passion towards Physics.
- To facilitate conceptual understanding of the content through experiential learning.
- To offer courses that will expose students to a broad spectrum of knowledge and enhance their scientific curiosity and thinking.

MISSION

- To enable the students to be self-reliant in order to take up challenges with confidence.
- To motivate students towards pursuing higher education and a career in Physics.
- To engage the students in quality scientific research so as to respond to the societal needs and demands.

PROGRAMME SPECIFIC OUTCOMES

On successful completion of the M.Sc. Physics Programme, the students will be able to:

PSO1	exhibit in depth knowledge and proficiency in the advanced domains of physics by employing the theoretical, observational and computational skills to assimilate the natural phenomena of life and its application in the interdisciplinary fields.
PSO2	acquire technical proficiency in conducting scientific experiment interpretations, identify physical problem – solving techniques and hone entrepreneurial abilities for successful careers.
PSO3	collaborate effectively with peers and experts to participate in professional development activities while keeping abreast of advances in physics research and technology.
PSO4	develop advance computational skills, scientific thinking, critical evaluation and research intelligence to implement innovative techniques enhancing their research curiosity through multidisciplinary collaboration.
PSO5	implement and demonstrate the essence of physics in creating new technologies to address scientific concerns, embark global competence, social ethics and professionalism for a self- sustaining environment.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
DISTRIBUTION OF CREDITS AND HOURS
M.Sc. Physics 2023-2024

Courses	Semester I		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	5	4	5	4	6	4	5	16	21
	4	5	4	5	4	5	4	5	16	20
	4	5			4	5	4	5	12	15
PC Practical	4	8	4	8	4	8			12	24
Dissertation							7	9	7	9
PE-dept.	5	5	5	5			5	5	15	15
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PA	2	2							2	2
PN					2				2	0
Library						1		1		2
TOTAL	23	30	24	30	23	30	24	30	94	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE : Branch III PHYSICS

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
SEMESTER-I									
23PH/PC/MP14	Mathematical Physics I	4	4	1	0	3	50	50	100
23PH/PC/SM14	Statistical Mechanics	4	4	1	0	3	50	50	100
23PH/PC/EL14	Electronics	4	4	1	0	3	50	50	100
23PH/PC/P114	Experimental Physics I	4	0	0	8	3	50	50	100
	PA/PL								
	Department Elective I								
SEMESTER-II									
23PH/PC/MP24	Mathematical Physics II	4	4	1	0	3	50	50	100
23PH/PC/CM24	Classical Mechanics	4	4	1	0	3	50	50	100
23PH/PC/P224	Experimental Physics II	4	0	0	8	3	50	50	100
23PH/PK/SS22	Soft Skills	2	2	0	0	-	50	-	100
CD / ET	Value Education								
	Department Elective II								
	Common Elective I								
SEMESTER-III									
23PH/PC/QM34	Quantum Mechanics I	4	4	1	0	3	50	50	100
23PH/PC/SS34	Solid State Physics	4	4	1	0	3	50	50	100
23PH/PC/ET34	Electromagnetic Theory	4	4	2	0	3	50	50	100
23PH/PC/P334	Experimental Physics III	4	0	0	8	3	50	50	100
23PH/PN/SI32	Summer Internship	2	0	0	2	-	50	-	100
	Common Elective II								
CD / ET	Value Education								
SEMESTER-IV									
23PH/PC/QM44	Quantum Mechanics II	4	4	1	0	3	50	50	100
23PH/PC/NP44	Nuclear and Elementary Particle Physics	4	4	1	0	3	50	50	100
23PH/PC/SP44	Spectroscopy	4	4	1	0	3	50	50	100
23PH/PC/DS47	Dissertation	7	0	0	9	-	50	50	100
	Department Elective III								
Postgraduate Elective Courses Offered to Parent Department									
23PH/PE/CP15	Crystal Physics	5	5	0	0	3	50	50	100
23PH/PE/PP15	Plasma Physics	5	5	0	0	3	50	50	100
23PH/PE/NN15	Nanoscience and Nanotechnology	5	5	0	0	3	50	50	100
23PH/PE/MU15	Medical Physics and Ultrasonics	5	5	0	0	3	50	50	100
23PH/PE/AP15	Astrophysics	5	5	0	0	3	50	50	100
23PH/PE/GP15	Geophysics	5	5	0	0	3	50	50	100
23PH/PE/IR15	Introduction to R Programming	5	3	0	2	4	50	50	100
Postgraduate Elective Courses Offered to Other Departments									
23PH/PE/ED23	Everyday Physics	3	2	0	1	3	50	50	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086**M.Sc. DEGREE : Branch III PHYSICS****COURSES OF STUDY****(Effective from the academic year 2023-2024)****CHOICE BASED CREDIT SYSTEM**

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
23PH/PE/EI23	Electrical Installations	3	2	0	1	3	50	50	100
23PH/PE/EP23	Energy Physics	3	3	0	0	3	50	50	100
The Department will offer one Social Awareness Course									
Social Awareness									
23PH/PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100
23PH/PA/CR12	Child Rights	2	2	0	0	-	50	-	100
23PH/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100
23PH/PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100
23PH/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100
23PH/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100
23PH/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100
23PH/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100
23PH/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100
Independent Elective Courses									
23PH/PI/DC24	Digital Communication	4	0	0	0	3	-	100	100
23PH/PI/DN24	Data Communication and Computer Networks	4	0	0	0	3	-	100	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

MATHEMATICAL PHYSICS I

CODE: 23PH/PC/MP14

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE:

- To inculcate problem-solving skills and to enhance the expertise in mathematical techniques required in Physics
- To enable students to formulate, interpret and draw inferences from mathematical solutions.
- To equip the students to apply numerical methods in obtaining approximate solutions from real life data.
- To impart students with the advanced concepts in vector, tensor and complex analysis
- To make the students to master in various special functions

COURSE LEARNING OUTCOMES:

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the main mathematical methods used in physics.	K1
CO2	explain the fundamentals of Vector and Tensor analysis, Complex Analysis and special functions	K2
CO3	apply the concepts of mathematical physics in real life problems	K3
CO4	demonstrate the tools of mathematical physics that are important prerequisites for other theoretical physics courses	K4
CO5	evaluate accurate and efficient use of specific mathematical physics techniques	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Numerical analysis Finite differences – Newton Gregory formula – Interpolation and extrapolation – Numerical differentiation - Numerical integration –Simpson’s one third rule - Solution of ordinary differential equations: Euler method - Euler modified method – Runge – Kutta method (2nd order) – Newton Raphson method – method of iterations (forward and backward iterations) – method of Least squares.	K1- K6	13	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Complex Analysis Functions of a complex variable - Analytic function - Cauchy - Riemann equations - Laplace equation and harmonic function - Line integral in complex plane – Singular points- Cauchy's theorem - multiply connected regions - Cauchy integral formula - Derivatives of analytic function-Taylor and Laurent series – Residue theorem	K1- K6	13	1-5
3	Linear vector Space Dual space: ket and bra notation – basis – orthogonal basis – change of basis – Isomorphism of vector spaces – projection operator – Eigen values and eigen functions –orthogonal transformations and rotations– Expansion theorem – Inner product and unitary spaces – Orthonormal sets – Schmidt orthogonalization procedure – Completeness – Applications to Hydrodynamics , Heat flow in solids, Gravitation and Electromagnetic field	K1- K6	13	1-5
4	Tensor Analysis Tensors in Physics - Notation and conventions - Contra and covariant tensors of rank one and two - Algebra of tensors - outer and inner products - Contraction - Symmetric and anti symmetric tensors - Quotient law - Conjugate tensors - Metric tensor - Raising and lowering of indices-Stress, strain and Hooke's law – Tensors in dynamics, in elasticity and in rigid bodies - Moment of inertia tensor	K1- K6	13	1-5
5	Special Functions – I Gamma and Beta functions - Properties - Legendre polynomial and function - Generating function - Rodrigue formula – Orthogonality property - Associated Legendre function - Recurrence relations	K1- K6	13	1-5

BOOKS FOR STUDY

H. K. Dass, *Mathematical Physics*, 8th edition, S. Chand & Company Limited, Delhi, 2019.
Sathyaprakash, *Mathematical Physics with Classical Mechanics*, 6th edition, Sultan Chand & Sons, Delhi, 2014.

BOOKS FOR REFERENCE

Louis Albert Pipes, Lawrence R. Harvill, *Applied Mathematics for Engineers and Physicist*, 3rd Edition, Reprint, McGraw – Hill, New York, 2013.
Greenberg, *Advanced Engineering Mathematics*, 2nd Edition, Pearson Education India, Delhi, 2014.
saac A. Thangapandi Somasundaram A. Arumugam S, *Engineering Mathematics*, Vol I - III, 2nd edition, Scitech Publications (India) Pvt. Ltd, Chennai, 2009.
George Arfken, Hans-Jurgen Weber, *Mathematical Methods for Physicists*, 6th Edition, Academic Press, Cambridge, 2003.
K. F. Riley, M. P. Hobson, S. J. Bence, *Mathematical Methods for Physics and Engineering: A Comprehensive Guide*, 3rd Edition, Cambridge University Press, Cambridge, 2006.
Mary L. Boas, *Mathematical Methods in the Physical Sciences*, 3rd Edition, Wiley, New Jersey, 2006.
Nikolaï Nikolaevich Lebedev, *Special Functions and Their Applications*, Courier Dover Publications, New York, 1972.

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration: 1 hour 30 minutes**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	Problem section 1 x 5 = 5 marks (1 out of 2 questions to be answered)
	K4	PART B	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
C	K5, K6		20	1 x 20 = 20 marks <ul style="list-style-type: none"> • 1 question to be asked with internal choice • Question should have two subdivisions which carries 10 marks each – one for K5 and other for K6 level question

Other Components:**Total Marks: 50**

Seminars / Quiz / Problem Solving / Assignment

All K1- K6 to be assessed

End Semester Examination**Total Marks : 100****Duration : 3 hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 3 questions K2 - 4 questions K3 – 3 questions
B	K3	PART A	10	Problem section 2 x 5 = 10 marks (2 out of 3 questions to be answered)
	K4	PART B	20	4 x 5 = 20 marks (4 out of 5 questions to be answered)
C	K5, K6		40	2 x 20 = 40 marks <ul style="list-style-type: none"> • 2 questions to be asked with internal choice • Questions should have two subdivisions which carries 10 marks each – one for K5 and other for K6 level questions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PC/MP14												
I	Course Title: MATHEMATICAL PHYSICS I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	2	1	2	1	1	1	3	2	2	2	2
CO 2	3	2	3	2	2	1	1	1	3	3	2	2	1
CO 3	3	3	3	2	3	1	1	1	3	3	2	3	1
CO 4	3	3	3	2	2	1	1	1	3	3	3	3	2
CO 5	3	3	2	2	3	1	1	1	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

STATISTICAL MECHANICS

CODE: 23PH/PC/SM14

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE:

- To make the students understand real system by integrating thermodynamics and kinetic theory with statistical techniques
- To expose the students to the concepts and the significance of entropy
- To facilitate the students with the theories pertaining to ensembles, canonical ensembles and grand canonical ensemble
- To impart an in-depth understanding in the quantum picture, density matrix and quantum gases
- To enhance the students knowledge on the concepts of ideal gas statistics related to Bose Einstein and Fermi Dirac utilizing quantum techniques

COURSE LEARNING OUTCOMES:

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and relate statistical methods to ideal gas, actual gas and harmonic oscillator in the field of thermodynamics.	K1
CO2	provide a description of the relevant parameters, thermodynamic ensembles, and potentials that are employed to describe macroscopic systems.	K2
CO3	compute thermodynamic probability and apply probability theory to the distribution of particles in multiple systems.	K3
CO4	distinguish the characteristics of quantum systems including phonon gas, photon gas and electron gas using statistical methods.	K4
CO5	develop analytical skills for problem solving in statistical mechanics	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Ensemble Theory Foundation of statistical Mechanics – connection between statistical mechanics and thermodynamics – classical ideal gas – Gibb’s paradox – phase space – Liouville’s theorem, microcanonical ensemble – classical gas in microcanonical ensemble – linear harmonic oscillator – coarse graining of phase space	K1-K5	13	1-5
2	Canonical Ensembles Classical Canonical ensembles –partition function – connection with thermodynamics – energy fluctuation – classical ideal gas in canonical ensembles - calculation of statistical quantities – equipartition theorem – classical harmonic oscillator – two level system – concept of negative temperature – particle in a box – linear harmonic oscillator – system with internal degrees of freedom – rigid rotator – Einstein’s theory of specific heat capacity	K1-K5	13	1-5
3	Grand Canonical ensemble Particle reservoir – grand partition function – connection with thermodynamics – classical gas in grand canonical ensemble – symmetry aspect of many particle wave function – photons – number fluctuation – parametric equation of states – virial expansion – critical fluctuation – pair production – elements of quantum statistics – density matrix – pure and mixed states – properties of density matrix– density operators for quantum statistics.	K1-K5	13	1-5
4	Bose – Einstein statistics Ideal Bose gas – its thermal properties – statistics of ensembles - Black body radiation – phonons - Debye’s theory of specific heat –BE condensation -Liquid helium – super fluidity	K1-K5	13	1-5
5	Ideal Fermi gas Ideal Fermi gas – Fermi Dirac distribution – thermodynamic properties of Fermi gas – electrons in metals – electronic heat capacity – paramagnetic susceptibility – white dwarf – Chandrasekhar limit – nuclear matter.	K1-K5	13	1-5

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Pathria, R. K., and Beale, P., *Statistical Mechanics*, 4th edition, RELX India Pvt. Ltd, New Delhi, 2021.

Greiner, W., Neise, L., and Stocker, H., *Thermodynamics and Statistical Mechanics*, 4th edition, Springer India Pvt. Ltd., New Delhi 1995.

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Agarwal, B. K., and Eisner, M., *Statistical Mechanics*, 8th edition, New Age International Pvt. Ltd., New Delhi, 2011.

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Reif, F., *Fundamentals of Statistical and Thermal Physics*, 4th edition, Sarat Impressions Pvt. Ltd., Kolkata, 2010.

Landau, L. D., and Lifshitz, E., *Statistical Physics*, 3rd edition, Reed Elsevier India Pvt, Ltd., New Delhi, 1980.

Hill, T. L., *Statistical Mechanics: Principles and Selected Applications*, 4th edition, Dover India, Bangalore, 1987.

Chandler, D., *Introduction to Modern Statistical Mechanics*, 6th edition, Oxford University Press, New Delhi, 1987.

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration : 1 hour 30 minutes**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	Problem section 1 x 5 = 5 marks (1 out of 2 questions to be answered)
	K4	PART B	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
C	K5		20	1 x 20 = 20 marks ➤ 1 question to be asked with internal choice ➤ Question can have subdivisions

Other Components:**Total marks : 50**

Presentation/Assignments/Problem solving/Quiz

All K1 – K5 levels has to be assessed

End Semester Examination**Total Marks:100****Duration : 3hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 3 questions K2 - 4 questions K3 – 3 questions
B	K3	PART A	10	Problem section 2 x 5 = 10 marks (2 out of 3 questions to be answered)
	K4	PART B	20	4 x 5 = 20 marks (4 out of 5 questions to be answered)
C	K5		40	2 x 20 = 40 marks ➤ 2 question to be asked with internal choice ➤ Questions can have subdivisions

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PC/SM14												
I	Course Title: STATISTICAL MECHANICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	1	2	1	1	1	3	2	3	3	2
CO 2	3	3	3	1	2	1	1	1	2	3	2	3	1
CO 3	3	3	3	1	2	1	1	1	3	3	3	2	2
CO 4	3	3	3	1	2	1	1	1	3	3	2	3	2
CO 5	3	3	3	1	2	1	1	1	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

ELECTRONICS

CODE: 23PH/PC/EL14

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE:

- To impart an extensive knowledge on different electronic devices.
- To enable the students to understand the physical concepts, construction, working and operational characteristics of semiconductor devices, microprocessor and peripheral interface devices.
- To guide the students to understand the functionalities of special electronic devices, various logic circuits, microprocessor and peripheral interface devices and apply them in instrument design.
- To equip the students to develop expertise in analysing the performance of electronic devices and propose scientific solutions.
- To facilitate the students to design the electronic devices and develop expertise in programming for real time applications.

COURSE LEARNING OUTCOMES:

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	acquire knowledge on fundamental theories and principles of semiconductor devices, microprocessor, peripheral interface and their basic operations.	K1
CO2	develop a firm understanding on the concepts of H and Z parameters of transistors, trans-conductance of FET, operations of flip-flops, counters and registers, operations of Op-Amp and 555 timer, arithmetic operations and programming technique in microprocessors	K2
CO3	apply the theoretical concepts of the working of different devices to modify them as an amplifier, voltage variable resistor, switch, rectifiers, counters, registers, voltage controlled oscillator, 8085 and 8255.	K3
CO4	analyze the performance of different amplifier circuits, rectifier circuits, filters, counters, registers and assembly programming languages using instruction sets.	K4
CO5	develop expertise in programming and designing the circuits for day-to-day applications.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Special Devices Transistor Amplifiers – Establishing the Q point – Types of Transistor Amplifiers (CE,CC,CB)- H parameter – Z parameter Types of FET (JFET, D-MOSFET, E- MOSFET) - Structure and constructional features - working principle and characteristics - transconductance G_m - JFET as voltage variable resistor- MOSFET as a switch. SCR theory, construction and characteristics – SCR as half wave and full wave rectifier.	K1-K4	13	1-4
2	Digital Electronics DTL type AND, OR, NAND and NOR – RTL type NAND and NOR – TTL type NAND-- ECL and I²L circuits - CMOS NOR and CMOS NAND. Flip – Flops: RS, RST, D, JK and JK master-slave flip flops Counters-Asynchronous Counters: 4bit binary ripple counter -- mod-5, mod-7 and mod counter – decade counter – up counter – down counter – up-down counter Synchronous counters: mod -8, mod-7, mod-6 and mod -5 parallel counters – race problem Registers: Serial shift register – Ring counter – Johnson counter	K1-K6	13	1-5
3	Op Amp, Filters, Timer and Its Applications Op-amp: Instrumentation amplifier – Transducer bridge – applications- Temperature indicator, Flux meter and weighing machine Analog integrator, differentiator – Design of analog circuits for the solution of differential equation and simultaneous equation using op amp – Sample and hold system – analog multiplexer. Active filters: high, low and band pass filters – first order and second order filters. 555 Timer: Internal architecture and working – monostable and astable operation – voltage control oscillator (VCO) 566 – PLL concept - Phase locked loop IC 565	K1-K6	13	1-5

UNIT	CONTENT	CL	Hrs	CO
4	8085 Programming and Interfacing Architecture of 8085 – addressing modes – instruction sets – programming technique - assembly language programs – multibyte arithmetic operations, array programme -code conversion (BCD to binary, binary to BCD)– block move- Timing diagram for memory READ and memory WRITE cycles – Memory mapping – I/O schemes – memory mapped I/O and I/O mapped I/O schemes – comparison between them.	K1-K6	13	1-5
5	Interfacing Peripheral and I/O Systems Programmable peripheral interface 8255: Architecture of 8255 – control signals of 8255 – operational modes – assembly language programs for interfacing of traffic light control – interfacing multiplexed 7 segment display – interfacing of DAC and ADC – Stepper motor interface.	K1-K6	13	1-5

BOOKS FOR STUDY

Agrawal J.P, *Soild State Electronics*, Pragati Prakashan, Reprint, Meerut, 2021.

Ramesh Gaonkar, *Microprocessor Architecture, Programming and Application with 8085*, Penram International Publishing, 6th edition, Mumbai, 2013.

Douglas V.Hall, *Microprocessor and Interfacing*, 3nd Edition. Tata McGraw Hill Publishing, Noida, 2017.

Aditya P. Mathur, *Introduction to Microprocessors*, McGraw Hill Higher Education, 3rd edition, New York, 1990.

A.P. Malvino, D.P. Leach and Saha , *Digital Principles & Applications*, Tata McGraw Hill, 7th Edition , Noida, 2011.

Milman and Grabel, *Microelectronics*, McGraw Hill Education; 2nd edition, New York 2017.

BOOKS FOR REFERENCE

Taub and Schilling, *Digital Integrated Electronics*, McGraw Hill Education, New York 2017.

Albert, D. Helfrick and Cooper, W. D., *Modern Electronic Instrumentation and Measurement Techniques*, PHI Learning Pvt. Ltd., Delhi, 2011.

Vijayendran, V., *Fundamentals of Microprocessor 8085 – Architecture, Programming and Interfacing*, Viswanathan, S., Printers & Publishers Pvt Ltd , Chennai, 2009.

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration : 1 hour 30 minutes**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	Problem section 1 x 5 = 5 marks (1 out of 2 questions to be answered)
	K4	PART B	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
C	K5, K6		20	1 x 20 = 20 marks <ul style="list-style-type: none"> 1 question to be asked with internal choice Question should have two subdivisions which carries 10 marks each – one for K5 and other for K6 level question

Other Components:**Total Marks: 50**

Seminars / Quiz / Problem Solving / Assignment

All K1- K6 to be assessed

End Semester Examination**Total Marks:100****Duration: 3 hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 3 questions K2 - 4 questions K3 – 3 questions
B	K3	PART A	10	Problem section 2 x 5 = 10 marks (2 out of 3 questions to be answered)
	K4	PART B	20	4 x 5 = 20 marks (4 out of 5 questions to be answered)
C	K5, K6		40	2 x 20 = 40 marks <ul style="list-style-type: none"> 2 questions to be asked with internal choice Questions should have two subdivisions which carries 10 marks each – one for K5 and other for K6 level questions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PC/EL14												
I	Course Title: ELECTRONICS I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	1	2	3	1	3	3	2	3	1
CO 2	3	3	3	2	1	3	3	2	3	3	3	2	1
CO 3	3	3	2	3	2	2	3	2	3	3	2	3	2
CO 4	3	3	2	3	1	2	3	1	3	3	2	3	1
CO 5	3	3	2	3	3	3	3	1	3	3	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

EXPERIMENTAL PHYSICS I

CODE:23PH/PC/P114

CREDITS:4

L T P:0 0 8

TOTAL TEACHING HOURS: 104

OBJECTIVES OF THE COURSE:

- To illustrate the concepts of theoretical understanding required for the scientific phenomenas through experiential learning.
- To enhance analytical, technical and observational skills to perform the specific experiment.
- To enable the students to gain expertise in handling and troubleshooting variety of equipments in electrical, electronics and general experiments.
- To prepare the students to interpret the scientific findings utilizing the experimental data in a systematic manner.
- To acquire intellectual skills which kindle the curiosity for practical real time applications.

COURSE LEARNING OUTCOMES:

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the experimental perspective of the principles of physics through individual hands on experience leading to conceptual learning.	K1
CO2	design electronic circuits, ideate the experimental set-up of equipments and develop microprocessor programme to perform the specific experiments systematically.	K2
CO3	demonstrate Laboratory experiments, both qualitatively and quantitatively inculcating scientific temper, reflective and logical thinking.	K3
CO4	evaluate and interpret the recorded observations using graphs and numerical calculations justified by the degree of accuracy.	K4, K5
CO5	draw conclusions from performed experiments and explore the scope of future investigations promoting experiential learning.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

LIST OF EXPERIMENTS	CL	Hrs	CO
1) De Sauty's bridge – Determination of unknown capacitance 2) Optic Bench - Fresnel's Biprism – Determination of wavelength of monochromatic source of light 3) Polarimeter – Determination of specific rotation of the given solutions 4) Cornu's method – Elliptical Fringes - Determination of Young's modulus and Poisson's ratio of a material 5) UV visible Spectrometer – Determination of absorbance of the given solution at varied concentrations 6) Study of RS, Clocked RS, D flip flops using NAND and NOR 7) Arithmetic Operations – 4-bit binary addition and subtraction using IC 7483 8) OP-AMP - 4 bit Digital – Analog R – 2R Ladder 9) OP – AMP – Phase shift oscillator 10) Multi vibrators – Monostable and astable using 555 timer 11) UJT - Characteristics and as relaxation oscillator 12) Microprocessor 8085 - Traffic Signal Controller 13) Microprocessor 8085 - Code Conversion 14) Microprocessor 8085 - Stepper motor interface 15) Microprocessor 8085 - Interfacing of R-2R ladder 16) Microprocessor 8085 - Interfacing of 7 segmented display	K1-K6	104	1-5

BOOKS FOR STUDY

Ouseph, C. C., V. Srinivasan and R. Balakrishnan, A Text Book of Practical Physics, Vol. I & II S. Viswanathan Pvt., Ltd. Madras, 2009.

Philomin Raj, M.Sc. Practical Physics, Academic Scientific technical Publishers Distributors Private Ltd. Madras, 1989.

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration : 3hours**

CRITERION	Cognitive Level	Marks
Aim & Formula	K1, K2	10
Experimental Procedure	K3	10
Observation	K4	10
Calculation	K5	10
Results &Accuracy	K6	5
Interpretation on the Experiment	K6	5
TOTAL		50

PATTERN OF ASSESSMENT:**End Semester Examination:****Total Marks: 50****Duration: 3 hours**

CRITERION	Cognitive Level	Marks
Aim & Formula	K1, K2	10
Experimental Procedure	K3	10
Observation	K4	10
Calculation	K5	10
Results &Accuracy	K6	5
Interpretation on the Experiment	K6	5
TOTAL		50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PC/P114												
I	Course Title: EXPERIMENTAL PHYSICS I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	2	2	2	1	3	3	2	3	2
CO 2	3	3	2	3	2	2	2	1	3	3	2	3	2
CO 3	3	3	2	2	3	3	1	1	3	3	2	2	3
CO 4	3	3	1	2	1	2	1	1	3	3	1	2	1
CO 5	3	3	2	3	1	2	2	1	3	3	2	3	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

MATHEMATICAL PHYSICS II

CODE: 23PH/PC/MP24

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To inculcate problem-solving skills and to enhance the expertise in mathematical techniques required in Physics
- To enable the students to formulate, interpret and draw inferences from mathematical solutions.
- To equip the students to apply mathematical methods in obtaining solutions for real life problems.
- To impart students with the advanced concepts in Fourier Transform, Partial Differential Equations, Special Functions, Group Theory and Probability
- To make the students to master in various special functions

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the main mathematical methods used in physics.	K1
CO2	explain the fundamentals of Fourier Transform, Partial Differential Equations, Special Functions, Group Theory and Probability	K2
CO3	apply the concepts of mathematical physics in real life problems	K3
CO4	demonstrate the tools of mathematical physics that are important prerequisites for other theoretical physics courses	K4
CO5	evaluate accurate and efficient use of specific mathematical physics techniques	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Fourier and Laplace Transform 1.1 Fourier transform – Infinite Fourier Sine and Cosine Transforms – Properties of Fourier Transform – Finite Fourier Transforms 1.2 Laplace Transform – Properties of Laplace Transform – Laplace transform of a derivative and Integral – Laplace Transform of Periodic Functions – Laplace Transform of Special Functions 1.3 Inverse Laplace Transform: Fourier Mellin Theorem – Properties of Inverse Laplace Transform – Convolution Theorem – Evaluation of Inverse Laplace Transforms by Convolution Theorem 1.4 Solution of Ordinary Differential Equations with constant and variable coefficients.	K1- K6	13	1-5
2	Partial Differential Equations 2.1 Introduction – Elliptic, parabolic and hyperbolic equations - Solution of partial differential equations – Method of separation of variable 2.2 Solution of wave equation by D’ Alembert’s method – One dimensional Heat Flow – Two dimensional Heat Flow – Equation of heat flow in two dimension in polar coordinates – Solution of Laplace Equation	K1- K6	13	1-5
3	Special Function – II 3.1 Bessel’s differential equation: Bessel’s Function of first ($J_n(x)$) and second kind ($Y_n(x)$) – Bessel’s function of third kind: Hankel functions – Recurrence formulae for $J_n(x)$ – Generating function for $J_n(x)$ – Orthonormality of Bessel’s functions 3.2 Hermite differential equation and Hermite polynomials – Generating function – Recurrence formulae – Rodrigue’s formula – Orthogonality – Laguerre’s differential equation and Laguerre polynomials – Generating function - Rodrigue’s formula – Recurrence relations – Orthogonal property	K1- K6	13	1-5
4	Group Theory 4.1 Concept of a group – Abelian group – The generators of finite group – The cyclic group – The group	K1- K6	13	1-5

UNIT	CONTENT	CL	Hrs	CO
	multiplication table – Rearrangement theorem – Subgroups – Cosets – Conjugate elements and classes – The product of classes – Conjugate Subgroups, Normal Subgroups and Factor Groups – Isomorphism and Homomorphism – Permutation Groups 4.2 The group of symmetry of an equilateral triangle and square – Representation of Groups – Reducible and Irreducible Representations – Important theorems on Representations – The orthogonality theorem – The character of a representation – Continuous and Lie Groups – The Unitary Group and Point Groups			
5	Probability 5.1 Introduction - Definitions – Sample Space – Mutually Exclusive Events – The theorem of total probability – Compound events and Theorem of Compound Probability – Binomial theorem of Probability – Measures of central tendency, Averages, Dispersion – Standard deviation as the sum of distribution – Moments 5.2 Theoretical distributions – Binomial, Poisson's and Normal distributions- Other Discrete Distributions: Casual distribution, Rectangular and Geometrical Distribution	K1- K6	13	1-5

BOOKS FOR STUDY

Sathyaprakash, *Mathematical Physics with Classical Mechanics*, 6th edition, Sultan Chand & Sons, Delhi, 2014.

H. K. Dass, *Mathematical Physics*, 8th edition, S. Chand & Company Limited, Delhi, 2019.

B. D. Gupta, *Mathematical Physics*, 4th edition, Vikas Publishing House Pvt Ltd, Noida, 2010.

A.W. Joshi, *Elements of group theory for physicists*, 4th Edition, New Age International Publishers, New Delhi, 2007.

BOOKS FOR REFERENCE

George Arfken, Hans-Jurgen Weber, *Mathematical Methods for Physicists*, 6th Edition, Academic Press, Cambridge, 2003.

Louis Albert Pipes, Lawrence R. Harvill, *Applied Mathematics for Engineers and Physicist*, 3rd Edition, Reprint, McGraw – Hill, New York, 2013.

Greenberg, *Advanced Engineering Mathematics*, 2nd Edition, Pearson Education India, Delhi, 2014.

Isaac A. Thangapandi Somasundaram A. Arumugam S, *Engineering Mathematics*, Vol I - III, 2nd edition, Scitech Publications (India) Pvt. Ltd, Chennai, 2009.

K. F. Riley, M. P. Hobson, S. J. Bence, *Mathematical Methods for Physics and Engineering: A Comprehensive Guide*, 3rd Edition, Cambridge University Press, Cambridge, 2006.

Mary L. Boas, *Mathematical Methods in the Physical Sciences*, 3rd Edition, Wiley, New Jersey, 2006.

Nikolaï Nikolaevich Lebedev, *Special Functions and Their Applications*, Courier Dover Publications, New York, 1972.

F. Albert Cotton, *Chemical Applications of Group Theory*, 3rd Edition, Wiley India Pvt. Ltd, New Delhi, 1989.

PATTERN OF ASSESSMENT

Continuous Assessment

Total Marks:50

Duration : 1 hour 30 minutes

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	1 x 5 = 5 marks (Problem Section) (1 out of 2 questions to be answered)
	K4	PART B	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
C	K5, K6		20	1 x 20 = 20 marks <ul style="list-style-type: none"> • 1 question to be asked with internal choice • Question should have two subdivisions which carries 10 marks each – one for K5 and other for K6 level question

Other Components:

Seminars / Quiz / Problem Solving / Assignment

All K1- K6 to be assessed

Total Marks: 50

End Semester Examination**Total Marks : 100****Duration : 3 hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 3 questions K2 - 4 questions K3 – 3 questions
B	K3	PART A	10	2x 5 = 10 marks (Problem Section) (2 out of 3 questions to be answered)
	K4	PART B	20	4 x 5 = 20 marks (4 out of 5 questions to be answered)
C	K5, K6		40	2 x 20 = 40 marks <ul style="list-style-type: none"> 2 questions to be asked with internal choice Questions should have two subdivisions which carries 10 marks each <ul style="list-style-type: none"> – one for K5 and other for K6 level questions

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PC/MP24												
II	Course Title: MATHEMATICAL PHYSICS II												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	2	1	2	1	1	1	3	2	2	2	2
CO 2	3	2	3	2	2	1	1	1	3	3	2	2	1
CO 3	3	3	3	2	3	1	1	1	3	3	2	3	1
CO 4	3	3	3	2	2	1	1	1	3	3	3	3	2
CO 5	3	3	2	2	3	1	1	1	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

CLASSICAL MECHANICS

CODE: 23PH/PC/CM24

CREDITS: 4

L T P:4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To impart knowledge on the fundamental and advanced concepts in classical mechanics.
- To familiarize the students with theoretical concepts of Lagrangian formulation, Hamiltonian formulation, rigid body dynamics, canonical transformations and small oscillations involved in a system.
- To guide the students to realize the importance of constraints, degrees of freedom, Poisson brackets, action angles and free vibrations in a system.
- To equip the students to obtain solutions for simple and complex systems utilizing equations of motion, function and coordinates.
- To train the students to examine a system thoroughly utilizing the advanced concepts of classical mechanics

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	acquire in-depth knowledge of the fundamental and advanced principles in classical mechanics.	K1
CO2	summarize the theory of Lagrange's equations, Euler's equation, Eigen value equation, Legendre transformation and Hamiltonian equations.	K2
CO3	examine the D'Alembert's principle, Euler's theorem on the motion of a rigid body, Hamiltonian equations from Variational principle, free particle in Cartesian coordinate and the principal axis transformation.	K3
CO4	deduce expression for Two - body central force problem, Motion in rotational frames, canonical transformations, Hamilton-Jacobi theory and linear triatomic molecule	K4
CO5	explain application-oriented systems such as Atwood's machine, symmetric top, harmonic oscillator and triple pendulum	K5
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Lagrangian Formulation 1.1 Mechanics of a system of particles - Constraints - D'Alembert's principle and Lagrange equations- Velocity dependent potentials and the dissipation function- Simple applications of the Lagrangian formulation - Hamilton's principle - Non-holonomic systems – Conservation theorems and symmetry properties 1.2 Reduction to the equivalent one-body problem - equations of motion and first integrals - Equivalent one-body problem and classification of orbits - Conditions for closed orbits (Bertrand's theorem)- Kepler's problem – scattering in a central force field - Transformation of the scattering problem to laboratory coordinates.	K1– K5	13	1-5
2	The Kinematics of Rigid Body Motion 2.1 The independent coordinates of a rigid body – Orthogonal transformations - Euler angles - Euler's theorem on the motion of a rigid body - Rotations - Finite and infinitesimal -Rate of change of a vector - Coriolis forces. 2.2 Angular momentum and kinetic energy of motion about a point– The inertia tensor and the moment of inertia - The eigen values of the inertia tensor and the principal axes - Torque free motion of a rigid body - Symmetric top – Precession of the equinoxes and of satellite orbits.	K1– K5	13	1-5
3	Hamiltonian Formulation 3.1 Legendre transformation and Hamiltonian equations - Cyclic coordinates and conservation theorems – Routh's procedure and oscillations about steady motion - Hamiltonian equations from Variational principle. 3.2 The equations of canonical transformations - Poisson brackets – Equations of motion – Conservation theorems in Poisson bracket formulation - Angular momentum Poisson brackets.	K1– K5	13	1-5
4	Hamilton-Jacobi Formulation 4.1 Hamilton-Jacobi equation for Hamilton's principal function- Harmonic oscillator problem – Characteristic function – Separation of variables 4.2 Action angle variables in system of one degree of freedom, in separable systems -Kepler's problem– Hamilton-Jacobi theory, geometrical optics and wave mechanics.	K1– K5	13	1-5

UNIT	CONTENT	CL	Hrs	CO
5	Small Oscillations 5.1 Formulation of the problem - The eigen value equation and the principal axis transformation - Free vibrations and normal coordinates 5.2 Linear triatomic molecule – Forced vibrations and the effect of dissipative forces – Double pendulum – Triple pendulum – Triple parallel pendulum.	K1– K5	13	1-5

BOOKS FOR STUDY

H. Goldstein, Charles Poole and John Sabko, *Classical Mechanics*, 3rd edition, Pearson Education, United Kingdom, 2011.
 M.G. Calkin, *Lagrangian and Hamiltonian mechanics*, 1st Indian Reprint, Allied Publishers, India, 2000.
 R. Douglas Gregory, *Classical Mechanics: An Undergraduate Text*, Cambridge University Press, India, 2006.
 Upadhyaya. J.C, *Classical Mechanics*, 3rd edition, Himalaya Publishing house, India, 2019.

BOOKS FOR REFERENCE

P.V. Panat, *Classical Mechanics*, 5th Edition, Alpha Science International, United Kingdom, 2005.
 K.N. Srinivasa Rao, *Classical Mechanics*, Universities Press Private Limited, India, 2003.
 Dare A. Wells, *Lagrangian dynamics*, McGraw – Hill Education Pvt Ltd, India, 2005.
 Yung–Kuol, *Problems and solutions on Mechanics*, Sarat Book House, India, 2001.
 Rana & Joag, Rana, *Classical Mechanics*, 24th Reprint, Tata McGraw-Hill Education, India, 2001.
 Stephen T. Thornton, Jerry B. Marion, *Classical Dynamics of Particles and Systems*, 5th Edition, Brooks/ Cole, Pacific grove, 2004.

PATTERN OF ASSESSMENT:

Continuous Assessment

Total Marks:50

Duration : 1 hour 30 minutes

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	1 x 5 = 5 marks (Problem Section) (1 out of 2 questions to be answered)
	K4	PART B	15	3 x 5 = 15 marks (3 out of 4 questions to be answered)
C	K5		15	1 x 15 = 15 marks (1 out of 2 questions to be answered)

Other Components:

Presentation/Assignments/Problem solving/Quiz

All K1 – K5 levels has to be assessed

Total marks : 50**End Semester Examination****Total Marks:100****Duration : 3hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 4 questions K2 - 4 questions K3 – 2 questions
B	K3	PART A	10	2 x 5 = 10 marks (Problem Section) (2 out of 3 questions to be answered)
	K4	PART B	30	6 x 5 = 30 marks (6 out of 8 questions to be answered)
C	K5		30	2 x 15 = 30 marks (2 out of 4 questions to be answered)

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PC/CM24												
II	Course Title: CLASSICAL MECHANICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	2	2	1	1	3	2	3	3	2
CO 2	3	3	2	3	2	2	1	1	2	3	2	3	1
CO 3	3	3	3	3	3	2	1	1	3	3	3	2	2
CO 4	2	3	2	3	1	2	1	1	3	3	2	3	3
CO 5	3	2	3	3	2	2	1	1	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

EXPERIMENTAL PHYSICS II

CODE:23PH/PC/P224

CREDITS:4

L T P:0 0 8

TOTAL TEACHING HOURS: 104

OBJECTIVES OF THE COURSE:

- To illustrate the concepts of theoretical understanding required for the scientific phenomenas through experiential learning.
- To enhance analytical, technical and observational skills to perform the specific experiment.
- To enable the students to gain expertise in handling and troubleshooting variety of equipments in electrical, electronics and general experiments.
- To prepare the students to interpret the scientific findings utilizing the experimental data in a systematic manner.
- To acquire intellectual skills which kindle the curiosity for practical real time applications.

COURSE LEARNING OUTCOMES:

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the experimental perspective of the principles of physics through individual hands on experience leading to conceptual learning.	K1
CO2	design electronic circuits, ideate the experimental set-up of equipments and develop microprocessor programme to perform the specific experiments systematically.	K2
CO3	demonstrate Laboratory experiments, both qualitatively and quantitatively inculcating scientific temper, reflective and logical thinking.	K3
CO4	evaluate and interpret the recorded observations using graphs and numerical calculations justified by the degree of accuracy.	K4, K5
CO5	draw conclusions from performed experiments and explore the scope of future investigations promoting experiential learning.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

LIST OF EXPERIMENTS	CL	Hrs	CO
1. Magnetron method – Determination of e/m ratio 2. Hall Effect – Determination of Hall voltage, Hall co-efficient, carrier mobility, Hall angle, carrier concentration 3. Air wedge – Determination of thickness of the insulation of a wire 4. Mayer's method – Determination of the coefficient of viscosity of the given liquid 5. Hydrogen spectra – Determination of Rydberg's constant 6. Cornu's method (Hyperbolic Fringes) – Determination of Young's modulus and Poisson's ratio 7. GM counter – Determination of absorption coefficient and verification of inverse square law 8. Ultrasonic interferometer - Determination of velocity and adiabatic compressibility of ultrasonic waves in different liquids 9. Planck's constant – Determination of Planck's constant using light-emitting diodes (LEDs) for different colours 10. Determination of the value of Stefan's constant 11. He – Ne Laser – Determination of particle size of Lycopodium powder 12. Op - Amp – To solve simultaneous equation 13. Op - Amp – To study the frequency response of Low pass, band pass and high pass filters 14. Flip flops - Shift register, Ring counter and Johnson twisted ring counter using IC 7473 15. Op-Amp – Pulse generator and its application as Frequency divider 16. Regulated power supply - Regulation characteristics of IC 7805	K1-K6	104	1-5

BOOKS FOR STUDY

Ouseph, C. C., V. Srinivasan and R. Balakrishnan, *A Text Book of Practical Physics*, Vol. I & II S. Viswanathan Pvt., Ltd. Madras, 2009.

Philomin Raj, *M.Sc. Practical Physics*, Academic Scientific technical Publishers Distributors Private Ltd. Madras, 1989.

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration : 3hours**

CRITERION	Cognitive Level	Marks
Aim & Formula	K1, K2	10
Experimental Procedure	K3	10
Observation	K4	10
Calculation	K5	10
Results &Accuracy	K6	5
Interpretation on the Experiment	K6	5
TOTAL		50

End Semester Examination:**Total Marks: 50****Duration: 3 hours**

CRITERION	Cognitive Level	Marks
Aim & Formula	K1, K2	10
Experimental Procedure	K3	10
Observation	K4	10
Calculation	K5	10
Results &Accuracy	K6	5
Interpretation on the Experiment	K6	5
TOTAL		50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PC/P224												
II	Course Title: EXPERIMENTAL PHYSICS II												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	2	2	2	1	3	3	2	3	2
CO 2	3	3	2	3	2	2	2	1	3	3	2	3	2
CO 3	3	3	2	2	3	3	1	1	3	3	2	2	3
CO 4	3	3	1	2	1	2	1	1	3	3	1	2	1
CO 5	3	3	2	3	1	2	2	1	3	3	2	3	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

SOFT SKILLS

CODE: 23PH/PK/SS22

CREDITS: 2

L T P: 2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- To empower students and create opportunities for self-development
- To instill confidence in students to face challenges
- To manage emotions and resolve conflicts
- To organize activities and manage time
- To set goals and plan ahead

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- Communicate with confidence and poise
- Accept themselves and improve on their weaknesses
- Strengthen their relationships through confronting and solving problems
- Work more effectively and complete activities on time
- Plan their future with clarity and focus

Unit 1

Behavioural Traits

(6 Hours)

- 1.1 Self- Awareness
- 1.2 Communication Skills –Verbal and Non-Verbal
- 1.3 Leadership Qualities
- 1.4 Etiquette and Good Manners
- 1.5 Experiential Learning –based on activities

Unit 2

Team Work

(5 Hours)

- 2.1. Interpersonal Skills
- 2.2. People Management
- 2.3. Creative Thinking
- 2.4. Critical Thinking
- 2.5. Experiential Learning – based on activities

Unit 3

Time Management

(5 Hours)

- 3.1. Importance of time management
- 3.2. Planning and Prioritizing
- 3.3. Organizing skills
- 3.4. Action Plan
- 3.5. Experiential Learning – based on activities

Unit 4**Conflict Resolution****(5 Hours)**

- 4.1. Reasons for conflict
- 4.2. Consequences of conflict
- 4.3. Managing emotions
- 4.4. Methods of resolving conflicts
- 4.5. Experiential Learning – based on activities

Unit 5**Career Mapping****(5 Hours)**

- 5.1. Goal-setting and Decision-making
- 5.2. Career Planning
- 5.3. Resume Writing
- 5.4. Handling Interviews
- 5.5. Experiential Learning – based on activities

BOOKS FOR REFERENCE

Khera, Shiv. *You Can Win*. Macmillan India, 2002.

Mishra, Rajiv. K. *Personality Development: Transform Yourself*. Rupa, 2004.

Newstorm, John. W. and Scannell. Edward. E. *Games Trainers Play: Experiential Learning*. Tata McGraw Hill, 1980.

PATTERN OF EVALUATION**Internal Assessment:****Total Marks: 50**

Quiz / Group Presentation /Assignment

No End Semester Examination.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

QUANTUM MECHANICS I

CODE:23PH/PC/QM34

CREDITS: 4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To enhance the knowledge of students in the fundamental and advanced concepts of quantum mechanics.
- To guide students to explain the theoretical concepts of general and matrix formalism, approximation methods, angular momentum and theories related to scattering methods.
- To equip students to study the importance of state functions, operators, degeneracy states and partial waves.
- To familiarize the students to obtain solutions for simple and complex systems utilizing equations of motion and mathematical representation.
- To acquaint students to examine the quantum mechanical effect of different dimensional eigen value problems, hydrogen molecule, spinors and the importance of scattering by a central potential.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	acquire in-depth knowledge of the fundamental and advanced principles in quantum mechanical aspect.	K1
CO2	explain the theory of schrodinger and heisenberg representation, perturbation methods, orbital and intrinsic angular momentum along with scattering analysis.	K2
CO3	examine the significance of dirac's notation, unitary transformations, variation principle, pauli's spin matrices and born approximation in scattering.	K3
CO4	analyse the gained knowledge to derive expression for linear harmonic oscillator, anharmonic oscillator, general angular momentum and mass coordinate systems.	K4
CO5	solve problems in physics utilizing theoretical concepts in quantum mechanics.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	General Formalism and One-Dimensional Energy Eigen Value Problem 1.1 Interpretation of wave function – Time dependent Schrodinger equation – Time independent Schrodinger equation - Linear vector space –Linear operator–Eigen functions and eigen values -Hermitian operator - Postulates of quantum mechanics -Simultaneous measurability of observables -General uncertainty relation Dirac's notation – Equations of motion - Momentum representation 1.2 Square–well potential with rigid walls – Square well potential with finite walls – Square potential barrier – Alpha emission – Bloch waves in a periodic potential – Kronig-penny square well periodic potential – Linear harmonic oscillator: Operator method	K1 – K5	13	CO1-5
2	Three-Dimensional Energy Eigen Value Problems and Matrix Formalism 2.1 Particle moving in a spherically symmetric potential – System of two interacting particles –Rigid rotator - Hydrogen atom. 2.2 Matrix representation of wave function – Matrix representation of operators –Schrodinger equation in matrix form – Eigen value problems – Unitary transformations– Harmonic oscillator: matrix method - matrix representation of spin – Pauli matrices- Spinors and expectation values – Precession of an electron in a magnetic field.	K1 – K5	13	CO1-5
3	Approximation Methods 3.1 Basic concepts of time independent perturbation theory – Non degenerate energy levels – First order and second order correction to energy and wave function 3.2 Anharmonic oscillator: first order correction, ground state of Helium and hydrogen – Degenerate energy levels – Stark effect – Spin-Orbit interaction - Variational principle- Variation method for excited states - WKB method.	K1 – K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
4	Angular Momentum 4.1 Angular momentum operator–Commutation relation– Eigen values and Eigen functions of L^2 and L_z – General angular momentum – Eigen states and eigen values of J^2 and J_z – Angular momentum matrices 4.2 Spin angular momentum –Spin vectors for spin half systems –Addition of angular momenta - Clebsch-Gordan coefficients.	K1 – K5	13	CO1-5
5	Scattering Theory and Applications 5.1 Scattering cross section –Scattering amplitude–Partial waves–Scattering by a central potential: Partial wave analysis – Scattering by an attractive square well potential – Scattering length 5.2 Born approximation – Scattering by screened Coulomb potential – Validity of Born approximation–Laboratory and Centre of mass coordinate systems.	K1 – K5	13	CO1-5

BOOKS FOR STUDY

- P. M. Mathews and K. Venkatesan, *A Text book of Quantum Mechanics*, 2nd Edition, Tata McGraw-Hill, India, 2010.
- G. Aruldas, *Quantum Mechanics*, 2nd Edition, Prentice-Hall of India, India, 2008.
- Leonard. I. Schiff, *Quantum Mechanics*, 4th Edition, McGraw Hill education, Tokyo, 2017.
- V. K. Thankappan, *Quantum Mechanics*, 4th Edition, New Academic Science Ltd., India, 2014.
- V. Devanathan, *Quantum Mechanics*, 1st Edition, Narosa Publishing House, India, 2005.

BOOKS FOR REFERENCE

- Nouredine Zettili, *Quantum Mechanics: Concepts and Applications*, 2nd Edition, John Wiley & Sons, New Jersey, 2009.
- Claude Cohen - Tannoudji, Bernard Diu, Franck Laloë, *Quantum mechanics*, Vol. 1, Wiley, New Jersey, 1977.
- Walter Greiner, *Quantum mechanics: An introduction*, 4th Edition, Elsevier, Netherlands, 2001.
- David J. Griffith, *Introduction to Quantum Mechanics*, 2nd Edition, Pearson Education India, 2005.
- Ramamurti Shankar, *Principles of Quantum Mechanics*, 2nd Edition, Springer, New York, 2012
- J.J. Sakurai, *Modern Quantum Mechanics*, Pearson Education, India, 1967.

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration : 1 hour 30 minutes**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	1 x 5 = 5 marks (Problem Section) (1 out of 2 questions to be answered)
	K4	PART B	15	3 x 5 = 15 marks (3 out of 4 questions to be answered)
C	K5		15	1 x 15 = 15 marks (1 out of 2 questions to be answered)

Other Components:**Total marks : 50**

Presentation/Assignments/Problem solving/Quiz

All K1 – K5 levels has to be assessed

End Semester Examination**Total Marks:100****Duration : 3hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 4 questions K2 - 4 questions K3 – 2 questions
B	K3	PART A	10	2 x 5 = 10 marks (Problem Section) (2 out of 3 questions to be answered)
	K4	PART B	30	6 x 5 = 30 marks (6 out of 8 questions to be answered)
C	K5		30	2 x 15 = 30 marks (2 out of 4 questions to be answered)

Mapping of Course Outcomes (COs)

to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PH/PC/QM34												
III	Course Title: QUANTUM MECHANICS – I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	1	2	1	1	3	2	3	3	2
CO 2	3	3	2	3	2	2	1	1	2	3	2	3	1
CO 3	3	3	3	3	3	2	1	1	3	3	3	2	2
CO 4	2	3	2	3	1	2	1	1	3	3	2	3	3
CO 5	3	2	3	3	2	2	2	1	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

SOLID STATE PHYSICS

CODE:23PH/PC/SS34

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- Enable the students to understand the basic concepts of crystal structures, lattice vibrations, electronic band structures and their implications for material properties.
- Expose the students to get themselves familiarized with the importance of periodicity and symmetry in solid state systems.
- Describe the principles of dielectric properties to understand and predict the behaviour of materials in electric fields.
- Analyse the behaviour of magnetic moments and their interactions in different crystalline systems.
- Foster critical thinking skills by engaging students in problem-solving exercises and encouraging them to analyze and interpret experimental data.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explain the fundamental principles and concepts of solid state physics, and apply crystallographic techniques to determine crystal structures and lattice parameters.	K1
CO2	describe the formation of energy bands in solids, calculate band gaps, and predict the electrical conductivity of materials based on their electronic structure.	K2
CO3	solve complex problems related to solid state physics, both analytically and numerically, and interpret experimental data to draw meaningful conclusions.	K3
CO4	comprehend and discuss advanced topics in solid state physics, including superconductivity, semiconductor physics, and the behavior of nanomaterials.	K4
CO5	assess the importance of solid state physics in technological advancements to explain the behaviour of complex materials with diverse properties	K5, K6

CL – Cognitive Level

K1 – Remember | K2 – Understand | K3 – Apply | K4 – Analyse | K5 – Evaluate | K6 - Create

UNIT	CONTENT	CL	Hrs	CO
1	Lattice dynamics 1.1 Theory of elastic vibrations in mono and diatomic lattices - group and phase velocities - Phonons – Dispersion relations - Phonon momentum - Inelastic scattering by phonons 1.2 Heat Capacity Vibrational modes - Density of states in one and three dimensions - Debye's theory of lattice heat capacity – Einstein's theory of specific heat – relation between C_p and C_v – Gruneisen constant - Anharmonic effects: Explanation for Thermal expansion, Thermal Conductivity and resistivity – Umklapp process.	K1- K6	13	CO1-5
2	Theories of electrons 2.1 Free electron gas in one & three dimensions – quantum free electron theory – density of states - Electronic heat capacity - Electrical conductivity – Wiedemann-Franz law - Hall effect 2.2 Band theory of metals and semiconductors - Bloch functions - Kronig-Penney model - Semiconductors - band gap determination - direct and indirect band gap semiconductors – n and p type semiconductors - free carrier concentration in semiconductors –Mobility – Thermoelectric effect 2.3 Fermi surfaces and construction – Experimental methods in Fermi surface studies – de Hass-van Alphen effect.	K1- K6	13	CO1-5
3	Dielectrics and Ferroelectrics 3.1 Polarization – macroscopic electric field – Local electric field at an atom – Clausius -Mosotti Relation - dielectric constant and polarizability – electronic polarizability –ionic polarizability - dipolar polarizability – Piezoelectricity 3.2 Ferroelectricity – Ferroelectric crystals - Classification of ferroelectric crystals - ferroelectric domains – Antiferroelectricity - Ferroelectricity	K1- K6	13	CO1-5

4	Magnetic materials 4.1 Diamagnetism – Quantum theory of paramagnetism – Rare earth ion – Hund’s rule – Quenching of orbital angular momentum – Adiabatic demagnetization 4.2 Ferromagnetic order – Curie point – Exchange integral – Heisenberg’s interpretation of Weiss field – Ferromagnetic domains – Bloch wall – Spin waves – Quantization – Magnons – Thermal excitation of magnons 4.3 Ferrimagnetic order - Curie temperature and susceptibility of ferrimagnets – Theory of antiferromagnetism – Neel temperature – Structure of Ferrites – applications	K1- K6	13	CO1-5
5	Superconductivity 5.1 Experimental facts: Occurrence – Effect of magnetic fields – Meissner effect – Type I and II Superconductors - Critical field – Critical current – Entropy and heat capacity – Energy gap– Microwave and infrared properties – isotope effect 5.2 Theoretical Explanation: Thermodynamics of super conducting transition – London equations - Coherence length – Isotope effect – Cooper pairs – Bardeen Cooper Schrieffer (BCS) Theory – Flux quantization – Single particle tunnelling – Josephson tunnelling – DC and AC Josephson effects – High temperature Superconductors – SQUIDS.	K1-K6	13	CO1-5

BOOKS FOR STUDY:

Charles Kittel, *Introduction to Solid State Physics*, 8th edition, John Wiley & Sons, US, 2012.

Neil. W. Ashcroft, N. David Mermin, *Solid state Physics*, Harcourt Asia PTE Ltd, Singapore, 2021.

S.O. Pillai, *Solid State Physics*, New age international publishers, New Delhi, 2018.

Rita John, *Solid State Physics*, McGraw Hill Education, 2017.

Mohammad Abdul Wahab, *Solid State Physics: Structure and properties of materials*, 2nd edition, Narosa Publishing house private ltd., NewDelhi, 2015.

BOOKS FOR REFERENCE:

H.C. Gupta, *Solid state Physics*, 2nd edition, Vikas publishing house Pvt Ltd., Noida, 2009.

Mircea S. Rogalski, Stuart B. Palmer, Gordon & Breach, *Solid State Physics*, CRC Press, London, 2000.

R.K. Puri and V.K. Babber, *Solid State Physics*, 3rd edition, S. Chand and company Ltd., Delhi, 2010.

P.K. Palanisamy, *Solid State Physics*, Scitech Publication Pvt Ltd, Chennai, 2011.

Dr. Ajay Kumar Saxena, *Solid State Physics*, Pragati Prakashan Publishers, Uttarpradesh, 2023.

PATTERN OF ASSESSMENT

Continuous Assessment

Total Marks:50

Duration : 1 hour 30 minutes

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	1 x 5 = 5 marks (Problem Section) (1 out of 2 questions to be answered)
	K4	PART B	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
C	K5, K6		20	1 x 20 = 20 marks <ul style="list-style-type: none">• 1 question to be asked with internal choice• Question should have two subdivisions which carries 10 marks each – one for K5 and other for K6 level question

Other Components:

Seminars / Quiz / Problem Solving / Assignment

All K1- K6 to be assessed

Total Marks: 50

End Semester Examination**Total Marks : 100****Duration : 3 hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 3 questions K2 - 4 questions K3 – 3 questions
B	K3	PART A	10	1 x 5 = 10 marks (Problem Section) (2 out of 3 questions to be answered)
	K4	PART B	20	4 x 5 = 20 marks (4 out of 5 questions to be answered)
C	K5, K6		40	2 x 20 = 40 marks <ul style="list-style-type: none"> 2 questions to be asked with internal choice Questions should have two subdivisions which carries 10 marks each <ul style="list-style-type: none"> – one for K5 and other for K6 level questions

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PC/SS34												
III	Course Title: SOLID STATE PHYSICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	1	1	1	1	3	3	2	2	2
CO 2	3	3	2	2	1	1	1	1	3	3	2	2	2
CO 3	3	3	3	2	2	1	1	1	3	3	2	2	2
CO 4	3	3	3	2	2	1	1	1	3	3	3	2	2
CO 5	3	3	3	2	2	1	1	1	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

ELECTROMAGNETIC THEORY

CODE: 23PH/PC/ET34

CREDITS:4

L T P:4 2 0

TOTAL TEACHING HOURS:78

OBJECTIVES OF THE COURSE

- To provide an understanding on the fundamental aspects of electromagnetic theory.
- To illustrate the applications of electrostatics, magnetostatics and Maxwell's equations in macroscopic media and waveguides.
- To impart the knowledge on energy in dielectric system and magnetic field, energy flow in waveguides and relativistic energy of a free particles.
- To make the students to learn boundary value problems in electrostatics and magnetostatics, conservation laws, plane electromagnetic waves and its propagation through vacuum and medium.
- To expose the students electric and magnetic dipoles, retarded potentials, propagation of electromagnetic waves and relativistic electrodynamics.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	remember the basic concepts of divergence and curl, biot-savart law, amperes law, electric and magnetic potential, maxwell's equation, poynting's theorem, polarization, wave equation, lorentz's transformation and energy-momentum correlation	K1
CO2	understand the idea on electric dipole, magnetic dipole, multipole, gauge transformation, frequency dependence of permittivity, and covariance of electrodynamics.	K2
CO3	apply the concept of multipole to assess field at different distances, poynting's theorem in linear dissipative media, wave propagation in a rectangular wave guide, lorentz transformation to show invariance of maxwell's equation.	K3
CO4	analyse the effect of magnetic field on atomic orbits, electric field in a dielectric medium, reflection and transmission at normal incidence and oblique incidence, fields on the surface and inside rectangular wave guide, transformation of electromagnetic fields.	K4
CO5	evaluate and develop boundary value problems in electrostatics and magnetostatics, deduct the field of a moving point charge, predict energy flow and attenuation in wave guides, evaluate lagrangian and hamiltonian for a relativistic charged particle.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Electrostatics 1.1 Divergence and curl of E – Electric potential - Poisson's equations - Laplace's equations in 1D, 2D and 3D – Boundary's conditions and uniqueness theorems 1.2 Potential of a localized charge distribution - Energy of a point and continuous charge distributions - Multipole expansion: approximate potentials at large distances – monopole and dipole - Electric field of a dipole 1.3 Dielectrics – Field of a polarized object – Boundary value problems with dielectrics - Field inside a dielectric – Energy in dielectric systems – Forces on dielectric.	K1-K5	15	CO1-CO5
2	Magnetostatics 2.1 Bio-Savart law - Divergence and curl of B – Ampere's law – Calculation of magnetic fields due to current carrying elements – Long straight wire, long solenoid - Magnetic vector potential – Magnetic potential at any point due to current carrying elements 2.2 Macroscopic equations, boundary conditions on B and H - Methods of solving boundary value problems in magnetostatics - Multipole expansion of the vector potential 2.3 Magnetization – Torque and forces on magnetic dipole – Energy in the magnetic field - Effect of a magnetic field on atomic orbits.	K1-K5	15	CO1-CO5
3	Maxwell's equations, Conservation laws and Radiation 3.1 Maxwell's equations – Maxwell's equation in matter – Polarization current – Displacement current - Boundary conditions – Vector and Scalar potentials – Gauge transformations – Lorentz and Coulomb Gauge 3.2. Poynting's theorem and conservation of energy and momentum for a system of charged particles and electromagnetic fields – Retarded scalar and vector potentials for continuous distributions - Jefimenko's equations - Point charges – Lienard-Wiechert potential – Fields of a moving point charge - Electric and magnetic fields of a moving point charge - Velocity and acceleration fields.	K1-K5	16	CO1-CO5

UNIT	CONTENT	CL	Hrs	CO
	3.3 Electric dipole radiation - Magnetic dipole radiation - Radiation from an arbitrary source - Power radiated by a point charge -Larmor formula.			
4	Plane Electromagnetic Waves and Wave guides 4.1. Wave equation – Boundary conditions: Reflection and Transmission – Polarization – Electromagnetic waves in vacuum - Wave equation for E and B - Monochromatic plane waves - Energy and momentum in electromagnetic waves - Propagation in linear media - Reflection and transmission at normal incidence and oblique incidence 4.2. Guided waves – Wave guides – TE and TM waves - TE waves in a rectangular wave guide - Cut-off frequency, wave velocity and wavelength – Group velocity - Coaxial transmission line - Cylindrical waveguides - Energy flow and attenuation in wave guides – Cavity resonators	K1-K5	16	CO1-CO5
5	Relativistic Electrodynamics: 5.1 Lorentz transformation – Structure of space time – Relativistic mechanics - Relativistic energy and momentum – Relativistic kinematics – Relativistic dynamics 5.2 Invariance of Maxwell's equations under Lorentz transformation – Invariance of electric charge; covariance of electrodynamics – Transformation of electromagnetic fields - Lagrangian for a relativistic free particle - Lagrangian and Hamiltonian for a relativistic charged particle in an external electromagnetic field	K1-K5	16	CO1-CO5

BOOKS FOR STUDY

David J. Griffiths, *Introduction to Electrodynamics*, 4th Edition, Pearson Education India Learning Private Limited, Noida, 2015.

John David Jackson, *Classical electrodynamics, An Indian Adaption*, 3rd Edition, Wiley India Pvt Ltd., New Delhi, 2020.

Bishwanath Chakraborty, *Principles of electrodynamics*, Books and Allied Ltd., Chennai, 2010.

BOOKS FOR REFERENCE

B B Laud, *Electromagnetics*, 3rd Edition, New Age International (P), Chennai, 2011
 Gupta SL, Kumar V, Singh SP, *Electrodynamics*, 2nd Edition, Pragati Prakashan, Delhi 2001
 Anton Z. Capri, P. V. Panat, *Introduction to Electrodynamics*, Narosa Publishing house, New Delhi, 2002
 V. V. Sarwate, *Electromagnetic fields and waves*, 2nd Edition, New Age International Publishers (formerly Wiley Eastern limited), Chennai, 2018

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration : 1 hour 30 minutes**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 - 2 questions K3 - 1 question
B	K3	PART A	5	1 x 5 = 5 marks (Problem Section) (1 out of 2 questions to be answered)
	K4	PART B	15	3 x 5 = 15 marks (3 out of 4 questions to be answered)
C	K5		15	1 x 15 = 15 marks (1 out of 2 questions to be answered)

Other Components:**Total marks : 50**

Presentation/Assignments/Problem solving/Quiz
 All K1 – K5 levels has to be assessed

End Semester Examination**Total Marks:100****Duration : 3hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 4 questions K2 - 4 questions K3 – 2 questions
B	K3	PART A	10	2 x 5 = 10 marks (Problem Section) (2 out of 3 questions to be answered)
	K4	PART B	30	6 x 5 = 30 marks (6 out of 8 questions to be answered)
C	K5		30	2 x 15 = 30 marks (2 out of 4 questions to be answered)

Mapping of Course Outcomes (COs)

to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PH/PC/ET34												
III	Course Title: ELECTROMAGNETIC THEORY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	3	2	2	3	3	3	3	2
CO 2	3	3	3	2	3	2	2	2	3	3	3	2	2
CO 3	3	3	3	2	2	1	1	1	3	3	3	2	2
CO 4	3	3	3	2	1	2	2	2	3	3	3	2	3
CO 5	3	3	3	2	3	2	2	2	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

EXPERIMENTAL PHYSICS III

CODE:23PH/PC/P334

CREDITS:4

L T P:0 0 8

TOTAL TEACHING HOURS: 104

OBJECTIVES OF THE COURSE:

- To illustrate the concepts of theoretical understanding required for the scientific phenomenas through experiential learning.
- To enhance analytical, technical and observational skills to perform the specific experiment.
- To enable the students to gain expertise in handling and troubleshooting variety of equipments in electrical, electronics and general experiments.
- To prepare the students to interpret the scientific findings utilizing the experimental data in a systematic manner.
- To acquire intellectual skills which kindle the curiosity for practical real time applications.

COURSE LEARNING OUTCOMES:

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the experimental perspective of the principles of physics through individual hands on experience leading to conceptual learning.	K1
CO2	design electronic circuits, ideate the experimental set-up of equipments and develop microprocessor programme to perform the specific experiments systematically.	K2
CO3	demonstrate Laboratory experiments, both qualitatively and quantitatively inculcating scientific temper, reflective and logical thinking.	K3
CO4	evaluate and interpret the recorded observations using graphs and numerical calculations justified by the degree of accuracy.	K4, K5
CO5	draw conclusions from performed experiments and explore the scope of future investigations promoting experiential learning.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

LIST OF EXPERIMENTS	CL	Hrs	CO
1. Fabry Parot Etalon – Determination of thickness of the air film 2. B-H loop by CRO – Determination of the magnetic behavior of the given specimen 3. Band gap of a thermistor – Determination of the band gap of the thermistor using P.O. Box 4. Guoy's method - Determination of magnetic susceptibility of the given liquid 5. Edser and Butler fringes – Determination of thickness of the air film 6. GM counter – Study of Beta Particle Range and Maximum Energy (Feather Analysis) 7. He – Ne Laser – Determination of Numerical aperture and acceptance angle of an optical fiber 8. Planck's constant - Determination of Planck's constant using black body radiation and photodetector 9. Solar cell - To study the P-V and I-V characteristics 10. Op-amp – To solve differential equation 11. Flip flops – To study JK, D and T flip-flops using 7476 and 7473 12. Counters – To study binary up and down counters using 7473 and 7486 13. Michelson interferometer - Measurement of wavelength of the given source 14. Quincke's Method - Determination of mass and volume susceptibility of the given liquid 15. Op-amp – To construct triangular wave oscillator and Wein bridge oscillator 16. FET CS amplifier- To study the Frequency response, input impedance, output impedance	K1-K6	104	1-5

BOOKS FOR STUDY

Ouseph, C. C., V. Srinivasan and R. Balakrishnan, *A Text Book of Practical Physics*, Vol. I & II S. Viswanathan Pvt., Ltd. Madras, 2009.

Philomin Raj, *M.Sc. Practical Physics*, Academic Scientific technical Publishers Distributors Private Ltd. Madras, 1989.

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration : 3hours**

CRITERION	Cognitive Level	Marks
Aim & Formula	K1, K2	10
Experimental Procedure	K3	10
Observation	K4	10
Calculation	K5	10
Results &Accuracy	K6	5
Interpretation on the Experiment	K6	5
TOTAL		50

End Semester Examination:**Total Marks: 50****Duration: 3 hours**

CRITERION	Cognitive Level	Marks
Aim & Formula	K1, K2	10
Experimental Procedure	K3	10
Observation	K4	10
Calculation	K5	10
Results &Accuracy	K6	5
Interpretation on the Experiment	K6	5
TOTAL		50

Mapping of Course Outcomes (COs)

to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PH/PC/P334												
III	Course Title: EXPERIMENTAL PHYSICS – III												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	2	2	2	1	3	3	2	3	2
CO 2	3	3	2	3	2	2	2	1	3	3	2	3	2
CO 3	3	3	2	2	3	3	1	1	3	3	2	2	3
CO 4	3	3	1	2	1	2	1	1	3	3	1	2	1
CO 5	3	3	2	3	1	2	2	1	3	3	2	3	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

SUMMER INTERNSHIP

CODE : 23PH/PN/SI32

CREDITS:2

OBJECTIVES OF THE COURSE

- To expose the students to research ambience.
- To equip the students to gain knowledge on various experimental and analytic techniques related to research.
- To enable the students to have a hands-on experience to work in their field of interest, helping them to learn how their course of study applies to the real world and enhancing their professional skills that makes them competent for jobs and research after graduation.

The summer internship program is for a minimum period of one month. The students are expected to have regular attendance in their respective Institutes and submit a report to the department about their summer internship along with an attendance certificate. The students are also expected to give a detailed oral presentation in the third semester related to their research carried out at the Institute.

Guidelines for Assessment

The maximum marks for the summer internship are 50 and is evaluated by considering the following:

Summer internship report: **20 marks**

Seminar presentation: **20 marks**

Attendance along with the log book: **10 marks**

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

QUANTUM MECHANICS - II

CODE:23PH/PC/QM44

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To develop deeper understanding on the fundamental principles of quantum mechanics including Wave functions, Hamiltonian operations and eigen value problems.
- To enable the students to describe the significance of symmetry operations in quantum mechanics and its connection to conservation laws and selection rules.
- To employ mathematical techniques to calculate probabilities, expectation values and transition rates for various quantum phenomena.
- To describe the behaviour of identical particles in quantum mechanics, including the Pauli exclusion principle, quantum statistics (Bose-Einstein and Fermi-Dirac), and multi-particle systems.
- To train the students in applying the concepts of quantum mechanics with other areas of physics such as statistical mechanics, solid state physics etc.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	relate the mathematical formalism of quantum mechanics including bra-ket notations, Schrodinger equation, approximation methods etc and explain their significance in understanding the behaviour of quantum systems	K1
CO2	define the time evolution of quantum systems using the Schrodinger equation and interpret the role of Hamiltonians	K2
CO3	apply perturbation theory to deduce and predict energy corrections in quantum systems subjected to external influences	K3
CO4	utilize symmetry principles and angular momentum theory to calculate and examine quantized angular momentum states and selection rules	K4
CO5	contrast and interpret experimental results involving quantum phenomena such as interference patterns and quantum states manipulation	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Time Dependent Perturbation Theory 1.1 Introduction – first and second order transitions – Fermi’s Golden rule - constant perturbation – harmonic perturbation 1.2 Interaction of an atom with electro-magnetic radiation – The dipole approximation – selection rules – The Einstein coefficients and spontaneous emission.	K1- K5	13	CO1-5
2	Identical particles, Symmetries and conservation laws 2.1 Identical particles in quantum mechanics – exchange degeneracy –permutation operators – two - particle system – symmetric and antisymmetric wavefunctions – slater determinant – Pauli Exclusion Principle - system with arbitrary number of particles 2.2 Symmetry transformations – conservation laws and degeneracy - space inversion – intrinsic parity – unitary operator - parity non-conservation – time reversal.	K1- K5	13	CO1-5
3	Relativistic Mechanics 3.1 Lorentz transformation equation - structure of space-time — proper time and proper velocity - metric tensor – contra & covariant vectors - Relativistic addition of velocities – Lorentz conservation of momentum 3.2 Variation of mass with velocity – work – energy theorem – relation between momentum and energy - Minkowski’s space – four vectors – velocity four vector – energy - momentum four vector – force four vector - Compton scattering	K1- K5	13	CO1-5
4	Relativistic Quantum Mechanics 4.1 Generalisation of Schrodinger equation – The Klein – Gordon equation – interpretation – charge and current densities – hydrogen like atom – Dirac’s relativistic Hamiltonian 4.2 Dirac’s matrices – covariant form of Dirac’s equation - probability density - plane wave solutions - negative energy states - spin of Dirac’s particle – relativistic electron in a central potential - radial equation for electron in a central potential – spin magnetic moment	K1- K5	13	CO1-5
5	Elements of field quantization 5.1 Introduction – Lagrangian field theory – classical field equations – Hamiltonian formulation – Quantisation of the field – non – relativistic fields 5.2 Quantisation of Schrodinger equation – the N representation – creation – annihilation operators – relativistic fields – the Klein – Gordon field – Dirac field – electromagnetic field	K1-K5	13	CO1-5

BOOKS FOR STUDY:

- P. M. Mathews and K. Venkatesan, *A Text book of Quantum Mechanics*, 2nd Edition, Tata McGraw-Hill, New Delhi, 2010.
- G. Aruldas, *Quantum Mechanics*, 2nd Edition, Prentice-Hall of India, New Delhi, 2009.
- Leonard. I. Schiff, *Quantum Mechanics*, 4th Edition, McGraw Hill education, Tokyo, 2017.
- V. K. Thankappan, *Quantum Mechanics*, 4th Edition, New Academic Science Ltd., London, UK, 2014.
- V. Devanathan, *Quantum Mechanics*, 1st Edition, Narosa Publishing House, New Delhi, 2005.
- Satya Prakash, *Relativistic mechanics*, Pragati Prakashan Publisher, Uttarpradesh, 2019.

BOOKS FOR REFERENCE:

- B.K. Agarwal, Hari Prakash, *Quantum Mechanics*, Prentice Hall India Learning Pvt. Ltd., Delhi, 2004.
- S L Kakani, H M Chandalia, *Quantum Mechanics: For M.phil, M.Sc., B.Sc. Students of Indian and Foreign Universities NET, SLET, UGC - CSIR & Other Entrance Examination*, Sultan Chand, Newdelhi, 2007.
- Walter Greiner, *Quantum mechanics: An introduction*, 4th Edition, Elsevier Springer, 2001.
- Nouredine Zettili, *Quantum Mechanics: Concepts and Applications*, 2nd Edition, John Wiley & Sons, New Jersey, US, 2009.
- Claude Cohen - Tannoudji, Bernard Diu, Franck Laloë, *Quantum mechanics*, Vol. 2, Wiley, New Jersey, US, 1977.

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration : 1 hour 30 minutes**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	1 x 5 = 5 marks (Problem Section) (1 out of 2 questions to be answered)
	K4	PART B	15	3 x 5 = 15 marks (3 out of 4 questions to be answered)
C	K5		15	1 x 15 = 15 marks (1 out of 2 questions to be answered)

Other Components:

Presentation/Assignments/Problem solving/Quiz

All K1 – K5 levels has to be assessed

Total marks : 50**End Semester Examination****Total Marks:100****Duration : 3hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 4 questions K2 - 4 questions K3 – 2 questions
B	K3	PART A	10	2 x 5 = 10 marks (Problem Section) (2 out of 3 questions to be answered)
	K4	PART B	30	6 x 5 = 30 marks (6 out of 8 questions to be answered)
C	K5		30	2 x 15 = 30 marks (2 out of 4 questions to be answered)

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PC/QM44												
IV	Course Title: QUANTUM MECHANICS – II												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	1	2	1	1	1	3	3	2	2	2
CO 2	3	3	2	2	2	1	1	1	3	3	2	2	2
CO 3	3	3	2	2	2	1	1	1	3	3	2	2	2
CO 4	3	3	2	2	2	1	1	1	3	3	3	2	2
CO 5	3	3	2	2	2	2	1	1	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

NUCLEAR AND ELEMENTARY PARTICLE PHYSICS

CODE: 23PH/PC/NP44

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To enable the students to understand the basic nuclear properties, like size, forces, and to analyze the nature of interactions of nuclei.
- To familiarize the students with the nuclear models and the different types of nuclear reactions and their complexities.
- To facilitate the students to understand nuclear decays with calculations for selection rules and infer the experimental observations
- To equip the students to understand the stability of the nuclei.
- To enable the students to classify the elementary particles, associated symmetries, conservations, their behaviour, physical structure and model

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and relate the forces of interaction and reactions between elementary particles and the nuclear models	K1
CO2	explain the nuclear decay processes and their outcomes	K2
CO3	apply the understanding of nuclear structure of various models and describe the nuclei characteristics	K3
CO4	Identify, analyze, and critically assess nuclear reactions and their complexities with direct correspondence to reactions in the nuclear reactors.	K4
CO5	Compare and classify the elementary particles present in the nature and elaborate the internal symmetries of their nature	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Nuclear Characteristics 1.1 Nuclear mass and Binding energy – Nuclear size – Measurement of nuclear radius – Electron scattering method - Mirror nuclei method – Nuclear spin, parity and moments 1.2 Ground state of Deuteron - Nucleon-nucleon scattering – Scattering cross section – Scattering length and effective range- Meson theory of nuclear force	K1- K5	13	CO1-5
2	Nuclear Models 2.1 Fermi gas model – Liquid drop model: similarities between nucleus and liquid drop, Semi-empirical mass formula 2.2 The shell model: Magic numbers, Nuclear spin orbit interaction, Predictions of shell model – Unified model	K1- K5	13	CO1-5
3	Nuclear Reactions and Reactors 3.1 Introduction – Types of nuclear reactions – Conservation laws- Nuclear reaction cross section – Theories of nuclear reaction – Breit – Weigner single level formula – Neutron resonances at low energy – Continuum states of the Compound Nucleus – Mechanism of nuclear reaction – Heavy ion induced nuclear reaction – Measurement of nuclear reaction life times – Photo nuclear reactions – Nuclear molecules. 3.2 Fission and mechanism of fission –Nuclear reactors – General features of a nuclear reactor – Classification of nuclear reactors- Nuclear Fusion	K1- K5	13	CO1-5
4	Radioactivity 4.1 Introduction - Alpha decay – Range of α Particles – α Disintegration Energy – Range Energy Relationship - Geiger- Nuttall Law – α Spectrum and Fine Structure 4.2 Beta decay – Energies of β decay – Continuous β ray Spectrum and Pauli's Neutrino Hypothesis – Fermi's Theory of β decay – Neutrino Mass – Gamow - Teller selection rules – Parity violation in β decay 4.3 Gamma decay – Selection Rules – Internal conversion of γ – rays - Resonance scattering and absorption	K1- K5	13	CO1-5
5	Elementary particles 5.1 Introduction - Classification – Fundamental interactions in nature – Conservation Laws – Symmetry classification of elementary particles 5.2 Quark model - Gellman - Okubo mass formula for octets and decuplet hadrons – Quantum Chromodynamics – Charmed Quark- Beauty and truth	K1- K5	13	CO1-5

BOOKS FOR STUDY

S. L. Kakani, Shubhra Kakani, *Nuclear and Particle Physics*, Anshan Publishers, 2008.
Jagdish Varma, Roop Chand Bhandari, D. R. S. Somayajulu, *Fundamentals of Nuclear Physics*, 1st Edition, CBS Publishers and Distributors, New Delhi, 2005.
D. C. Tayal, *Nuclear Physics*, 2nd Edition, Himalaya Publishing House, Nagpur, 2009.
Bhoop Narain Srivastava, *Basic Nuclear Physics and Cosmic Rays*, 18th Edition, Pragati Prakashan, Meerut, 2019.
Radha Raman Roy, B.P. Nigam, *Nuclear physics: theory and experiment*, 1st Edition, New Age International, Chennai, 2008.

BOOKS FOR REFERENCE

David Jeffery Griffiths, *Introduction to elementary particles*, 2nd Edition, Wiley, New York, 2008.

B R Martin, *Nuclear and Particle Physics: An Introduction*, 2nd Edition, John Wiley & Sons, New York, 2011.

Christopher G Tully, *Elementary Particle Physics in a Nutshell*, Princeton University Press, New Jersey, 2011.

PATTERN OF ASSESSMENT:

Continuous Assessment

Total Marks:50

Duration : 1 hour 30 minutes

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	1 x 5 = 5 marks (Problem Section) (1 out of 2 questions to be answered)
	K4	PART B	15	3 x 5 = 15 marks (3 out of 4 questions to be answered)
C	K5		15	1 x 15 = 15 marks (1 out of 2 questions to be answered)

Other Components:

Presentation/Assignments/Problem solving/Quiz

All K1 – K5 levels has to be assessed

Total marks : 50**End Semester Examination****Total Marks:100****Duration : 3hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 4 questions K2 - 4 questions K3 – 2 questions
B	K3	PART A	10	2 x 5 = 10 marks (Problem Section) (2 out of 3 questions to be answered)
	K4	PART B	30	6 x 5 = 30 marks (6 out of 8 questions to be answered)
C	K5		30	2 x 15 = 30 marks (2 out of 4 questions to be answered)

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PC/NP44												
IV	Course Title: NUCLEAR AND ELEMENTARY PARTICLE PHYSICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	3	2	2	2	1	1	3	2	2	2	2
CO 2	2	2	3	2	2	1	1	1	3	3	2	2	1
CO 3	3	2	2	2	2	1	1	1	3	2	2	3	1
CO 4	3	2	2	2	2	1	1	1	3	2	2	2	2
CO 5	3	2	2	2	2	1	1	1	3	2	2	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

SPECTROSCOPY

CODE:23PH/PC/SP44

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To enable the students to understand the different regions of spectroscopy such as UV, Visible, Infra-red, microwave etc. and explore the interaction of electromagnetic radiations with matter.
- To assist the students to grasp the concepts of energy levels, transitions and selection rules governing the spectroscopic transitions.
- To enhance the student's ability to critically analyze the spectroscopic data and to draw meaningful conclusions.
- To familiarize the students with the principles, instrumentation and application of advanced spectroscopic methods such as time resolved spectroscopy, photoelectron spectroscopy, mass spectrometry etc.
- To encourage the students in investigating the interdisciplinary applications of spectroscopy in the fields of materials science, astronomy, biology, chemistry etc.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define and recall the principles of spectroscopy involved in the concept of energy levels, transitions and selection rules in spectroscopic processes	K1
CO2	describe the various spectroscopical instrumentation techniques in identifying the molecular and structural information's	K2
CO3	compare and contrast the different spectroscopic methods in terms of their strengths, limitations and specific applications	K3
CO4	analyze experimental spectroscopic data to provide comprehensive informations about the properties of the samples being studied.	K4
CO5	gain insights into current research trends and challenges in the field of spectroscopy.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Microwave Spectroscopy 1.1 Rotation of molecules-Rotational Spectroscopy-Rigid and non-rigid diatomic Rotator - Intensity of spectral lines-Isotopic Substitution-Poly atomic molecules (Linear and symmetric top) 1.2 Hyperfine structure and quadrupole effects-Inversion spectrum of ammonia-Chemical analysis by microwave spectroscopy-Techniques and instrumentation - microwave oven	K1- K5	13	CO1-5
2	Infrared Spectroscopy 2.1 The Vibrating diatomic molecule - Diatomic vibrating rotator-Vibrational rotational spectrum-Interactions of rotations and vibrations 2.2 Influence of rotation on the Vibrational spectrum of linear and symmetric top and poly atomic molecules-Analysis by infrared techniques- Techniques and instrumentation - FTIR spectroscopy.	K1- K5	13	CO1-5
3	Raman spectroscopy: 3.1 Classical and quantum mechanical picture of Raman effect- Polarizability –Pure rotational Raman spectrum-Vibrational Raman Spectra - Raman activity of vibrations of CO ₂ and H ₂ O 3.2 Rule of mutual exclusion-Overtones and combination-Rotational fine structure – Degree of Depolarization - Vibrations of spherical top molecule-structural determination from IR and Raman spectroscopy- techniques and instrumentation - FT Raman spectroscopy.	K1- K5	13	CO1-5
4	Electronic Spectroscopy: 4.1 Electronic spectra-Frank-Condon principle-Dissociation energy and dissociation products- forttrat diagram- predissociation – electronic structure of diatomic molecules - shapes of some molecular orbits - Electronic angular momentum in diatomic molecules 4.2 Chemical analysis by electronic spectroscopy-Techniques and instrumentation- Molecular Photoelectron spectroscopy (PES) – Instrumentation – interpretation of spectrum; XPES, UPES – Auger Electron Spectroscopy (AES)	K1- K5	13	CO1-5
5	NMR and ESR Spectroscopy 5.1 NMR Spectroscopy: Introduction - Interaction between spin and magnetic field - population of energy levels - Larmor precession - Relaxation times – NMR of Hydrogen nuclei - Chemical shift and its measurement- Coupling constant - Chemical analysis by NMR techniques – C ¹³	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
	NMR Spectroscopy – Quadrupole effects – Techniques and Instrumentations 5.2 ESR spectroscopy: Introduction – Hyperfine structure of E.SR – Double resonance in ESR – Electron–electron coupling – Techniques of ESR Spectroscopy			

BOOKS FOR STUDY:

Colin Banwell and Mc Cash, *Fundamentals of molecular spectroscopy*, 5th Edition, TMH publishers, Nodia, 2004

G. Aruldas, *Molecular and Structure and Spectroscopy*, 2nd Edition, PHI Learning Private Limited, New Delhi, 2007

Raymond Chang, *Basic Principles of Spectroscopy*, R.E. Krieger Publishing Company, US, 1980.

BOOKS FOR REFERENCE:

Berman Paul R., Malinowski Vladimir S. *Principles of Laser Spectroscopy and Quantum Optics*, Princeton University Press, New Jersey, 2011

Tuniz C., Kutschera W., Fink D., Herzog G.F, *Accelerator Mass Spectrometry*, CRC press, Florida, 2011

Thomas Engel, *Quantum Chemistry and Spectroscopy*, 3rd Edition, Pearson Publications, Chennai, 2012

Wozniak Bogdian, Dera Jerzy, *Light Absorption in Sea Water*, Springer Publications New York, 2011

WEB RESOURCES:

www.ups.edu/faculty/hanson/chemwebsites/organicwebsites.htm

www.rsc.org/.../InterestGroups/ESRSpectroscopy/index.asp

PATTERN OF ASSESSMENT:

Continuous Assessment

Total Marks:50

Duration : 1 hour 30 minutes

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	1 x 5 = 5 marks (Problem Section) (1 out of 2 questions to be answered)
	K4	PART B	15	3 x 5 = 15 marks (3 out of 4 questions to be answered)
C	K5		15	1 x 15 = 15 marks (1 out of 2 questions to be answered)

Other Components:

Presentation/Assignments/Problem solving/Quiz

All K1 – K5 levels has to be assessed

Total marks : 50**End Semester Examination****Total Marks:100****Duration : 3hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 4 questions K2 - 4 questions K3 – 2 questions
B	K3	PART A	10	2 x 5 = 10 marks (Problem Section) (2 out of 3 questions to be answered)
	K4	PART B	30	6 x 5 = 30 marks (6 out of 8 questions to be answered)
C	K5		30	2 x 15 = 30 marks (2 out of 4 questions to be answered)

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PC/SP44												
IV	Course Title: SPECTROSCOPY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	1	2	1	1	1	3	3	2	2	2
CO 2	3	2	2	3	2	2	1	1	3	3	2	2	2
CO 3	3	2	2	3	1	2	1	1	3	3	2	2	2
CO 4	3	2	2	3	2	1	1	1	3	3	3	2	2
CO 5	3	3	3	2	2	2	1	1	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

DISSERTATION

CODE: 23PH/PC/DS47

CREDITS:7

GUIDELINES FOR DISSERTATION

Project should be done individually. Each student will choose a topic of her interest and the student will be assigned to a supervisor.

Each candidate should submit a research proposal to the Supervisor and the abstract of the project to be developed in guidance with the supervisor.

The project will require practical work with the submission of a project report. The duration of the project work is between 3 and 6 months.

The project report should be submitted in the prescribed format containing a minimum of 50 pages. Reference should not be counted with the main pages. The report should be enhanced with graphs, spectra, tables and or photographs.

Each candidate must give three periodical reviews to the internal guide on the scheduled dates prescribed by the Department.

Each candidate will submit 4 hard copies of the project thesis on the scheduled date. 1 copy for the candidate and 3 copies to be submitted to the Department.

The student will appear for Viva-voce before a panel comprising External Examiner, Supervisor and Head of the Department.

PATTERN OF ASSESSMENT

Continuous Assessment :

Total Marks: 50

Description	Marks	Cognitive Level
Research Statement	5	K1
Methodology	10	K2
Presentation	10	K3, K4
Research Findings	10	K5
Interpretation	15	K6

End Semester Examination:

Total Marks: 50

Description	Marks	Cognitive Level
Research Statement	5	K1
Methodology	10	K2
Presentation	10	K3, K4
Research Findings	10	K5
Interpretation	15	K6

Mapping of Course Outcomes (COs)

to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code:23PH/PC/DS47												
	Course Title:DISSERTATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	3	3	3	3	3	3	3	2
CO 2	3	3	3	2	3	3	3	3	3	3	3	2	2
CO 3	3	3	3	2	2	3	3	3	3	3	3	2	2
CO 4	3	3	3	2	1	3	3	3	3	3	3	2	3
CO 5	3	3	3	2	3	3	3	3	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

CRYSTAL PHYSICS

CODE:23PH/PE/CP15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE:

- To impart knowledge behind various Classical theories of nucleation.
- To enable the students to understand the dynamics of crystal lattice using theoretical models.
- To guide the students to apply Nucleation theories in obtaining sizable crystals.
- To equip the students to examine various properties of the obtained crystal using suitable characterization techniques.
- To facilitate the student to design its applications using liquid crystals technology.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	to acquire knowledge on the classical and quantum mechanical laws which can be applied to explain the properties of the solid state.	K1
CO2	describe the lattice dynamics and the underlying theories essential for adopting suitable growth techniques in the production of quality crystals.	K2
CO3	apply the theoretical concepts to build models explaining the physical properties and behavior of solid matter.	K3
CO4	illustrate the classification of growth techniques, vibrational modes, and characterization techniques pertaining to crystal.	K4
CO5	interpret and investigate on structural, electrical, optical, and mechanical properties of novel crystals reported in scientific research papers.	K5
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Crystal Theory 1.1 Importance of crystal growth – Classification of crystal growth methods – Nucleation Theory - Kinds of nucleation – Homogeneous nucleation - Heterogeneous nucleation - secondary nucleation 1.2 Classical theory of nucleation: Gibbs Thomson equations for vapour and solution – Kinetic theory of nucleation – Becker and Doring concept on nucleation rate – Energy of formation of a spherical nucleus and cylindrical nucleus - Crystal System and Symmetry.	K1-K5	13	1-5
2	Lattice Dynamics 2.1 Theory of elastic vibrations in mono and diatomic lattices -Phonons – Dispersion relations - Phonon momentum. Heat Capacity Vibrational modes - Einstein model - Density of modes in one and three dimensions - Debye Model of heat capacity. 2.2 Anharmonic effects: Explanation for Thermal expansion, Conductivity and resistivity– Umklapp process.	K1-K5	13	1-5
3	Growth techniques 3.1 Gel growth technique: Chemical reaction method – Single and double diffusion method – Chemical reduction method – Complex and decomplexion method 3.2 Melt growth: Bridgman method - Czochralski technique – Growth apparatus – seed preparation – pulling rate – shape of crystal melt interface – Growth process 3.3 Vapour growth: Physical Vapour Transport (PVT) – Processes of sublimation and condensation principle – Chemical Vapour Transport – Criteria for the choice of transport reaction	K1-K5	13	1-5
4	Crystal Characterization 4.1 X Ray diffraction (XRD) - Thermal analysis - methods of thermal analysis - thermogravimetric analysis (TGA) - Differential thermal analysis (DTA) - Differential Scanning Calorimetry (DSC) 4.2 Mechanical studies - methods of hardness testing (qualitative) - Vickers hardness testing - correlation of microhardness with other properties - estimation of hardness number and work hardening coefficient (n) – dielectric	K1-K5	13	1-5
5	Liquid Crystals 5.1 Liquid Crystals: Classification-isotropic-nematic, smectic-cholesteric phases, Phase transition of liquid phases 5.2 Properties- optical, electric and magnetic fields, Application of liquid crystals	K1-K5	13	1-5

BOOKS FOR STUDY

J.C. Brice, *Crystal Growth Process*, John Wiley, New York, 1986

P. Santhana Raghavan and P. Ramasamy, *Crystal Growth Processes*, KRU Publications, India, 2000.

Brian R. Pamplin, *Crystal Growth: International Series on the Science of the Solid State*, Elsevier Science, United Kingdom, 2013.

Goodman, *Crystal Growth: Theory and Techniques*, Volume 1, Springer, United Kingdom, 2013.

BOOKS FOR REFERENCE

Markov, *Crystal Growth for Beginners: Fundamentals of Nucleation, Crystal Growth and Epitaxy*, World Scientific, Singapore, 2017.

M. Ohora and R. C. Reid, *Modeling of Crystal Growth Rates from Solution*, Prentice – Hall, New Jersey, 1973.

D. Elwell and H. J. Scheel, *Crystal Growth from High Temperature Solution*, Academic Press, London, 2014.

Mogilatenko, A., Benz, K., Neumann, W, *Introduction to Crystal Growth and Characterization*, Wiley, Germany, 2014.

PATTERN OF ASSESSMENT:

Continuous Assessment

Total Marks:50

Duration : 1 hour 30 minutes

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	1 x 5 = 5 marks (1 out of 2 questions to be answered)
	K4	PART B	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
C	K5		20	1 x 20 = 20 marks • 1 question to be asked with internal choice • Questions can have subdivisions

Other Components:

Total: 50 marks

Presentation/Assignments/Problem solving/Quiz/ Program

All K1 – K5 levels has to be assessed

End Semester Examination**Total Marks:100****Duration : 3hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 3 questions K2 - 4 questions K3 – 3 questions
B	K3	PART A	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
	K4	PART B	20	4 x 5 = 20 marks (4 out of 5 questions to be answered)
C	K5		40	2 x 20 = 40 marks <ul style="list-style-type: none"> 2 questions to be asked with internal choice Questions can have subdivisions

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PE/CP15												
	Course Title:Crystal Physics												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	3	3	3	3	3	3	2	3	3
CO 2	3	3	1	3	2	3	2	2	3	3	3	3	3
CO 3	3	3	2	2	3	3	3	3	3	3	3	3	2
CO 4	3	2	2	3	3	3	2	3	3	2	3	3	3
CO 5	3	3	3	3	3	3	2	2	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

PLASMA PHYSICS

CODE:23PH/PE/PP15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE:

- To give the students an idea on fundamentals of plasma, fluid plasma, waves in plasma, kinetic theory on plasma, conductivity and diffusion of plasma.
- To provide an understanding on plasma beyond the solar system, fluid equation for plasma, Langmuir wave and oscillations, Vlasov equation, Langevin equation.
- To impart the knowledge on solar wind, Van-allen radiation belts, plasma resistivity, diamagnetic drift, waves in magnetized plasma, damping and Nyquist diagram, conductivity with ion motion.
- To expose relation between fluid equation and guiding center drifts, magnetized and unmagnetized plasma, different types treatments, dc and ac conductivity.
- To explore the applications of plasma in various fields.

COURSE LEARNING OUTCOMES:

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall properties of plasma, the concepts of continuity equation, plasma resistivity, ion sound waves, kinetic theory of plasma, plasma conductivity	K1
CO2	understand the idea on plasma frequency, radiation belts, equation for plasma, waves in plasma, kinetic theory of plasma, diffusion of plasma.	K2
CO3	apply the concepts of plasma on solar wind, drift and polarization current, magnetized and unmagnetized plasma Nyquist diagram and damping of electron plasma waves and conductivity with ion motion	K3
CO4	analyse the effect of plasma in various applications, plasma as fluids, low frequency and high frequency waves in different plasmas, different treatments for kinetic theory, isotropic and anisotropic magneto plasma	K4
CO5	evaluate the polarization current in the fluid model, relation between waves and oscillations, solution by linearized Vlasov equation, Ladau's equation, Langevin equation to correlate conductivity and mobility of an electron and diffusion in fully ionized plasma.	K5
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Fundamental Concepts of Plasma 1.1 General properties of plasma – Criteria for Plasma – Debye shielding – Plasma frequency - Occurrence of Plasma – The solar wind – Van allen radiation belts – Plasma beyond the solar system - Applications of Plasma physics – Controlled thermonuclear fusion 1.2 The magnetohydrodynamic generator – Plasma propulsion – Other applications – Theoretical description – MHD approximation	K1-K5	13	1-5
2	Plasma as Fluids 2.1 Fluid equation for plasma - Continuity equation – Equations of state – Two fluid equations – Plasma resistivity – Relation between fluid equations and guiding center drifts - Anisotropic-pressure case 2.2 Diamagnetic drift in non-uniform fields - Polarization current in the fluid model – The magnetohydrodynamic equations	K1- K5	13	1-5
3	Waves in a Fluid Plasma 3.1 Waves in an unmagnetized plasma – Langmuir waves and oscillations – Ion sound waves – High frequency electromagnetic waves in an unmagnetized plasma – High frequency waves in a magnetized plasma 3.2 Low frequency waves in a magnetized plasma – Alfvén waves – Magnetosonic waves – Slow waves and fast waves	K1- K5	13	1-5
4	Elements of Plasma Kinetic Theory 4.1 The Vlasov equation – The Boltzmann-Vlasov equation – The Vlasov-Maxwell equation – Vlasov's treatment – Linearized vlasov equation and solutions 4.2 Landau's treatment – Landau's solution – Landau damping – The Nyquist diagram – Inverse Landau damping of electron plasma waves	K1- K5	13	1-5
5	Plasma Conductivity and Diffusion 5.1 The Langevin equation - DC conductivity and electron mobility – Isotropic plasma – Anisotropic magnetoplasma – AC conductivity and electron mobility – Conductivity with ion motion 5.2 Plasma as a dielectric medium – Free electron diffusion – Diffusion in a fully ionized plasma	K1-K5	13	1-5

BOOKS FOR STUDY:

Robert J Goldston and Paul H Rutherford, *Introduction to plasma physics*, IOP Publishing Ltd., England, 1995.

J.A. Bittencourt, *Fundamentals of Plasma physics*, 3rd Edition, Springer, New York 2004.

Chen, F. F. *Introduction to Plasma Physics*. 2nd Edition, Springer, New York, 1984.

S. N. Sen, *Plasma Physics- Plasma State of Matter*, 13th Edition, Pragati Prakashan, Delhi, 2019.

M. Uman, Krall, *Introduction to Plasma Physics*, McGraw-Hill Inc., Noida, 1964.

N. A. Krall and A. W. Trivelpiece, *Principles of Plasma Physics*, McGraw-Hill, Noida, 1973.

BOOKS FOR REFERENCE:

Hutchinson, I. H. *Principles of Plasma Diagnostics*, Cambridge University Press, UK, 2005.

D.R. Nicholson, Shohet, *Introduction to Plasma Theory*, John Wiley & Sons, New Jersey, 1983.

San Diego, *The Plasma State*, CA: Academic Press Inc., Delhi, 1971

Hazeltine, R. D., and F. L. Waelbroeck. *The Framework of Plasma Physics*, CO: Westview Press, US, 2004.

Huddleston, R. H., and S. L. Leonard. *Plasma Diagnostic Techniques*, Academic Press, Delhi, 1965.

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration : 1 hour 30 minutes**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 - 2 questions K3 - 1 question
B	K3	PART A	5	1 x 5 = 5 marks (1 out of 2 questions to be answered)
	K4	PART B	15	3 x 5 = 15 marks (3 out of 4 questions to be answered)
C	K5		15	1 x 15 = 15 marks (1 out of 2 questions to be answered)

Other Components:**Total marks : 50**

Presentation/Assignments/Problem solving/Quiz

All K1 – K5 levels has to be assessed

End Semester Examination**Total Marks:100****Duration : 3hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 4 questions K2 - 4 questions K3 – 2 questions
B	K3	PART A	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
	K4	PART B	30	6 x 5 = 30 marks (6 out of 8 questions to be answered)
C	K5		30	2 x 15 = 30 marks (2 out of 4 questions to be answered)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PE/PP15												
	Course Title: PLASMA PHYSICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	3	2	2	3	3	3	3	2
CO 2	3	3	3	3	3	2	2	2	3	3	2	2	1
CO 3	3	3	3	2	2	3	2	1	2	3	2	2	2
CO 4	3	3	3	3	2	2	2	2	3	3	3	3	3
CO 5	3	3	3	2	3	2	2	2	3	3	3	2	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

NANOSCIENCE AND NANOTECHNOLOGY

CODE:23PH/PE/NN15

CREDITS:5

LTP:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To provide fundamental knowledge and advanced concepts pertaining to nanoscience and technology.
- To enable the students to explore various categories of nanomaterials and its surface effects in different dimensions
- To train the students to utilize the gained concepts of nanoscience and technology in various fields
- To facilitate the students to analyse the size, morphology, shape and different properties of nanomaterials.
- To prioritize nano technology-based products for domestic and commercial purposes

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	acquire knowledge on the underlying principles of nanoscience and nanotechnology.	K1
CO2	understand the importance of nanomaterials, its preparation using conventional and non- conventional methods for different applications.	K2
CO3	apply effective nanomaterials in various fields such as defence, air purification, water purification, fuel cells, storage systems and also in medical areas.	K3
CO4	analyze the different characterisation of nano-products using diffraction, spectroscopy, microscopy, and other approaches.	K4
CO5	select the societal and technological issues wherein nanotech based products could be replaced.	K5
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Fundamentals of Nanoscience 1.1 Fundamentals of NANO – Historical perspective on nanomaterial and nanotechnology – Classification of nanomaterials 1.2 Metal and semiconductor nanomaterials - 2D, 1D, 0D nanostructured materials - Quantum dots – Quantum wires – Quantum wells - Surface effects of nanomaterials.	K1 – K5	13	1-5
2	Properties of Nanomaterials 2.1 Physical properties of nanomaterials: Melting points, specific heat capacity, and lattice constant - Mechanical behaviour: Elastic properties – strength - ductility - superplastic behaviour - Optical properties: - Surface Plasmon Resonance – Quantum size effects 2.2 Electrical properties - Conductivity, Ferroelectrics and dielectrics - Magnetic properties – Superparamagnetism – Diluted magnetic semiconductor (DMS). Carbon nanostructures: Introduction - Fullerenes, C60, CNT, Types - Graphene, Hybridization – Activated carbon.	K1 – K5	13	1-5
3	Synthesis of Nanomaterials 3.1 Physical methods: Thermal evaporation - Spray pyrolysis - Molecular Beam Epitaxy (MBE) - Physical Vapour Deposition (PVD) - Ball milling technique - Microwave heating- Nanolithography: photolithography - Nanomanipulator. 3.2 Chemical methods: Co-precipitation - Sol – gel synthesis, Micro emulsions or reverse micelles, Solvothermal synthesis, Electrochemical synthesis, Chemical Vapour Deposition (CVD).	K1 – K5	13	1-5
4	Characterization Techniques 4.1 Powder X - Ray Diffraction, Scanning Electron Microscope (SEM), Transmission Electron Microscope (TEM), Scanning Tunnelling Microscope (STM), Atomic Force Microscope (AFM), Scanning Probe Microscopy (SPM), UV-Visible absorption 4.2 Impedance measurement - I-V characteristics-Vibrating Sample Magnetometer (VSM) - Brunauer -Emmett Teller (BET) Surface Area Analysis, Energy Dispersive X-ray (EDX), X-Ray Photoelectron Spectroscopy (XPS) and Photoluminescence.	K1 – K5	13	1-5
5	Applications of Nanomaterials 5.1 Nano sensors: Nano sensors based on optical and physical properties -Electrochemical sensors –Nano-biosensors. Nano Electronics: Nanobots - Display screens - GMR read/write heads - Carbon Nanotube Emitters 5.2 Photocatalytic application: Air purification, water purification - Medicine: Imaging of cancer cells – Biological tags - Drug delivery - Photodynamic therapy - Energy: Fuel cells - Rechargeable batteries - Supercapacitors – Photovoltaics.	K1 – K5	13	1-5

BOOKS FOR STUDY

M.A. Shah, Tokeer Ahmad, *Principles of Nanoscience and Nanotechnology*, Narosa Publishing House Pvt Ltd., India, 2010.

B. Viswanathan, *Structure and properties of solid-state materials*, 2nd Edition, Alpha Science International, United Kingdom, 2006.

K. K. Chattopadhyay and A.N. Banerjee, *Introduction to Nanoscience and Nanotechnology*, PHI Learning Pvt. Ltd, India, 2012.

BOOKS FOR REFERENCE

Rita John, *Solid State Physics*, 1st edition, McGraw-Hill Education, India, 2014.

Pulickel M. Ajayan, Linda S. Schadler, Paul V. Braun, *Nanocomposite Science and Technology*, John Wiley & Sons, New Jersey, 2006.

T. Pradeep, *Nano-The essentials*, Tata Mc Graw-Hill publishing company limited, India, 2007.

Günter Schmid, *Nanoparticles: From Theory to Application*, 2nd Edition, John Wiley & Sons, New Jersey, 2011.

Sulabha K. Kulkarni, *Nanotechnology: Principles and Practices*, Capital Publishing Company, India, 2007.

PATTERN OF ASSESSMENT:

Continuous Assessment

Total Marks:50

Duration : 1 hour 30 minutes

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	1 x 5 = 5 marks (1 out of 2 questions to be answered)
	K4	PART B	15	3 x 5 = 15 marks (3 out of 4 questions to be answered)
C	K5		15	1 x 15 = 15 marks (1 out of 2 questions to be answered)

Other Components:

Total marks : 50

Presentation/Assignments/Problem solving/Quiz

All K1 – K5 levels has to be assessed

End Semester Examination**Total Marks:100****Duration : 3hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 4 questions K2 - 4 questions K3 – 2 questions
B	K3	PART A	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
	K4	PART B	30	6 x 5 = 30 marks (6 out of 8 questions to be answered)
C	K5		30	2 x 15 = 30 marks (2 out of 4 questions to be answered)

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PE/NN15												
	Course Title: NANOSCIENCE AND NANOTECHNOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	3	3	3	3	3	3	3	3	3
CO 2	3	3	3	3	2	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	2	3	3	2	3	3
CO 4	3	3	3	2	3	3	2	2	2	2	3	2	2
CO 5	3	3	2	2	3	3	3	3	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

MEDICAL PHYSICS AND ULTRASONICS

CODE:23PH/PE/MU15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE:

- To deliver knowledge on the fundamental principles of medical physics and its applications in diagnosis and treatment
- To enable the students to explore the interaction of ionizing and non-ionizing radiations with biological tissues.
- To study the various medical imaging techniques, diagnostic methods and therapeutic devices such as EEG, ECG, MRI etc.
- To expose students with the basics of ultrasound radiations and their uses in medical applications.
- To encourage students to explore current research trends and innovations in medical physics and ultrasound technology.

COURSE LEARNING OUTCOMES:

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	acquire a strong knowledge on the importance of physics for medical diagnosis and treatment.	K1
CO2	explain the physical concepts for different modalities used in medical diagnosis and treatment.	K2
CO3	familiarize on how different external physical factors including ionizing radiation, electrical and magnetic fields and thermal effects influence biological systems.	K3
CO4	obtain proficiency in the concept of Physics, specifically X- rays, Gamma rays etc. which are used for medical applications.	K4
CO5	assess the ethical implications of medical physics practices and their impact on human health.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Diagnostic Devices 1.1 Blood Pressure and its Measurement - High Pressure Measurement – Electrical Signals from Heart: Electrocardiography (ECG) 1.2 Electrical Signals from brain : Electroencephalogram (EEG) – Electrical signal from muscles : Electromyogram(EMG) – Magnetic Resonance Imaging(MRI)	K1- K5	13	1-5
2	Therapeutic Devices 2.1 Pacemaker – Pacemaker batteries - AC and DC Defibrillator - Versatile Electro Therapeutic Stimulator 2.2 Dialysis process – Comparison between Haemodialysis and Peritoneal Dialysis – Peritoneal Dialysis Unit - Ventilator –Microprocessor based Ventilators - Anaesthesia Machine	K1- K5	13	1-5
3	Medical Applications of Lasers 3.1 Laser Doppler Blood Flow Meter – Laser based Blood Cell Counter –Laser in Angioplasty 3.2 Principle and Theory of Fluorescence – Reflectance and Light Scattering Spectroscopy – Laser Spectroscopy Cancer Detection.	K1- K5	13	1-5
4	Ultrasonic Study Of Liquid Mixtures And Solutions 4.1 Preparation of multi component liquid mixtures: Mole fraction – Weight fraction – Volume fraction. Measurement techniques: Ultrasonic Interferometer – Continuous Wave Method – Density – Viscosity 4.2 Pure liquids and binary mixtures : Free length theory – Collision factor theory – Nomoto's Relation - Acoustical Parameters – Adiabatic compressibility – Acoustic Impedence – Intermolecular Free Length – Molar Volume – Free Volume – Internal Pressure.	K1- K5	13	1-5
5	Applications of Ultra Sound 5.1 Low Frequency – High Intensity Applications: Ultrasonic Welding – Ultrasonic Cleaning – Applications – Food Industry – Flow Meters. 5.2 High Frequency - Low Intensity Applications: Level Meters – Thickness Measurements – Ultrasonic Microscopy – Acoustic Holography (Transmission Acoustic Holography).	K1-K5	13	1-5

BOOKS FOR STUDY

Dr.M.Arumugam, *Biomedical Instrumentation*, Anuradha Publications, Chennai, 2005.

S.Svanberg, *Atomic and Molecular Spectroscopy (Basic Aspects and Practical Applications)*, 4th edition, WILEY Publications, US, 2010.

Baldevraj, V.Rajendran and P.Palinichamy, *Science and Techology of Ultrasonics*, 4th edition, Narosa Publications, New Delhi, 2009.

BOOK FOR REFERENCE

John R.Cameron and James G. Skofronick, *Medical Physics*, John Wiley Interscience Publication, Canada, 2nd edition, 2009.

PATTERN OF ASSESSMENT

Continuous Assessment			Total Marks:50	Duration : 1 hour 30 minutes
Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	1 x 5 = 5 marks (1 out of 2 questions to be answered)
	K4	PART B	15	3 x 5 = 15 marks (3 out of 4 questions to be answered)
C	K5		15	1 x 15 = 15 marks (1 out of 2 questions to be answered)

Other Components:

Total marks : 50

Presentation/Assignments/Problem solving/Quiz

All K1 – K5 levels has to be assessed

End Semester Examination

Total Marks:100

Duration : 3hours

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 4 questions K2 - 4 questions K3 – 2 questions
B	K3	PART A	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
	K4	PART B	30	6 x 5 = 30 marks (6 out of 8 questions to be answered)
C	K5		30	2 x 15 = 30 marks (2 out of 4 questions to be answered)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PE/MU15												
	Course Title: MEDICAL PHYSICS AND ULTRASONICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	1	1	1	3	3	2	1	1
CO 2	3	2	2	2	2	1	1	1	3	2	1	1	1
CO 3	3	2	2	1	2	1	1	1	2	2	2	1	1
CO 4	3	2	3	3	2	1	1	1	3	3	2	2	1
CO 5	2	2	2	2	2	1	3	3	2	2	2	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

ASTROPHYSICS

CODE:23PH/PE/AP15

CREDITS:5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE:

- To enable the students, explore and contrast the objects in the universe.
- To explain the various observational and experimental techniques in the areas of astronomy to analyze the celestial objects
- To illustrate the students on the basic concepts of modern astrophysics, such as: Stellar classification and spectroscopy, solar system and planetary motion, stellar evolution and nuclear fusion etc.
- To train the students in analysing the astronomical concepts critically to broaden their knowledge in the scientific enterprise.
- To familiarize the students on the interdisciplinary aspects of astrophysics pertaining to planetary science and heliophysics.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and relate the violent Universe (white dwarfs, neutron stars, black holes etc.) beyond our planet and to describe the measurements of space and time.	K1
CO2	explain the origin of our universe and apply basic physical principles from the wide range of topics in physics to astronomical situations.	K2
CO3	demonstrate the relation between the temperature of a stellar core to its strength, colour and chemical composition and to manipulate them algebraically.	K3
CO4	categorize the importance of stellar magnetic fields, stellar populations, their classification and also to visualize the position of solar system, galactic objects in scale models.	K4
CO5	critically analyse the astronomical/physical concepts which enable them to interpret quantitative observations of celestial objects.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	General Astronomy 1.1 System of Coordinates - Altazimuth, Equatorial (local and Universal), Ecliptic and Galactic systems – Conversion of co-ordinates. Time scale - Magnitude scale and magnitude systems - correction for observed magnitudes 1.2 The proper motion - stellar parallax - Trigonometric, cluster and secular parallaxes. Method of Luminosity distance	K1- K5	13	1-5
2	Stellar temperatures and sizes 2.1 Colour and effective temperatures - defining stellar temperatures by matter laws - HR diagram - Spectral and luminosity classification of stars 2.2 Measurement of stellar radii - Relation of luminosity with mass, radii and surface temperature - Binary stars – visual, spectroscopic and eclipsing binaries.	K1- K5	13	1-5
3	Stellar structure 3.1 Equations of stellar structure - Russel - Vogt theorem – Ideas of polytropic model - stellar opacity - Free - Free transitions, Bound - Free transitions and electron scattering 3.2 Eddington's standard model - Homologous model for main sequence stars - Schwarzschild's model for real stars	K1- K5	13	1-5
4	Stellar evolution 4.1 The virial theorem - application to an isothermal gas sphere - evolution of stars near the main sequence - effect of hydrogen depletion 4.2 Schoenberg - Chandrasekhar limit of an isothermal core - nuclear time scale - ages of clusters - Star formation - Jean's criterion.	K1- K5	13	1-5
5	Stellar energy sources 5.1 Thermonuclear fusion - CN cycle - pp chain - simple formulae for the energy generation rates 5.2 Abundances for the elements in the stars structure of the sun from helioseismology - problems of nucleosynthesis.	K1-K5	13	1-5

BOOK FOR STUDY

Abhyankar K D, *Astrophysics: Stars and Galaxies*, Tata Mc Graw Hill, Universities Press, Hyderabad, India, 2020.

V.B.Bhatia, *Text Book of Astronomy and Astrophysics with elements of Cosmology*, Alpha Science International Ltd., Narosa Publishing House, New Delhi, 2001.

Baidyanath Basu, *An Introduction to Astrophysics*, Prentice Hall India Learning Pvt. Ltd., Delhi, 2003.

Roy, A. E., and Clarke, D., *Astronomy Principles and Practice*, 4th edition, Institute of Physics Publishing, London, UK, 2003.

BOOKS FOR REFERENCE

Simon F. Green, Mark H. Jones, S. Jocelyn Burnell, *An Introduction to the Sun and Stars*, Cambridge University Press, New York, 2015.

Günter Dietmar Roth, *Compendium of Practical Astronomy*, Volume 1, Springer Berlin, Heidelberg, 1994.

A. C. Phillips, *The Physics of Stars*, 2nd Edition, John Wiley, New Jersey, 1999.

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration : 1 hour 30 minutes**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	1 x 5 = 5 marks (1 out of 2 questions to be answered)
	K4	PART B	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
C	K5		20	1 x 20 = 20 marks <ul style="list-style-type: none"> 1 question to be asked with internal choice Questions can have subdivisions

Other Components:**Total: 50 marks**

Presentation/Assignments/Problem solving/Quiz/ Program

All K1 – K5 levels has to be assessed

End Semester Examination**Total Marks:50****Duration : 3hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 3 questions K2 - 4 questions K3 – 3 questions
B	K3	PART A	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
	K4	PART B	20	4 x 5 = 20 marks (4 out of 5 questions to be answered)
C	K5		40	2 x 20 = 40 marks <ul style="list-style-type: none"> 2 questions to be asked with internal choice Questions can have subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PE/AP15												
	Course Title: ASTROPHYSICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	1	3	2	2	2	1	3	2	2
CO 2	3	3	2	2	1	3	3	2	2	1	3	3	2
CO 3	3	3	2	3	2	3	3	2	3	2	3	3	2
CO 4	3	3	3	3	2	3	3	3	3	2	3	3	3
CO 5	3	3	3	3	2	3	3	3	3	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086 M.Sc.

DEGREE: BRANCH III- PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

GEOPHYSICS

CODE: 23PH/PE/GP15

CREDITS:5

L T P:5 0 0

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE

- To provide a comprehensive understanding of the seismic, magnetic, electric and gravitational nature of the earth
- To impart knowledge in the principles and practical applications of subsurface investigations.
- To familiarize students with the practical aspects of geophysical surveys, including data collection, and processing techniques
- To equip the students with the skills required to analyze and interpret geophysical data in order to construct suitable models of subsurface structures
- To engage the students in exercises and case studies to apply theoretical knowledge in practical situations

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and relate the geophysical properties of the earth such as electric, magnetic and gravity	K1
CO2	explain the types of seismic waves, internal structure and evolution of earth	K2
CO3	apply the practical aspects of geophysical surveys, including data collection, and processing techniques	K3
CO4	demonstrate the skills required for data acquisition, analysis and interpretation of the geophysical data	K4
CO5	develop expertise in applying the various geophysical techniques in real time applications	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Seismology 1.1 Introduction- Seismic waves - Seismic body waves - Compressional waves - Transverse waves - The solution of the seismic wave equation - D'Alembert's principle 1.2 Seismic surface waves - Rayleigh waves (L_R) - Love waves (L_Q) - The dispersion of surface waves - Free oscillations of the Earth - Comparison with surface waves	K1- K5	13	1-5
2	Seismograph 2.1 Introduction - Principle of the seismometer - Vertical-motion seismometer - Horizontal-motion seismometer - Strain seismometer - The equation of the seismometer - The seismogram - Analog recording - Digital recording - Phases on a seismogram 2.2 Earthquake seismology - Location of the epicenter of an earthquake - Analysis of earthquake focal mechanisms - Secondary effects of earthquakes: landslides, tsunami, fires – Earthquake size, intensity, magnitude, frequency – Prediction of the time, location and size of the earthquake	K1- K5	13	1-5
3	Internal Structure of Earth 3.1 Introduction – Refractions and reflections in the Earth's interior - Seismic rays in a uniformly layered Earth - Travel-time curves - Inversion of travel-time versus distance curves 3.2 Radial variations of density, gravity and pressure - Density inside the Earth - Gravity and pressure inside the Earth - Models of the Earth's internal structure - Seismic tomography	K1- K5	13	1-5
4	Earth's Age and Electrical Properties 4.1 Geochronology - The geological timescale - Estimating the Earth's age - Ages of the Earth and solar system 4.2 Geoelectricity - Electrical properties of the Earth - Electrical surveying- Self-potential - SP surveying- Telluric currents - Resistivity surveying - Electromagnetic surveying - Electrical conductivity in the Earth	K1- K5	13	1-5
5	Geomagnetism 5.1 Introduction -The magnetic field of internal origin- Origin of the internal field - Magnetostatic and electromagnetic models 5.2 The geomagnetic dynamo - Computer simulation of the geodynamo- magnetic surveying - Measurement methods - Magnetic gradiometers - The survey pattern	K1- K5	13	1-5

BOOKS FOR STUDY

William Lowrie, *Fundamentals of Geophysics*, 2nd Edition, Cambridge University Press, Cambridge, 2007

M. B. Ramachandra Rao, *Outlines of geophysical prospecting: a manual for geologists*, University of Mysore 1975

William Murray Telford, W. M. Telford, L. P. Geldart, Robert E. Sheriff, R. E. Sheriff, *Applied Geophysics*, 2nd Edition, Cambridge University Press, Cambridge, 1990

B. S. Rama Rao, I V R Murthy, *Gravity and magnetic methods of prospecting*, 4th Edition, Arnold - Heinemann, 1978

BOOKS FOR REFERENCE

George David Garland, *Introduction to geophysics: mantle, core, and crust*, 2nd Edition, Saunders, 1979

Alan H. Cook, *Physics of the earth and planets*, Macmillan, 1973

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration : 1 hour 30 minutes**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	1 x 5 = 5 marks (1 out of 2 questions to be answered)
	K4	PART B	15	3 x 5 = 15 marks (3 out of 4 questions to be answered)
C	K5		15	1 x 15 = 15 marks (1 out of 2 questions to be answered)

Other Components:**Total marks : 50**

Presentation/Assignments/Problem solving/Quiz

All K1 – K5 levels has to be assessed

End Semester Examination**Total Marks:100****Duration : 3hours**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 4 questions K2 - 4 questions K3 – 2 questions
B	K3	PART A	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
	K4	PART B	30	6 x 5 = 30 marks (6 out of 8 questions to be answered)
C	K5		30	2 x 15 = 30 marks (2 out of 4 questions to be answered)

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PE/GP15												
	Course Title: GEOPHYSICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	2	2	1	1	1	1	3	2	2	2	2
CO 2	2	2	2	2	2	1	1	1	3	3	2	2	1
CO 3	3	2	2	2	2	1	1	1	3	2	2	2	1
CO 4	3	2	2	2	2	1	1	1	3	2	2	2	1
CO 5	3	2	2	2	2	1	1	1	3	2	2	2	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

INTRODUCTION TO R – PROGRAMMING (THEORY CUM PRACTICAL)

CODE: 23PH/PE/IR15

CREDITS:5

L T P:3 0 2

TOTAL TEACHING HOURS:65

OBJECTIVES OF THE COURSE:

- To introduce R programming language, different data types, flow control, plotting various types of graphs and charts.
- To impart knowledge on variables, various operators, expressions and assignments, branching and looping statements, plotting data and different numerical techniques & probability.
- To provide an idea on logical assignment, various built-in-functions, getting inputs from keyboard, writing output to a file, connecting R to external interfaces, writing files in different formats.
- To expose the students the workspace, functions, debugging, reading and writing files, Newton Raphson method, Euler's method, Runge kutta method, and different distribution functions.
- To explore various applications using R programming language.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	remember the concept of identifier, constant, variables, data types, usage of branch and loop, plotting data	K1
CO2	understanding and interpreting various arithmetic and logical operators, expressions, functions, decision making, basic debugging, different types of graphs and charts and numerical techniques.	K2
CO3	apply the basic knowledge to define matrices, arrays, data type conversion, decision making, box plots, probability distribution functions	K3
CO4	distinguish between assignments, functions of built-in-functions, input from a file and output to a file, reading and writing of different files, different numerical techniques and functions.	K4
CO5	evaluate and create programming using R – language.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to R – Language 1.1 Feature of R - Installing R – Starting R – Writing scripts – R as a calculating environment – Identifiers – Constant - Variables - Operators - Arithmetic — Relational – Logical Assignment – Strings – The workspace	K1-K5	11	1-5
2	Data Types and Operations 2.1 Basic data types – Vectors - Lists – Expressions – Assignments – Matrices – Arrays – Factors - Data frames – Data type conversion 2.2 Functions – Function calling – Function without arguments – Function with named and default arguments – Built – in – functions – Recursive functions - debugging functions	K1-K5	13	1-5
3	Flow Control and Programming 3.1 Basic programming – Decision making - branching with ‘if’, ‘if else’, ‘nested if else’, ‘switch’ – Loops - Looping with ‘for’, ‘while’, ‘repeat’ – vector based programming – program flow 3.2 Basic debugging – input and output – text – input from a file – input form keyboard – output to a file – plotting	K1-K5	13	1-5
4	Charts and Graphs (Programming and Practical - I) 4.1 Bar charts – Plotting categorical data – grouped bar chart - Histogram – Line graph – simple and with multiple lines - Pie charts – simple and 3D pie charts - Box plots – multiple box plots – 3D Scatter plots – strip charts	K1-K5	14	1-5
5	Numerical Techniques and Probability (Programming and Practical – II) 5.1 Newton Raphson method – the bisection method – Trapezoidal rule – Simpson’s rule – Euler’s method – forward and backward Euler - Runge kutta method	K1-K5	14	1-5

BOOKS FOR STUDY

R, Owen Jones, Robert Maillardet, Andrew Robinson, *Introduction to Scientific Programming and Simulation*, 2nd edition, CRC Press, US, 2014.

Jeeva Jose, *Beginner’s Guide for Data Analysis using R programming*, Khanna Book Publishing, New Delhi, 2019.

BOOKS FOR REFERENCE

Graham W. Griffiths, *Numerical analysis using R*, 1st edition, Cambridge University Press, New York, 2016.

PATTERN OF ASSESSMENT:**Continuous Assessment:****Total Marks:50 (Theory - 30 Marks + Practical – 20 Marks)****Duration: 1 hour (Theory) + 1 hour (practical)**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 2 questions K3 – 1 question
B	K3	PART A	5	1 x 5 = 5 marks (1 out of 2 questions to be answered)
	K4	PART B	10	1 x 10 = 10 marks (1 out of 2 questions to be answered)
C	K5		20	Practical (Programming) (5+5+10)

Other Components:**Total: 50 marks**

Presentation/Assignments/Problem solving/Quiz

All K1 – K5 levels has to be assessed

End Semester Examination**Total Marks: 100 (Theory - 60 Marks + Practical – 40 Marks)****Duration: 2 hours (Theory) + 2 hours (practical)**

Section	Cognitive Level		Marks	Pattern
A	K1, K2, K3		30	10 x 3 = 30 (All questions to be answered) K1 – 3 questions K2 - 4 questions K3 – 3 questions
B	K3	PART A	10	2 x 5 = 10 marks (2 out of 3 questions to be answered)
	K4	PART B	20	2 x 10 = 20 marks (2 out of 3 questions to answered)
C	K5		40	Practical (Programming) (10+10+20)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PH/PE/IR15												
	Course Title: INTRODUCTION TO R – PROGRAMMING												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	2	3	2	1	2	3	2	3	1
CO 2	3	3	3	2	3	2	2	2	3	3	2	2	2
CO 3	2	2	2	3	2	1	1	1	3	2	3	2	1
CO 4	3	3	3	2	2	2	1	2	3	3	2	2	3
CO 5	3	3	2	3	3	2	2	1	3	3	3	2	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI-600086
Post Graduate Elective Course Offered by the Department of Physics for
M.A. / M.Sc./ M .Com. Degree Programme

SYLLABUS
(Effective from the academic year 2023- 2024)

EVERYDAY PHYSICS

CODE: 23PH/PE/ED23

CREDITS:3

L T P:2 0 1

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- To introduce the students the Newton's law of motion, Ohm's law, Lenz's law, wave motion and its propagation and magnetism.
- To impart knowledge on various principles like principle of moments, principle of laser and properties of light, magnet and waves.
- To involve the students in different demonstrating experiments like simple pendulum, parts of optical instruments, string instruments and generating EMF using induction coil.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the concepts in mechanics, light, electricity, sound waves and magnetism.	K1
CO2	interpreting the different laws of basic physics, characteristics of light, types of magnetic materials and acoustics of auditorium.	K2
CO3	apply the basic knowledge to demonstrate the simple experiments.	K3, K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	Hrs	CO
1	Mechanics 1.1 Newton's Laws of Motion- Torque-examples-Principle of Moments-Simple Harmonic oscillations- day to day examples-Centripetal and Centrifugal Forces around us – First and Second Order of Levers Simple Machines 1.2 Demonstration i) Simple pendulum ii) Principle of Moments	K1-K4	7	1-3
2	Optics 2.1 Light – Characteristics of Light- Reflection – Refraction – Interference – Diffraction - Polarization- Electromagnetic Spectrum- Microscope-Telescope- Spectrometer - Laser- Stimulated Emission – Principle of Laser Action	K1-K4	8	1-3

UNIT	CONTENT	CL	Hrs	CO
	2.2 Demonstration i) Parts of Optical Instruments ii) Study of Spectrum Using Prism and Transmission Grating			
3	Electricity 3.1 Ohm's Law- Resistance in Series and Parallel- Electromagnetic Induction - Lenz's Law - Direct Current and Alternating Current - Three Phase AC 3.2 Demonstration i) Verification of Ohm's Law ii) Generation of EMF Using Induction Coil	K1-K4	8	1-3
4	Sound 4.1 Waves - Properties of Waves- Wave Motion- Sound Propagation- Velocity of Sound in air and water - Echoes- Interference - Resonance and Beats – Vibration in strings – Acoustics in auditorium. 4.2 Demonstration i) Melde's String ii) Sonometer	K1-K4	8	1-3
5	Magnetism 5.1 Magnetism – Magnetic lines of force – Magnetic field – Magnetic Materials- Types of Magnetic Materials – Diamagnetism – Paramagnetism – Ferromagnetism – Antiferromagnetism – Ferrimagnetism. 5.2 Demonstration i) Making a magnet ii) Study of Magnetic Properties	K1-K4	8	1-3

BOOKS FOR STUDY :

D S Mathur, *Mechanics*, Chaukhamba Auriyantaliya Publisher, Delhi, 2020.
N Brij Lal Subrahmaniam, *A Text book of Optics*, 23rd Rev. Edition, S. Chand
Publisher, New Delhi, 2006.
R. Mugesan, *Properties of Matter and Acoustics*, S Chand & Company, New Delhi
2012.
R. Murugesan, *Electricity and Magnetism*, 10th Edition, S Chand Publishing, New Delhi
2017.

BOOKS FOR REFERENCE:

David Halliday, Robert Resnick, Jearl Walker, *Fundamental of Physics*, 10th Edition,
Wiley International, New Jersey, 2013.
Paul G. Hewit, *Conceptual Physics*, 12th Edition, Pearson publishers, Delhi, 2015.

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration : 1 hour 30 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1, K2	15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 3 questions
B	K3	15	3 x 5 = 15 marks (3 out of 4 questions to be answered)
C	K4	20	2 x 10 = 20 marks (2 out of 3 questions to be answered)

Other Components:**Total marks : 50**

Presentation/Assignments/Problem solving/Quiz

All K1 – K4 levels has to be assessed

End Semester Examination**Total Marks:100****Duration : 3hours**

Section	Cognitive Level	Marks	Pattern
A	K1, K2	30	10 x 3 = 30 (All questions to be answered) K1 – 4 questions K2 - 6 questions
B	K3	30	6 x 5= 30 marks (6 out of 8 questions to be answered)
C	K4	40	4 x 10 = 40 marks (4 out of 5 questions to be answered)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI-600086
Post Graduate Elective Course Offered by the Department of Physics for
M.A. / M.Sc./ M .Com. Degree Programme

SYLLABUS
(Effective from the academic year 2023- 2024)

ELECTRICAL INSTALLATIONS

CODE: 23PH/PE/EI23

CREDITS:3

L T P:2 0 1

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- To impart knowledge on basic facts on electric circuits and basic components, effects of electric current through the electrical circuit and types of lamps.
- To make the students to understand the concept of switch and its types, fuse wire, lightning conductor and inverter, single and three phase connections, fuses, electricity consumption calculations, different home appliances working principle.
- To demonstrate hands on training on earthing, wiring, measuring current and voltage, replacing fuses.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	remember the significance of electrical components.	K1
CO2	understand the significance of various electrical appliances and its operating principles.	K2
CO3	apply the concept of electrical components to demonstrate earthing, wiring, replacing fuses and undertake minor electrical repair works.	K3, K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	Hrs	CO
1	Basic Electric Circuits 1.1 Basic facts: electric circuits basic components used in an electric circuit Series and parallel types of circuits. 1.2 Switches types of switches plugs and its types safety practices and measurements 1.3 AC and DC - Principles of single phase and three phase connections.	K1-K4	9	1-3
2	Electrical Connections and Home Appliances 2.1 Three effects of electric current - Hot wires nichrome- fuses-fuse wire – melting point, causes and repairing a fuse 2.2 Lighting circuits - house lights ring circuit the earth wire lightning conductor 2.3 Using and paying for electricity consumption- KWH-meters.	K1-K4	10	1-3

UNIT	CONTENT	CL	Hrs	CO
3	Home Appliances 3.1 Refrigerator Air conditioner - microwave oven- washing machine 3.2 Types of lamps and its working 3.3 Inverter - Motor pump(Water)-jet pump	K1-K4	10	1-3
4	Demonstration and Hands on Training-I 4.1 Earthing. 4.2 Wiring practice of switches and plugs. 4.3 Measurement of current, voltage and resistance using multimeter.	K1-K4	5	1-3
5	Demonstration and Hands on Training-II 5.1 Replacing fuses. 5.2 A model of house wiring. 5.3 Model of an inverter	K1-K4	5	1-3

BOOK FOR STUDY

I M Anwani, *Electrical Appliances Theory and Repair*, 2nd Edition, New Heights Publishers, Meerut, 1981

BOOKS FOR REFERENCE

Trevor Linsley, *Basic Electrical Installation Work*, 9th Edition, Routledge Publisher, New Delhi, 2018

PATTERN OF ASSESSMENT:

Continuous Assessment

Total Marks:50

Duration : 1 hour 30 minutes

Section	Cognitive Level	Marks	Pattern
A	K1, K2	15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 3 questions
B	K3	15	3 x 5 = 15 marks (3 out of 4 questions to be answered)
C	K4	20	2 x 10 = 20 marks (2 out of 3 questions to be answered)

Other Components:

Total marks : 50

Presentation/Assignments/Problem solving/Quiz

All K1 – K4 levels has to be assessed

End Semester Examination**Total Marks:100****Duration : 3hours**

Section	Cognitive Level	Marks	Pattern
A	K1, K2	30	10 x 3 = 30 (All questions to be answered) K1 – 4 questions K2 - 6 questions
B	K3	30	6 x 5= 30 marks (6 out of 8 questions to be answered)
C	K4	40	4 × 10 = 40 marks (4 out of 5 questions to be answered)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI-600086
Post Graduate Elective Course Offered by the Department of Physics for
M.A. / M.Sc./ M .Com. Degree Programme

SYLLABUS
(Effective from the academic year 2023- 2024)

ENERGY PHYSICS

CODE: 23PH/PE/EP23

CREDITS:3

L T P:3 0 0

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- To understand the fundamental concepts of energy and its sources in physics
- To equip the students to explain the significance of energy conservation and the need for alternative sources of energy.
- To guide the students to utilize renewable energy sources instead of non-renewable energy sources.
- To prioritize sustainable energy development through proper energy audit and planning in both present and future scenarios.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	study the importance of energy and its energy conversion processes in physics	K1
CO2	describe the sources and forms of energy, renewable and non-renewable sources, its need for conservation and proper energy planning to reduce the adverse effects in the environment.	K2
CO3	apply the studied concepts to promote renewable energy technologies due to its low cost, feasibility, safety and less time consumption	K3, K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction 1.1 Energy: Sources of Energy-Forms of Energy-Units of Energy, Uses of Energy, Energy Conversion 1.2 Non-Renewable Energy – Coal, Petroleum, Gas, Renewable Energy- Solar, Wind, Biomass, Geothermal and Nuclear, Advantages and Disadvantages	K1 – K4	9	1-3

UNIT	CONTENT	CL	Hrs	CO
2	Non-Renewable Energy 2.1 Coal-Early Uses as Fuel, Electricity Generation, Petroleum - Composition, Reservoirs – Uses 2.2 Natural Gas – Process, Conversion to Electrical Energy 2.3 Alternate sources of energy - Need	K1 – K4	10	1-3
3	Renewable Energy 3.1 Solar radiation and its measurement - Solar cells for direct conversion of solar energy to electric powers- Efficiency – Wind Energy: Basic principles of wind energy conversion – Power in the wind - Forces in the blades – Advantages and disadvantages of wind energy conversion systems (WECS) – Applications of wind energy 3.2 Biomass Energy - Biofuel Conversion Process, Wet and Dry process – Photosynthesis – Biogas generation – Advantages of anaerobic digestion – Biogas from waste fuel – Utilization of Biogas. Nuclear: Nuclear Fission and Fusion, Power Reactors – energy from the oceans – energy utilization – energy from tides - Basic principle of tidal power– utilization of tidal energy	K1 – K4	10	1-3
4	Energy and Environment 4.1 Energy and Environment, Conservation of Energy, Energy Consumption, Calorific Values of Energy	K1 – K4	5	1-3
5	Energy Audit and Planning 5.1 Sustainable Energy Development, Present and Future – Energy Audit	K1 – K4	5	1-3

BOOKS FOR STUDY

Ashok V. Desai. *Non-conventional Energy*, New Delhi: New Age Publishers, 2001.

D.P. Kothari, K.C. Singal & Rakesh Ranjan, *Renewable energy sources and emerging Technologies*, Prentice Hall of India Pvt. Ltd., New Delhi, 2008.

BOOKS FOR REFERENCE

Ashwin Paramar, *Energy Future*, New Delhi, Dominant, 2001.

Tiwari. G. N. and Ghosal M. K. *Renewable Energy resources*, New Delhi, Narosa, 2007.

Vandana. S., *Alternative Energy*, New Delhi, APH, 2002.

PATTERN OF ASSESSMENT:**Continuous Assessment****Total Marks:50****Duration: 1 hour 30 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1, K2	15	5 x 3 = 15 marks (All questions to be answered) K1 - 2 questions K2 – 3 questions
B	K3	15	3 x 5 = 15 marks (3 out of 4 questions to be answered)
C	K4	20	2 x 10 = 20 marks (2 out of 3 questions to be answered)

Other Components:**Total marks: 50**

Presentation/Assignments/Problem solving/Quiz

All K1 – K4 levels has to be assessed

End Semester Examination**Total Marks:100****Duration: 3hours**

Section	Cognitive Level	Marks	Pattern
A	K1, K2	30	10 x 3 = 30 (All questions to be answered) K1 – 4 questions K2 - 6 questions
B	K3	30	6 x 5= 30 marks (6 out of 8 questions to be answered)
C	K4	40	4 x 10 = 40 marks (4 out of 5 questions to be answered)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

DIGITAL COMMUNICATION

CODE:23PH/PI/DC24

CREDITS:4

OBJECTIVES OF THE COURSE

- To acquaint students with concepts of communication systems
- To understand the principles of optical and mobile communication systems

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- Understand basic components of digital communication systems.
- Explain in simple words the working principles of basic building blocks of digital communication systems.
- Demonstrate understanding of various modulation and demodulation techniques
- Understand the basics of fibre optic communication
- Describe and differentiate four generations of wireless standard for cellular networks

Unit 1

Communication Principles

- 1.1 Types of Modulation – Amplitude Modulation – Modulation Factor – Analysis of Amplitude Modulated Wave – Energy Distribution in AM Wave
- 1.2 Frequency Modulation - Analysis of Frequency Modulated Wave – Phase Modulation – Comparison of Frequency and Amplitude Modulation

Unit 2

Radiation Propagation

- 2.1 Fundamentals of Electromagnetic Waves – Propagation of Waves – Ground Waves – Sky Waves
- 2.2 Space Wave Propagation – Effect of Earth's Curvature – Atmospheric Effects- Ionosphere and Its Stratification

Unit 3

RADAR Systems and Microwave Generations

- 3.1 Radar Systems – Basic Principles – Basic Pulsed Radar System – Block Diagram and Description – Uses of Radar – Doppler Radar Systems
- 3.2 Microwave Communication – Introduction – Generation of Microwaves – Magnetron Oscillator – Working

Unit 4

Fibre Optic Communication

- 4.1 Introduction – Importance of Optical Fibres – Propagation of Light Waves in an Optical Fibre – Basic Structure of an Optical Fibre – Modes of Propagation – Meridinal and Skew Rays
- 4.2 Fibre Losses – Attenuation in Optic Fibres- Material or Impurity Loss – Absorption Loss – Radiation Induced Losses

Unit 5

Basics of Wireless and Mobile Communications

- 5.1 Introduction - Present Day Mobile Communication - Radio Transmission Techniques- Cellular Concept - Operational Channels - Making a Call
- 5.2 Modern Wireless Communication Systems: First Generation Networks - Second Generation Networks - Mobile Networks – 3G and 4G Networks - Bluetooth – Hotspot.

BOOKS FOR STUDY

Ambrose, A., T. Vincent Devraj. *Elements of Solid State Electronics*, K. K. DT: Meera 1990.

Mehta. V.K. *Principles of Electronics*. New Delhi : S Chand, 1993.

Sarkar Subir Kumar. *Optical Fibres and Fibre Optic Communication Systems*. New Delhi: S Chand, 1997.

Jochen Schiller. *Mobile Communications*. Second Edition. U.K: Pearson Education, 2003.

BOOKS FOR REFERENCE

Haykin, Simon. *Digital Communications*. New Delhi: John Wiley, 1998.

Kennedy, George. *Electronic Communication Systems*. New Delhi: McGraw, 1984.

Lathi B.P. *Communication System*. New Delhi: New Delhi: Wiley, 1981.

Kaveh Pahlavan, Prasanth Krishnamoorthy. *Principles of Wireless Networks*. First Edition. U.K: Pearson Education, 2003.

PATTERN OF ASSESSMENT:

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section A – 10 x 3 = 30 Marks (All questions to be answered)

Section B – 5 x 5 = 25 Marks (5 out of 7 to be answered)

Section C – 3 x 15 = 45 Marks (3 out of 5 to be answered)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH III – PHYSICS

SYLLABUS

(Effective from the academic year 2023–2024)

DATA COMMUNICATION AND COMPUTER NETWORKS

CODE:23PH/PI/DN24

CREDITS:4

OBJECTIVE OF THE COURSE

To expose the students to the latest techniques in data communication and computer networks.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- Understand the basics of data communication;
- Explain how communication works in data networks and the Internet
- Be familiar with various types of computer networks;
- Explain the role of protocols in networking.
- Analyse the services and features of the various layers of data networks

Unit 1

Data Transmission And Encoding

Concepts: Analog and Digital transmission, Transmission impairments -Transmission media - Synchronous / Asynchronous transmission

Unit 2

Data Link Control

Flow control, Error control - HDLC, Multiplexing,

Unit 3

Introduction To Computer Networks

Introduction: The uses of computer networks - Network hardware - Network software - Reference models - Example of networks

Unit 4

The Data Link And The Network Layers

The Data Link Layer: Data link layer design issues - Error detection and correction - Elementary data link protocols - Sliding window protocols - Example of data link protocols - ETHERNET.

Unit 5

The Transport And The Application

LAYERS - The transport layer: Transport layer design issues -Transport protocols - Simple transport protocol - Internet transport protocols UDP, TCP. The application layer: Domain name system - Electronic mail – World Wide Web.

BOOKS FOR STUDY:

William Stallings, *Data and Computer Communications*, 8th Edition, Prentice - Hall of India, (2008)

Andrew S. Tanenbaum, *Computer Networks*, 4th edition, Prentice - Hall of India, New Delhi, (2005).

Behrouz Forouzan, *Introduction to Data Communication and Networking*, Tata McGraw - Hill, (2000).

BOOKS FOR REFERENCE:

Douglas Comer, *Volume 1 of Internetworking with TCP/IP*, 5th Edition, Prentice - Hall of India, (2006).

Taub and Schilling, *Principles Of Communication Systems*, McGraw Hill, (1986).

James F. Kurose, Keith W. Ross, Julie C. Meloni, *Computer Networking: A Top - Down Approach Featuring the Internet*, 3rd Edition, Pearson Education, Asia, (2006).

PATTERN OF ASSESSMENT:

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section A – 10 x 3 = 30 Marks (All questions to be answered)

Section B – 5 x 5 = 25 Marks (5 out of 7 to be answered)

Section C – 3 x 15 = 45 Marks (3 out of 5 to be answered)



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

M.Sc. Degree
Branch IV CHEMISTRY
(CHOICE BASED CREDIT SYSTEM)

OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600086

DEPARTMENT OF CHEMISTRY

PROGRAMME DESCRIPTION

The Master of Science degree in Chemistry at Stella Maris College (Autonomous) covers courses in the core areas of Organic, Inorganic, Physical and Analytical Chemistry and emerging areas of Polymer Chemistry, Nanoscience, Corrosion Science, etc. with training on research instrumentation in advanced, project-oriented laboratory courses. The structure of the programme enables the students to explore the sub disciplines of Chemistry that most interest them. Students are exceptionally well prepared for careers in chemical research, teaching, industry and analytical service laboratories through networking with industry and research organisations. The programme also prepares the students with the ability to plan, design, execute, evaluate and communicate original chemical research under the guidance of faculty research advisors. The students are trained to address social and environmental issues with professional and personal integrity and ethics.

VISION

To establish a progressive learning environment and cutting-edge research that advances the discipline and fosters the development of innovation and discovery to address increasingly complex challenges and problems that impact society and the environment.

MISSION

To adopt an interdisciplinary approach, network with industry and research institutions to create a synergy that will catalyse progress of the individual and society.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600086

DEPARTMENT OF CHEMISTRY

PROGRAMME SPECIFIC OUTCOMES (PSOs)

On successful completion of the M.Sc. Chemistry programme, the students will be able to

PSO1	Core competency Demonstrate an advanced level understanding of the major disciplines in Chemistry
PSO2	Scientific reasoning and Research motivation Identify research opportunities, plan strategies, devise methodologies and do original and independent research in their chosen field of study
PSO3	Communication skills Assess, interpret and present the results of their research work clearly and effectively to a scientific community
PSO4	Employability and Entrepreneurship Enhance their professional skills and hold responsible positions in academia, research or industry
PSO5	Social responsibility Address social, economic and environmental issues through the concepts learned while maintaining professional and personal integrity and ethics

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
DISTRIBUTION OF CREDITS AND HOURS
M.Sc. Chemistry 2023-2024

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	5	4	6	4	5			12	16
	4	5	4	5	4	6			12	16
	4	5	4	6	4	6			12	17
PC Practical	4	6	4	6	3	4	4	6	15	22
					3	4			3	4
Dissertation							9	11	9	11
PE-dept.	5	5					5	5	10	10
							5	5	5	5
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PA	2	2							2	2
PN					2				2	0
Library		2						3		5
TOTAL	23	30	23	30	25	30	23	30	94	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: BRANCH IV - CHEMISTRY

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks										
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M	
SEMESTER-I										
23CH/PC/OC14	Organic Chemistry I	4	4	1	0	3	50	50	100	
23CH/PC/PC14	Advanced Physical Chemistry	4	4	1	0	3	50	50	100	
23CH/PC/SI14	Structural Inorganic Chemistry	4	4	1	0	3	50	50	100	
23CH/PC/P114	Inorganic Qualitative and Quantitative Analysis Practical	4	0	0	6	6	50	50	100	
	PA/PL									
	Department Elective I									
SEMESTER-II										
23CH/PC/OC24	Organic Chemistry II	4	4	1	0	3	50	50	100	
23CH/PC/QG24	Quantum Chemistry and Group Theory	4	4	2	0	3	50	50	100	
23CH/PC/CO24	Coordination Chemistry	4	4	2	0	3	50	50	100	
23CH/PC/P224	Organic Separation and Analysis Practical	4	0	0	6	6	50	50	100	
23CH/PK/SS22	Soft Skills	2	2	0	0	-	50	-	100	
CD / ET	Value Education									
	Common Elective I									
SEMESTER-III										
23CH/PC/RM34	Research Methodology	4	3	0	2	3	50	50	100	
23CH/PC/MS34	Molecular Spectroscopy	4	4	2	0	3	50	50	100	
23CH/PC/SO34	Synthetic Organic Chemistry and Natural Products	4	4	2	0	3	50	50	100	
23CH/PC/P333	Physical Chemistry Practical	3	0	0	4	3	50	50	100	
23CH/PC/P433	Analytical Instrumentation Practical	3	0	0	4	3	50	50	100	
23CH/PN/SI32	Summer Internship	2	0	0	0	-	50	-	100	
CD / ET	Value Education									
	Common Elective II									
SEMESTER-IV										
23CH/PC/P544	Organic Synthesis and Purification Practical	4	0	0	6	6	50	50	100	
23CH/PC/DS49	Dissertation	9	0	0	11	-	50	50	100	
	Department Elective II & III									
Postgraduate Elective Courses Offered to Parent Department										
23CH/PE/AI15	Analytical Instrumentation	5	5	0	0	3	50	50	100	
23CH/PE/IM15	Industrial Waste Management	5	5	0	0	3	50	50	100	
23CH/PE/PM15	Polymer Materials and Applications	5	5	0	0	3	50	50	100	
23CH/PE/BC15	Essentials of Biochemistry	5	5	0	0	3	50	50	100	
23CH/PE/CP15	Corrosion and its Prevention	5	5	0	0	3	50	50	100	
23CH/PE/GC15	Green Chemistry	5	5	0	0	3	50	50	100	
23CH/PE/NC15	Nanochemistry	5	5	0	0	3	50	50	100	
23CH/PE/PY15	Phytochemistry	5	5	0	0	3	50	50	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: BRANCH IV - CHEMISTRY

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks										
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M	
Postgraduate Elective Courses Offered to Other Departments										
23CH/PE/MH23	Medicines and Health Care	3	3	0	0	3	50	50	100	
23CH/PE/CH23	Cosmetics and Herbal Products	3	3	0	0	3	50	50	100	
23CH/PE/FN23	Food Chemistry and Nutrition	3	3	0	0	3	50	50	100	
The Department will offer one Social Awareness / Service Learning Course										
Social Awareness										
23CH/PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100	
23CH/PA/CR12	Child Rights	2	2	0	0	-	50	-	100	
23CH/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100	
23CH/PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100	
23CH/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100	
23CH/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100	
23CH/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100	
23CH/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100	
23CH/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100	
Service Learning (Specific to the Department)										
23CH/PL/FW12	Food Adulteration and Water Pollution	2	2	0	0	-	50	-	100	
Independent Elective Courses										
23CH/PI/IF24	Introduction to Forensic Chemistry	4	0	0	0	3	-	100	100	
23CH/PI/NP24	Chemistry of Natural Products	4	0	0	0	3	-	100	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

ORGANIC CHEMISTRY I

CODE: 23CH/PC/OC14

CREDITS: 4

L T P: 4 1 0

TOTAL HOURS: 65

OBJECTIVES OF THE COURSE

- To enable understanding of the rules for IUPAC nomenclature and aromaticity of organic compounds
- To introduce the concepts in stereochemistry - chirality, absolute and relative configuration, topicity and prochirality of organic compounds
- To explain conformational analysis of cyclic systems and their behaviour in a chemical environment
- To facilitate understanding of the methods adopted in the study of reaction mechanisms

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the rules of IUPAC nomenclature, concepts of aromaticity, stereochemistry, conformational analysis and methods of determining mechanisms	K1
CO2	determine absolute configuration and prochirality of organic compounds with multiple stereocenters and identify the conformations of cyclic systems	K2
CO3	compare the stability of the conformations of different cyclic systems and apply electronic effects to study reaction rates	K3
CO4	correlate structures of compounds with their stereochemistry and reactivity and interpret them quantitatively	K4
CO5	predict products of organic reactions with stereochemical descriptors by examining the reaction mechanism and conformations of reagents and precursors	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1.	Nomenclature of Organic Compounds and Aromaticity 1.1 Modern Nomenclature - Cyclic, acyclic, aliphatic, aromatic, bridged and heterocyclic compounds 1.2 Benzenoid and non-benzenoid aromatic compounds 1.3 Hückel's rule of aromaticity, anti-aromaticity, homo-aromaticity, Frost circles, Craig's rule. Aromaticity in Annulenes and Heteroannulenes. 1.4 Diatropic and paratropic behaviour (in NMR).	K1-K5	8	1-3
2.	Geometrical and Optical Isomerism 2.1 Geometrical Isomerism - E-Z Nomenclature of olefins, cyclic systems and oximes. 2.2 Concept of optical activity, chirality, asymmetry and dissymmetry. Optical activity in molecules with C, N, S and P based chiral centres - Axial, planar and helical chirality – substituted adamantanes. 2.3 Absolute and Relative Configuration - D/L and R/S nomenclature, Cahn-Ingold-Prelog rules. R/S nomenclature of acyclic and cyclic compounds, biphenyls, allenes, spiranes, helicene and heteroatom chiral centres. 2.4 Erythro and Threo nomenclature. Interconversion of wedge, zig-zag, Fischer, Sawhorse and Newman Projection. Criteria for optical purity – Enantiomeric excess	K1-K5	15	1-5
3.	Stereochemistry 3.1 Racemic Modification - Racemisation by Thermal, Anion, Cation, Reversible formation; Epimerisation, Asymmetric Induction – Mutarotation. 3.2 Resolution of Racemic Mixtures - through the formation of diastereomers. 3.3 Topicity and Prochirality - Identification of homotopic, enantiotopic, diastereotopic ligands and faces. Prochirality – pro R, pro S, Re and Si faces. 3.4 Asymmetric synthesis - Cram's and Prelog's rules, Felkin Ahn modification, chiral auxiliaries – Evans Aldol reaction, chiral reagents - epoxidation (Sharpless' Reaction) 3.5 Stereospecific and Stereoselective reactions - Syn and Anti (Addition of X ₂ to alkenes and β -Elimination)	K1-K5	15	1-5

UNIT	CONTENT	CL	Hrs	CO
4.	Conformations and Conformational Analysis 4.1 Conformation and reactivity in cyclic systems - cyclobutane, cyclopentane, cyclohexane and piperidine. 4.2 Conformational analysis of disubstituted cyclohexanes and their stereochemical features. Conformation and reactivity of cyclohexanols (Oxidation and Acylation), cyclohexanones (Reduction) and cyclohexane carboxylic acid derivatives (Hydrolysis) 4.3 Conformation and stereochemistry of fused ring systems - Decalins (9-methyl decalin)	K1-K5	12	1-5
5.	Study of Reaction Mechanisms and Structural Effects 5.1 Thermodynamic and kinetic requirements of reactions, Baldwin rules for ring closure, Hammond postulates. Curtin-Hammett principle 5.2 Methods of determining reaction mechanisms - Identification of products and intermediates, cross-over experiments, trapping of intermediates, isotopic labeling, stereochemical studies, kinetic isotopic effects, salt effects and solvent isotopic effects 5.3 Quantitative relationships between molecular structure and chemical reactivity - Linear free energy relationship - Hammett equation, Taft equation	K1-K5	15	1-5

BOOKS FOR STUDY

Kalsi P. S. *Stereochemistry: Conformation and Mechanism*. New Delhi: New Age, 2019.
 Nasipuri D. *Stereochemistry of Organic Compounds: Principles and Applications*. New Delhi: Wiley Eastern, 1992.
 Ahuliwalia V. K. and Parashar R. K. *Organic Reaction Mechanism*. New Delhi, Narosa, 2011.

BOOKS FOR REFERENCE

Eliel E. L. *Stereochemistry of Organic Compounds*. New York: John Wiley, 2008.
 Singh, J. and Yadav L. D. S. *Advanced Organic Chemistry*. Meerut: Pragati Prakashan, 2010.
 Clayden J., Greeves N. and Warren S. *Organic Chemistry*, New York: Oxford University Press, 2012.
 Francis A. Carey and Richard J. Sundberg, *Advanced Organic Chemistry Part A: Structure and Mechanisms*. New York: Springer, 2007.
 Norman R. O. C. and Coxon J. M. *Principles of Organic Synthesis*. New York: CRC Press 2012.
 Buxton S. R. and Roberts S. M. *Guide to Organic Stereochemistry*, London: Orient Longman, 1997.
 Solomons T. W. G. and Fryhle C. B. *Organic Chemistry*. New York: John Wiley, 2000.
 Bansal Raj K. *Organic Reaction Mechanism*. New Delhi: Tata McGraw-Hill, 2006.

Page M. I. and Williams A. *Organic and Bio-organic Mechanisms*. New Delhi, Pearson Education, 2010.

Tewari N. *Advanced Organic Stereochemistry*. Kolkata: Books & Allied (P) Ltd, 2014.

JOURNALS

Tetrahedron letters

Journal of American Chemical Society

Journal of Chemical Education

WEB RESOURCES

<https://learninglink.oup.com/access/clayden2e>

<https://nptel.ac.in/courses/104101005/4>

<https://chem.libretexts.org>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three.• Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none">• One question to be set with either/or pattern• Questions can be set with or without subdivisions

Other Component:

Total Marks: 50

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five. Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none"> Two questions to be set with either/or pattern Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/OC14												
I	Course Title: ORGANIC CHEMISTRY - I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	2	2	2	2	2	2	3	2	2	2	2
CO 2	2	3	3	3	2	2	2	1	3	3	3	2	2
CO 3	3	3	3	3	2	2	2	1	3	3	2	2	1
CO 4	3	3	3	3	2	3	2	2	3	3	3	2	2
CO 5	3	3	3	2	2	3	2	2	3	3	3	2	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

ADVANCED PHYSICAL CHEMISTRY

CODE: 23CH/PC/PC14

CREDITS: 4

L T P: 4 1 0

TOTAL HOURS: 65

OBJECTIVES OF THE COURSE

- To provide advanced level understanding of statistical thermodynamics, kinetics, partition function, irreversible processes and surface chemistry
- To enhance knowledge of electrochemistry and electrode processes
- To give an insight into the connection between microscopic and macroscopic description of systems
- To impart the skills required to solve problems in thermodynamics, quantum statistics, kinetics, electrochemistry and surface chemistry

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the laws of statistical thermodynamics and kinetics, theories of electrochemistry and surface phenomena	K1
CO2	calculate molecular energies, reaction rates, surface potentials and predict reaction mechanisms	K2
CO3	derive different partition functions for various systems, approximation methods for simple and consecutive reactions, models for electrode systems and adsorption isotherms to explain surface phenomena	K3
CO4	solve numerical problems by applying the principles of statistical thermodynamics, irreversible processes, kinetics, electrochemistry and surface chemistry	K4
CO5	integrate the principles of quantum statistics, thermodynamics and kinetics into the framework of electrochemistry	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1.	Statistical Thermodynamics 1.1 Introduction to Statistical Mechanics (Permutation, Probability), Microstates, Macrostates, Probability, Ensemble. 1.2 Distributions and the most probable distribution, evaluation of Boltzmann parameters using Lagrange's method of undetermined multipliers, Stirling approximation 1.3 Bose-Einstein and Fermi-Dirac Statistics, Comparison between Bose-Einstein, Fermi-Dirac and Boltzmann Statistics, application to radiation and electron gas in metals	K1-K5	16	1-5

UNIT	CONTENT	CL	Hrs	CO
2.	Partition function and Irreversible processes 2.1 Evaluation of Translational, Rotational, Vibrational and Electronic Partition Functions for ideal gases, n particles (Distinguishable and Indistinguishable) systems 2.2 Applications: Calculation of thermodynamic properties in terms of partition function, Sackur-Tetrode Equation, Heat Capacities of ideal gases, Heat Capacity of solids, residual entropies, equilibrium constant 2.3 Introduction to Irreversible Processes - Phenomenological Equations and Onsager Reciprocity relation	K1-K5	12	1-5
3.	Molecules in Motion 3.1 Simple Reactions, Consecutive Reactions (Rate determining step approximation and steady state approximation), Pre-Equilibria and Unimolecular Reactions, Lindemann-Hinshelwood Mechanism, Rice-Ramsperger-Kassel and Rice-Ramsperger-Kassel-Marcus theories (derivation not required). Kinetics of complex reactions - chain reactions, explosions and photochemical reactions 3.2 Molecular Reaction Dynamics: Collision Theory, steric factor, diffusion controlled reactions, Activated Complex Theory, Eyring Equation, reaction coordinates and transition state, thermodynamic aspects, reaction between ions, effect of solvent on reaction rates, effect of ionic strength on reaction rates (salt effects), dynamics of molecular collisions (Molecular Beams), potential energy surfaces	K1-K5	14	1-5
4.	Theories of Electrochemistry 4.1 Electrodes and Electrochemical Cells - Evaluation of thermodynamic quantities 4.2 The Electrical Double Layer at the Electrode – Electrolyte Interface, Models: Helmholtz Perrin Model, Gouy - Chapman model and Stern model, Potentials (Galvanic and Voltaic) – Theory of Multiple Layer Capacity – Electrocapillarity, Lippmann Potential, Structure of double layers 4.3 Diffusion – Electrokinetic phenomena (Electroosmosis, sedimentation potential, electrophoresis, Dorn effect), membrane potential. I-E Variation, different types of overpotentials, Butler – Volmer equation for one electron transfer, Tafel plots, exchange current density, standard rate constants, transfer coefficient, Tafel and Nernst	K1-K5	14	1-5

UNIT	CONTENT	CL	Hrs	CO
	Equations, Polarisation. Rate determining step in Electrode Kinetics, Hydrogen overvoltage, Oxygen overvoltage, anodic and cathodic processes, redox reactions, Hydrogen-Oxygen fuel cells			
5.	Surface Chemistry 5.1 Adsorption Isotherms - Types of Adsorption Isotherms, Gibb's Adsorption Isotherm, BET Isotherm (Only Equation) - Determination of surface area 5.2 Heterogeneous Catalysis - Catalytic activity at surfaces, adsorption and catalysis - The Eley-Rideal mechanism, Langmuir-Hinshelwood mechanism. Examples of Catalysis - Hydrogenation, Oxidation, Cracking /Pyrolysis and Reforming	K1-K5	8	1-5

BOOKS FOR STUDY

Rajaram J. and Kuriacose J. C. *Kinetics and Mechanism of Chemical Transformations*. New Delhi: Macmillan, 1993.
 Atkins P. and de Paula J. *Atkins Physical Chemistry*. Oxford: Oxford Press, 2006.
 Laidler K. J. and Meiser J. H. *Physical Chemistry*. Brooks Cole: CA. 2002.

BOOKS FOR REFERENCE

Barrow G. M. *Physical Chemistry*, Orient Longman: New York, 1977.
 Engel T. and Reid P. *Physical Chemistry*. Pearson: Pearson Education Limited, 2014.
 Crow, D. R. *Principles and Applications of Electrochemistry*. New York: CRC Press, 1994.
 Viswanathan B. and Sundaram S., Venkataraman R., Rengarajan K. and Raghavan P. S. *Electrochemistry – Principles and Applications*. Chennai: Viswanathan, 2007.
 Gupta M. C. *Statistical Thermodynamics*. New Delhi: New Age International, 2003.
 Dole M. *An Introduction of Statistical Thermodynamics*. New York: Dover, 1986.
 Paul, M. *Physical Chemistry*. Harpur College, Endicott, New York. D. C. Heath and Co., Boston, 1962.

JOURNALS

Journal of Electrochemistry
 Journal of Surface Science
 Journal of Physical Chemistry (A, B and C)
 Langmuir
 Statistical Thermodynamics

WEB RESOURCES

<https://www.acs.org/careers/chemical-sciences/areas/physical-chemistry.html>
<http://www.annualreviews.org/journal/physchem>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none"> Three questions to be set Two questions to be answered out of three. Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none"> Three questions to be set Two questions to be answered out of three Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none"> One question to be set with either/or pattern Questions can be set with or without subdivisions

Other Component:**Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five. Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none"> Two questions to be set with either/or pattern Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/PC14												
I	Course Title: ADVANCED PHYSICAL CHEMISTRY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	2	2	3	1	3	2	2	3	2
CO 2	3	2	2	2	2	2	3	1	3	2	2	3	2
CO 3	3	3	3	2	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	2	3	2	3	3	3	3	2	3	3
CO 5	3	2	2	2	2	3	3	2	3	3	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

STRUCTURAL INORGANIC CHEMISTRY

CODE: 23CH/PC/SI14

CREDITS: 4

L T P: 4 1 0

TOTAL HOURS: 65

OBJECTIVES OF THE COURSE

- To provide understanding of the concepts of solid state chemistry
- To introduce the synthesis, properties and applications of organometallic compounds
- To give an insight into the structure-property correlation of inorganic materials with emphasis on crystalline solids
- To generate intellectual curiosity about the fundamental relationship between electronic structure, chemical bonding and properties of crystal systems, semiconductors and other inorganic solids.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	discuss the structure and bonding of inorganic solids, their applications and the methods used to characterise them	K1
CO2	compare and classify inorganic materials based on their structure, properties, applications and characterisation technique	K2
CO3	extract structural information about crystalline and amorphous materials using x-ray, electron and neutron diffraction techniques	K3
CO4	investigate the role of important inorganic materials in catalysis and other applications	K4
CO5	apply the knowledge of structure and bonding obtained from characterisation techniques to study the stability and reactivity of inorganic materials	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1.	Structure and Properties of Solids 1.1 Indexing of crystal planes using Miller indices, packing of ions in crystals, Pauling's rules for ionic crystals 1.2 Lattice Energy, Born-Lande equation derivation, factors affecting lattice energy 1.3 Structures of inorganic solids of type AX ₃ (ReO ₃), A ₂ X ₃ (Al ₂ O ₃), Perovskite, Spinel and Inverse Spinel 1.4 Bonding in Metals: Band Theory and metallic properties. Interstitial compounds, insulators and semiconductors	K1-K5	15	1-5

UNIT	CONTENT	CL	Hrs	CO
	1.5 Super Conductivity - Principle, BCS theory and Cooper pair, Meissner effect - Type I and II, applications of superconductors 1.6 Electrical properties of solids - Dielectric, Piezoelectric, Pyroelectric and Ferroelectric properties, relation between Piezo, Pyro and Ferroelectric Properties 1.7 Magnetic properties of Solids - Curie-Weiss Law			
2.	Techniques of Structure Determination in Solid State 2.1 X-Ray Diffraction Studies - Principle, powder XRD technique principle, instrumentation and applications, Debye-Scherrer method, selection rules for simple, bcc and fcc lattices, structure determination of NaCl using Powder Method. 2.2 Electron and Neutron Diffraction Studies - Principle and Applications 2.3 Comparison of X-Ray, Electron and Neutron diffraction.	K1-K5	11	1-5
3.	Structure and Chemistry of Organometallic Compounds 3.1 Preparation, Bonding and Structure of Metal Carbonyls, Carbonyl Hydride Complexes, Metal Nitrosyls (Application of EAN Rule and 18-Electron Rule), Metal Hydride Complexes, Alkyl Complexes, Carbenes, Carbynes, Carbides, Non-aromatic Alkene and Alkyne complexes, Allyl and Pentadienyl Complexes and Aryl Complexes. 3.2 Application of IR spectroscopic technique to the study of the structures of metal carbonyls and nitrosyls.	K1-K5	16	1-5
4.	Organometallic Compounds in Catalysis 4.1 Olefins - Wilkinson's catalyst, Oxo process, Ziegler - Natta Catalysis, Wacker Process, Cyclo-oligomerisation (Reppe's catalyst) 4.2 Role of Catalyst in Monsanto Acetic Acid Process and in the Synthesis of Gasoline	K1-K5	10	1-5
5.	Structure and Chemistry of Non - transition and Transition Metals 5.1 Preparation, properties and structures of Boranes (Wade's rules), Phosphazenes, Carboranes, Metallocarboranes, Supramolecular assembly - Zeolites 5.2 Preparation, properties and structures of iso and heteropolyacids of Molybdenum and Tungsten. Isopolyacids: Molybdenum - discrete molybdate, di, tri and tetramolybdate, Tungsten – discrete tungstate, paratungstate A and B. Heteropolyacids: Tetrahedral and Octahedral	K1-K5	13	1-5

BOOKS FOR STUDY

Cotton F. A. and Wilkinson G. *Advanced Inorganic Chemistry*. New York: John Wiley, 2000.
Huheey J. E. and Keiter E. A. *Inorganic Chemistry - Principles of Structure and Reactivity*. New York: Addison Wesley, 2004.

BOOKS FOR REFERENCE

Atkins P., Armstrong F., Rourke J., Weller M. and Overton T. *Inorganic Chemistry*. Oxford: Oxford Press, 2010.
Jolly W. L. *Modern Inorganic Chemistry*. New York: McGraw Hill, 1994.
Moeller T. *Inorganic Chemistry*. New York: John Wiley, 1982.
Purcell K. F. and Kotz J. C. *An Introduction to Inorganic Chemistry*. Philadelphia: W. B. Saunders Company, 1982.
Wells A. F. *Structural Inorganic Chemistry*. London: ELBS, 1981.
West A. R. *Solid State Chemistry and its Applications*. New York: John Wiley, 2014.
Das A. K. *Fundamental Concepts of Inorganic Chemistry*. New Delhi: CBS Publishers & Distributors, 2015.
Housecroft, C. E. *Inorganic Chemistry*. London: Pearson Education, 2012.

JOURNALS

Inorganic Chemistry
Organometallics
Inorganic Chemistry Frontiers

WEB RESOURCES

<http://www.chem.iitb.ac.in/~rmv/ch102/ic6.pdf>
<https://www2.chemistry.msu.edu/faculty/reusch/virttxtjml/orgmetal.htm>
<http://www.tandfonline.com/toc/gcic20/current#.VQL8TnyUflg>

PATTERN OF ASSESSMENT

Continuous Assessment: **Total Marks: 50** **Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none">Three questions to be setTwo questions to be answered out of three.Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none">Three questions to be setTwo questions to be answered out of threeQuestions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none">One question to be set with either/or patternQuestions can be set with or without subdivisions

Other Component:**Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five. Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none"> Two questions to be set with either/or pattern Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/SI14												
I	Course Title: STRUCTURAL INORGANIC CHEMISTRY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	2	2	2	1	3	3	2	3	2
CO 2	3	3	3	3	2	2	2	1	3	3	3	3	2
CO 3	3	3	3	3	3	3	2	2	3	3	3	3	3
CO 4	3	3	3	3	2	3	3	2	3	3	3	3	3
CO 5	3	3	3	3	2	2	2	1	3	3	3	2	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

INORGANIC QUALITATIVE AND QUANTITATIVE ANALYSIS PRACTICAL

CODE: 23CH/PC/P114

CREDITS: 4

L T P: 0 0 6

TOTAL HOURS: 78

OBJECTIVES OF THE COURSE

- To demonstrate laboratory techniques of inorganic qualitative analysis, volumetric analysis and complex preparation
- To impart analytical and technical skills in inorganic qualitative and quantitative analysis
- To instil understanding of the principles behind the various techniques involved

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the principles and concepts of inorganic qualitative and volumetric analyses and complex preparation	K1, K2
CO2	choose the appropriate chemical reagents for the preparation, detection and estimation of inorganic compounds	K3
CO3	prepare various complexes by understanding the principle involved	K4
CO4	estimate the amount of a metal ion present in the whole of the given solution	K5
CO5	identify the presence of rare and common cations in an inorganic salt mixture	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1.	Semi-micro qualitative analysis Analysis of four cations - two rare cations and two common cations in a salt mixture	K1, 2, 6	40	1, 2, 5
2.	Titrimetry Complexometry: Estimation of Mg^{2+} , Zn^{2+} , Ca^{2+} and Ni^{2+} Cerimetry: Estimation of Fe^{2+} /Oxalic acid Iodometry: Determination of Chlorine in bleaching powder.	K1, 2, 5	26	1, 2, 4
3.	Preparation of Inorganic Complexes Tetrammine nickel(II)chloride Potassium tris(oxalate) iron(III)hydrate Bis(acetylacetonato)copper (II) /Bis (acetylacetonato) nickel(II) Trans dichlorobis(ethylenediamine)cobalt(III)chloride	K1-3	12	1-3

A comprehensive viva will be conducted during the practical hours.

BOOKS FOR REFERENCE

Ramanujam V. V. *Inorganic Semi-Micro Qualitative Analysis*. Chennai: National, 1995.
Mendham J., Denny R. C., Barnes J. D. and Thomas M. *Vogel's Text Book of Quantitative Chemical Analysis*. London: Pearson Education, 2002

PATTERN OF ASSESSMENT

Continuous Assessment (Internal) Total Marks: 100

Inorganic complex preparation (10 marks)

Procedure	-	05 marks
Preparation – quantity and quality	-	05 marks

Semi micro qualitative analysis (40 marks)

General Procedure	-	10 marks
Rare cations (2 x 10)	-	20 marks
Common cations (2 x 5)	-	10 marks

Volumetric analysis (40 marks)

Procedure	-	05 marks
Error up to 1%	-	35 marks
1.1% - 2%	-	30 marks
2.1% - 3%	-	25 marks
> 3%	-	20 marks

Viva - **10 marks**

End Semester Examination Total Marks: 100 Duration: 6 hours

Inorganic complex preparation (10 marks)

Procedure	-	05 marks
Preparation – quantity and quality	-	05 marks

Semi micro qualitative analysis (40 marks)

General Procedure	-	10 marks
Rare cations (2 x 10)	-	20 marks
Common cations (2 x 5)	-	10 marks

Volumetric analysis (40 marks)

Procedure	-	05 marks
Error up to 1%	-	35 marks
1.1% - 2%	-	30 marks
2.1% - 3%	-	25 marks
> 3%	-	20 marks

Viva - **10 marks**

Section	Cognitive Level	Marks	Pattern
Viva	K1-K2	10	Subjective
Theoretical Principles and Procedure	K1-K2	20	Subjective
Experiment	K3-K6	70	Subjective

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/P114												
I	Course Title: INORGANIC QUALITATIVE AND QUANTITATIVE ANALYSIS PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	1	3	3	3	2	2
CO 2	3	3	3	3	2	1	3	1	3	3	3	3	2
CO 3	3	3	3	3	2	2	3	2	3	3	3	2	2
CO 4	3	3	3	3	2	3	1	1	3	3	3	3	2
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

ORGANIC CHEMISTRY II

CODE: 23CH/PC/OC24

CREDITS: 4

L T P: 4 1 0

TOTAL HOURS: 65

OBJECTIVES OF THE COURSE

- To enable understanding of reaction intermediates and their applications in organic reaction mechanisms
- To communicate the mechanistic concepts of different types of organic reactions
- To facilitate understanding of different mechanisms in oxidation and reduction reactions
- To introduce the concepts of photochemistry and concerted reactions

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	outline the role of reactive intermediates in different types of organic reactions and basic concepts in photochemistry and pericyclic reactions	K1
CO2	classify and explain the different types of organic reactions and identify them by name	K2
CO3	demonstrate the use of reagents, laws of light absorption and orbital symmetry in organic reactions	K3
CO4	analyse various organic reactions and explain with mechanism	K4
CO5	evaluate organic reactions and predict the products with stereochemical outcome	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1.	Reactive Intermediates 1.1 Formation, Stability, Reactions and Rearrangements - Carbocations (Wagner-Meerwein Rearrangements), Carbanions (Wittig, Favorskii Rearrangement), Carbene (Arndt-Eistert synthesis, Wolff Rearrangement, Skattebol rearrangement, Insertion of C-H and X-H bonds), Nitrenes (Hofmann, Beckmann and Neber rearrangements), Carbon Radicals (Acyloin Condensation, McMurry Reactions).	K1-K5	14	1-5

UNIT	CONTENT	CL	Hrs	CO
	1.2 Non-classical carbonium ion - Neighbouring Group Participation – C=C, aromatic ring, 2-norbornyl and hydrogen as neighbouring groups			
2.	Condensation, Addition, Elimination and Substitution Type Name Reactions 2.1 Condensation – Mukaiyama-Aldol, Henry, Nef, Stobbe, Dieckmann, Claisen, Mannich reactions 2.2 Addition - Grignard, Michael, Hydroboration, Robinson Annulation, Woodward and Prevost Hydroxylation, Stork enamine reactions 2.3 Substitution - Vilsmeier-Haack, Gatterman-Koch, Houben-Hoesch, Bischler-Napieralski, Baylis-Hillman, Hunsdiecker, Photo-Fries, Sommelet-Hauser rearrangements. 2.4 Elimination – Chugaev, Peterson and Shapiro reactions.	K1-K5	13	1-5
3.	Oxidation and Reduction Reactions 3.1 Oxidation – Corey-Kim, Davis, Rubottom, Swern, Collins, Jones, Corey-Suggs and Etard reactions. 3.2 Reduction - Birch, Bouveault-Blanc, Corey-Bakshi-Shibata, Luche and Rosenmund reductions.	K1-K5	10	1-5
4.	Photochemistry 4.1 Fundamentals of Photochemistry, Jablonski Diagram. Photosensitizers 4.2 Cis-trans Isomerisation, Paterno-Buchi Reaction, Norrish type I and type II reactions, di-pi methane rearrangement. 4.3 Photochemistry of α , β -unsaturated enones, cyclohexadienones 4.4 Photoreduction of ketones and Photooxidation of olefins. 4.5 Photosubstitution – Barton reaction	K1-K5	10	1-5
5.	Pericyclic Reactions 5.1 Classification and Orbital Symmetry, pi Molecular orbital diagrams of polyene systems 5.2 Electrocyclic Reactions - Thermal and Photochemical cyclisation and ring openings. Stereochemistry, Woodward - Hofmann Rules (con and dis rotation), Frontier Molecular Orbital approach and Correlation Diagrams for butadiene to cyclobutene and 1, 3, 5-hexatriene to 1, 3-cyclohexadiene systems 5.3 Cycloaddition Reactions - Thermal and Photochemical, Stereochemistry, Woodward – Hofmann rules, FMO and Correlation Diagrams of (2+2 and 4+2) Reactions. Diels-Alder reaction. 5.4 Cheletropic Reactions – Linear and non-linear approach, stereochemistry and Woodward – Hofmann's rules for cheletropic reactions	K1-K5	18	1-5

UNIT	CONTENT	CL	Hrs	CO
	5.5 Sigmatropic rearrangements – FMO method only – (1, 3), (1, 5), (1, 7) and (3, 3) sigmatropic rearrangements, Claisen, Cope and oxy-Cope rearrangements. Cope rearrangement of divinylcyclopropane and degenerate Cope rearrangement.			

BOOKS FOR STUDY

Ahuliwalia V. K. and Parashar R. K. *Organic Reaction Mechanism*. New Delhi: Narosa, 2002.
Singh J. and Singh J. *Photochemistry and Pericyclic Reactions*. New Delhi: New Age, 2005.
Gill G. B. and Willis M. R. *Pericyclic Reactions*. Chapman and Hall Chemistry Textbook Series, Springer Dordrecht, 2012.
March J. *Advanced Organic Chemistry*. New York: Wiley, 2007.

BOOKS FOR REFERENCE

Bruckner R. *Advanced Organic Chemistry: Reaction Mechanisms*. USA: Academic Press, 2003.
Clayden J., Greeves N. and Warren S. *Organic Chemistry*. New York: Oxford University Press, 2012.
Carey A. F. and Sundberg R. J. *Advanced Organic Chemistry Part A: Structure and Mechanisms*. New York: Springer, 2007.
Carruthers W. and Coldham I. *Modern Methods of Organic Synthesis*. UK: Cambridge University Press, 2005.
Turro N. J. *Modern Molecular Photochemistry*. Sausalito: University Science Books, 2010.
Solomons T. W. G. and Fryhle C. B. *Organic Chemistry*. New York: John Wiley, 2000.
Raj B. K. *Organic Reaction Mechanism*. New Delhi: Tata McGraw-Hill, 2006.

JOURNALS

Angewandte Chemie International Edition
The Journal of Organic Chemistry
Organic Chemistry Frontiers

WEB RESOURCES

<https://archive.nptel.ac.in/courses/104/106/104106077/>
<https://archive.nptel.ac.in/courses/104/101/104101005/>
<https://www.organic-chemistry.org/namedreactions/>

PATTERN OF ASSESSMENT

Continuous Assessment: **Total Marks: 50** **Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three.• Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none">• One question to be set with either/or pattern• Questions can be set with or without subdivisions

Other Component: **Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: **Total Marks: 100** **Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five.• Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none">• Two questions to be set with either/or pattern• Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/OC24												
II	Course Title: ORGANIC CHEMISTRY - II												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	3	3	3	1	3	3	3	2	2
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CO 3	3	3	3	2	3	2	3	2	3	3	3	3	2
CO 4	3	3	2	2	3	2	3	1	3	3	3	3	2
CO 5	3	3	2	3	3	1	2	2	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

QUANTUM CHEMISTRY AND GROUP THEORY

CODE: 23CH/PC/QG24

CREDITS: 4

L T P: 4 2 0

TOTAL HOURS: 78

OBJECTIVES OF THE COURSE

- To introduce the wave-particle duality of matter
- To enable understanding of the importance of quantum mechanical models
- To impart the quantum mechanical approach to the atomic and molecular electronic structure
- To enhance the knowledge of symmetry in molecules and applications of Group theory

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the basic principles of quantum mechanical systems and identify the symmetry in molecules	K1
CO2	interpret the nature of wavefunctions in different systems and infer the properties of molecules based on their symmetry	K2
CO3	construct the wave equations of different systems, compute their respective energies, and classify the molecules based on their symmetry	K3
CO4	examine the nature of wave equation, atomic structure, and point groups of molecules.	K4
CO5	evaluate the quantum mechanical systems, and atomic structure based on their wavefunctions and demonstrate the hybridization, point group, and spectral properties of molecules based on the principles of group theory.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1.	Matter Waves and Quantum Mechanical Formalism 1.1 Wave Particle Duality, Uncertainty Principle, Particle Wave and Schrödinger Wave Equation, Wave Functions, Properties of Wave Functions. Conditions of Normalization and Orthogonality; Orthonormal functions, Complete orthonormal set of functions	K1-K5	13	1-5

UNIT	CONTENT	CL	Hrs	CO
	<p>1.2 Operators and their Algebra, <i>Eigen</i> Values and <i>Eigen</i> Functions, Hermitian Properties of Operators, Postulates of Quantum Mechanics.</p> <p>1.3 Free Particle, Particle in One Dimensional Box with Infinite Potential Barriers, Quantization and Quantum Numbers, Use of Box Model, Particle in a Three-Dimensional Box, Degeneracy, Particle in a Rectangular Well, Quantum Mechanical Tunneling</p>			
2.	<p>Application to Simple Systems</p> <p>2.1 Harmonic Oscillator System: Classical treatment, Quantum Mechanical treatment - Schrodinger Wave Equation and its Solution, Hermite Polynomial, Complete Wave Function, Energy Eigen Values, Vibrational Quantum Numbers, Physical Picture of Ψ and Ψ^2. Isotropic Oscillator (no derivation)</p> <p>2.2 Particle in a Sphere: using the Schrödinger Wave Equation in Spherical Coordinates (derivation not required), Legendre and Associated Legendre Functions (derivation not required), Rotational Quantum Numbers, Spherical Harmonics, Rotation of a Diatomic Molecule (Rigid Rotator), Problems</p> <p>2.3 Application to Hydrogen/Hydrogen-like atoms: Schrodinger Wave Equation in Spherical Coordinates, Splitting Equation into R, Θ and Φ Equations, Solving R Equation, Laguerre Polynomial and Associated Laguerre Polynomials, Radial Functions, Quantum Numbers n and l, Energy Eigenvalues in Atomic Units, Complete Wave Function of Hydrogen Like Atoms, Physical Representation of Orbitals, Radial Plots and Angular Plots, Probability Function and Plots, Average Distance of Electron, Problems</p> <p>2.4 Approximation Methods: Variational Method (Linear Band Non-Linear Variation), Perturbation Theory (Non-Degenerate, First Order), Application of Variation and Perturbation methods to ground state Helium Atom. Application to hydrogen atom in a weak electric field (perturbation), Time dependent perturbation theory – two level system</p>	K1-K5	22	1-5
3.	<p>Atomic Structure</p> <p>3.1 Symmetric and Anti Symmetric Wave Functions, Electron Spin, Spin Orbitals, Pauli's Principle, concept of hybridization, Wave functions of sp² hybrid orbitals</p> <p>3.2 Excited State of He Atom, Singlet and Triplet States.</p> <p>3.3 Hartee-Fock Self Consistent Field Theory. Walsh Diagrams. Angular Momentum of many Electron Atoms, Ladder Operators</p>	K1-K5	15	1-5

UNIT	CONTENT	CL	Hrs	CO
	3.4 LCAO-MO for H ₂ ⁺ , Molecular Orbital Approximation for Ethylene, Butadiene, Cyclobutadiene and Benzene. Plots and Nodes of Molecular Orbitals			
4.	Group theory: Fundamental Concepts 4.1 Symmetry Operation and Elements, Defining Coordinate System, Combining Symmetry Operations, Symmetry Point Groups, Point Groups of Molecules, Systematic Point Group Classification, Optical Activity and Symmetry 4.2 Irreducible Representation, Unit Vector Transformation, Reducible Representations, Systematic Reduction of Reducible Representation, Symmetry of Atomic orbitals and Molecular orbitals 4.3 Group Multiplication Tables (C _{2v} , C _{3v}), Sub Groups and Classes, the Great Orthogonality Theorem 4.4 Construction of Character Table for Point Groups. (C _{2v} , C _{3v}), Explanation for the Complete Character Table for the above Groups	K1-K5	20	1-5
5.	Applications of Group Theory 5.1 Applications of Group Theory in Electronic Spectra– HCHO, Vibrational Spectra– H ₂ O, BF ₃ and trans N ₂ F ₂ 5.2 Applications of Group Theory in Hybridization Schemes for Simple Molecules -CH ₄ , H ₂ O, NH ₃	K1-K5	8	1 - 5

BOOKS FOR STUDY

Prasad, R.K. *Quantum Chemistry*. New Delhi: New Age International, 2020.
 Cotton, F.A. *Chemical Applications of Group Theory*. New Delhi: Wiley Eastern, 2013.

BOOKS FOR REFERENCE

Atkins, P.W. *Molecular Quantum Mechanics*. Oxford: Clarendon Press, 2012.
 Carter, R.L. *Molecular Symmetry and Group Theory*. New Delhi: John Wiley, 2009.
 Levine, I.R. *Quantum Chemistry*. New Delhi: Pearson education, New Delhi 2016.
 Prasad, R.K. *Quantum Chemistry through Problems and Solutions*. New Delhi: New Age International, 2021.
 Lowe, J.P. *Quantum Chemistry*. San Diego: Academic Press, 2009.
 McQuarrie, A. Donald, *Quantum Chemistry*. Oxford: Oxford University Press, 2016.
 Cox, P.A. *Introduction to Quantum Theory and Atomic Structure*, Oxford: Oxford University Press, 2005

WEB SOURCES

<http://symmetry.otterbein.edu/gallery/>
<http://ctg.epfl.ch/>

JOURNALS

International Journal of Quantum Chemistry
 Langmuir
 Journal of Group Theory

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none"> • Three questions to be set • Two questions to be answered out of three. • Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none"> • Three questions to be set • Two questions to be answered out of three • Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none"> • One question to be set with either/or pattern • Questions can be set with or without subdivisions

Other Component:**Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none"> • Five questions to be set • Four questions to be answered out of five. • Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none"> • Five questions to be set • Four questions to be answered out of five • Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none"> • Two questions to be set with either/or pattern • Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/QG24												
II	Course Title: QUANTUM CHEMISTRY AND GROUP THEORY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	2	2	3	3	3	3	2
CO 2	3	2	3	2	2	2	2	1	3	3	3	3	2
CO 3	3	2	3	2	2	2	2	2	3	3	3	3	2
CO 4	3	3	3	3	2	2	2	2	3	3	2	3	2
CO 5	3	3	3	3	2	2	2	2	3	3	2	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

COORDINATION CHEMISTRY

CODE: 23CH/PC/CO24

CREDITS: 4

L T P: 4 2 0

TOTAL HOURS: 78

OBJECTIVES OF THE COURSE

- To enable the understanding of the bonding in coordination complexes
- To impart the importance of electronic spectra and magnetic properties of complexes
- To provide an insight into the role of metal ions in biological systems
- To facilitate understanding of the kinetics of reaction mechanisms

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify the nomenclature, bonding, stability and applications of coordination compounds	K1
CO2	explain the theories of bonding, structure, electronic and magnetic properties of coordination compounds and their role in biological systems	K2
CO3	construct Orgel and Tanabe-Sugano diagrams and correlate the electronic spectra of coordination compounds, examine the kinetics and reaction mechanism of complexes	K3
CO4	analyse the nature of coordination compounds, their geometry, and their properties through spectral methods	K4
CO5	evaluate the type of bonding and spectral characteristics of coordination compounds	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1.	Introduction to Coordination Complexes 1.1 Nomenclature, Stereochemistry and Isomerism of Complexes With Coordination Number 2 to 6, Stability of Complexes, Thermodynamic factors, Successive and Overall Formation Constants – Factors affecting Stability of Complexes -Chelate Effect - Importance of Chelates and Determination of Stability Constants 1.2 Crystal Field Theory- Crystal Field Splitting in Oh, Td and Square planar Complexes. Tetragonal	K1-K5	18	1-5

UNIT	CONTENT	CL	Hrs	CO
	<p>distortion in Oh complexes. Factors Influencing Magnitude of ΔO – Spectrochemical Series, Crystal Field Stabilization Energy and Applications of Crystal Field Theory. Lattice energy, Site preferences of spinels and Inverse spinels, Ionic radius. Distortion in Oh Complexes - Jahn Teller Effect</p> <p>1.3 Ligand Field Theory and Molecular Orbital Theory – Qualitative Treatment of LCAO Method, MO Energy Diagrams of Sigma and Pi Bonding in Oh Complexes. MO Treatment of Ferrocene.</p>			
2.	<p>Spectral Characteristics of Metal Complexes</p> <p>2.1 Types of Absorption Spectra, Spectral Terms – Russell-Saunders States, Electronic States – Terms Resulting From dn Configuration, Selection Rules</p> <p>2.2 Correlation Diagrams – Orgel and Tanabe-Sugano Diagrams, Racah Parameters and Nephelauxetic Series, Electronic Spectra of d^{1-9} Metal Complexes - $V(H_2O)_6$, $Ni(H_2O)_6$, $NiCl_2$, CrF_6, $Mn(H_2O)_6$. Charge Transfer Spectra</p> <p>2.3 Electronic Spectra of Lanthanide & Actinide Complexes</p> <p>2.4 Mössbauer Spectra of Iron and Tin Complexes</p> <p>2.5 ESR Spectra of Copper complexes – $Cu(en)_3^{2+}$, bis(salicylaldimine)copper(II), diethyldithiophosphinato copper(II), and Cobalt Complexes - $[(NH_3)_5Co-O_2-Co(NH_3)_5]^{5+}$, Co(II)-phthalocyanin complexes and Vanadium complex – $VO(acac)_2$.</p>	K1-K5	22	1-5
3.	<p>Magnetic Characteristics of Complexes</p> <p>3.1 Types of Magnetic Properties, Magnetic Properties of Complex Ions –Lanthanides & Actinides</p> <p>3.2 Orbital Contribution to Magnetic Moment, Quenching of Orbital Angular Moment, Spin-Orbit Coupling</p>	K1-K5	08	1-5
4.	<p>Reaction Mechanisms in Complexes</p> <p>4.1 Kinetics and Mechanisms of Reactions of Complexes: Substitution Reactions of Oh complexes - Mechanism of Water Replacement - Acid Hydrolysis and Base hydrolysis SN_1cB Mechanism</p> <p>4.2 General Mechanism of Square Planar Substitution Reactions: Two Parallel Pathways - Factors Affecting the Reactivity of Square Planar Complexes of d^8 metal ions - Trans Effect - Theories of Trans Effect</p> <p>4.3 Mechanism of Electron Transfer Reactions: Outer Sphere Electron Transfer Reactions - Marcus Theory (only equation) and Inner Sphere Electron</p>	K1-K5	16	1-5

UNIT	CONTENT	CL	Hrs	CO
	Transfer Reactions-Formation and Rearrangement, Nature of the Bridge Ligand in Inner Sphere Electron Transfer Reactions. Non-Complementary Reactions 4.4 Photochemical Reactions of Transition Metal Complexes: Photosubstitution and Photoisomerisation of Cobalt and Chromium Complexes			
5.	Bioinorganic Chemistry 5.1 Biological Importance of Trace Elements 5.2 Structure and Functions of Metalloporphyrins:- Transport and Storage of Oxygen (Haemoglobin Myoglobin and Hemerythrin)- Electron transport chain - Cytochromes- Vitamin B12 (Cyanocobalamin)- Photosynthesis (Chlorophyll) – Photosystems I and II. 5.3 Iron storage and transport in biological systems - Ferritin and Transferrin 5.4 Biological Redox Systems- Rubredoxins and Ferredoxins, Plastocyanin, haemocyanin.	K1-K5	14	1-5

BOOKS FOR STUDY

Cotton, F.A. and G.Wilkinson, *Advanced Inorganic Chemistry*. New York: John Wiley, 2000.

Huheey, E. James and Ellen A. Keiter, *Inorganic Chemistry - Principles of Structure and Reactivity*. Pearson Education India 2006.

Advanced Inorganic Chemistry Vol I and II by S. P. Banerjee. Books and Allied (P) Ltd. 2003.

BOOKS FOR REFERENCE

D.F. Shriver, P.W. Atkins and C.H. Langford 2010, *Inorganic Chemistry*, WH Freeman & Co. New York.

Purcell, Keith.F. and John C.Kotz. *An Introduction to Inorganic Chemistry*, Philadelphia: W.B.Saunders, 1997

Wells, A.F. *Structural Inorganic Chemistry*. OUP UK, 2013

Asim K. Das Fundamental concepts of Inorganic Chemistry. 2008. Vol. 1-6. II Edition. (CBS Publications)

Douglas, McDaniel, Alexander, 2006, Concepts and models in Inorganic Chemistry – John Wiley 3rd edition

JOURNALS

Journal of Inorganic Chemistry

Journal of Coordination Chemistry

<https://www.sciencedirect.com/journal/coordination-chemistry-reviews>

WEB RESOURCES

<http://chemed.chem.purdue.edu/genchem/topicreview/bp/ch12/names.php>

https://onlinecourses.nptel.ac.in/noc19_cy19/preview

<https://archive.nptel.ac.in/courses/104/104/104104109/>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
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E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none"> One question to be set with either/or pattern Questions can be set with or without subdivisions

Other Component:**Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
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B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
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**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/CO24												
II	Course Title: COORDINATION CHEMISTRY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	2	2	2	1	3	2	2	3	3
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CO 4	3	3	3	3	2	3	2	2	3	3	3	2	2
CO 5	3	3	3	3	2	3	2	2	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV- CHEMISTRY

SYLLABUS

(Effective from the academic year 2023–2024)

ORGANIC SEPARATION AND ANALYSIS PRACTICAL

CODE: 23CH/PC/P224

CREDITS:4

L T P:0 0 6

TOTAL HOURS:78

OBJECTIVES OF THE COURSE

- To demonstrate laboratory techniques in separation of mixtures into compounds and analyse them.
- To impart analytical and technical skills in organic qualitative analysis
- To analyse the separated organic components systematically and derivatize them suitably

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the principles of organic separation and qualitative analysis.	K1
CO2	interpret the method of separation and systematic analysis of separated organic mixtures.	K2
CO3	demonstrate the skills to separate and systematically analyse the organic compounds by various chemical reactions.	K3
CO4	examine strategies to separate and prepare organic compounds.	K4
CO5	separate an organic mixture, analyse the components present and report their structural characteristics	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Separation Technique 1.1 Separation and analysis of a mixture of two organic compounds – A microscale approach solvent separation based on solubility in acid, base or neutral media 1.2 Pilot separation & Bulk separation	K1-K6	34	1-5
2	Organic Qualitative Analysis 2.1 Identification of functional groups 2.2 Preparation of derivatives 2.3 Determination of their melting points	K1-K6	34	1-5
3	Separation and Spectroscopic identification 3.1 Separation using Soxhlet and Rotary Evaporator (Demonstration only) 3.2 Identification of separated compounds and derivatives using UV and IR (Demonstration only)	K1-K5	10	1-5

BOOKS FOR REFERENCE

Ahluwalia, V.K. and Renu Agarwal. *Comprehensive Practical Organic Chemistry Preparation and Quantitative Analysis*. Hyderabad: University Press, 2000.
Mohan, J. *Organic Analytical Chemistry—Theory and Practice*. New Delhi: Narosa, 2003.

WEB RESOURCE

https://ocw.mit.edu/courses/3-091-introduction-to-solid-state-chemistry-fall-2018/video_galleries/lecture-videos/

PATTERN OF ASSESSMENT

Continuous Assessment Test: Total Marks: 50 Duration: 6 Hours

Pilot test		-	04 marks
For each component (18 marks)			
Aliphatic/Aromatic	-	01 mark	
Saturated/Unsaturated	-	01 mark	
Special elements	-	03 marks	
Procedure	-	04 marks	
Derivative	-	02 marks	
Functional group (4 + 2)	-	06 marks	
Melting point	-	01 mark	
Total	-	18 marks	
For two components (18 x 2)		-	36 marks
Viva		-	10 marks
Total		-	50 marks

End-Semester Examination Total Marks: 50 Duration: 6 Hours

Pilot test		-	04 marks
For each component (18 marks)			
Aliphatic/Aromatic	-	01 mark	
Saturated/Unsaturated	-	01 mark	
Special elements	-	03 marks	
Procedure	-	04 marks	
Derivative	-	02 marks	
Functional group (4 + 2)	-	06 marks	
Melting point	-	01 mark	
Total	-	18 marks	
For two components (18 x 2)		-	36 marks
Viva		-	10 marks
Total		-	50 marks

Section	Cognitive Level	Marks	Pattern
Viva	K1-K4	10	Subjective
Theoretical Principles and Procedure	K1-K2	04	Subjective
Experiment	K5-K6	36	Subjective

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific
Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/P224												
II	Course Title: ORGANIC SEPARATION AND ANALYSIS PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	3	3	3	2	3	3	3	3	2
CO 2	3	3	3	3	3	2	3	1	3	3	3	3	2
CO 3	3	3	3	2	3	2	3	2	3	3	3	3	2
CO 4	3	3	2	2	3	2	3	1	3	3	3	3	2
CO 5	3	3	2	3	3	1	3	2	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: BRANCH IV- CHEMISTRY

SYLLABUS

(Effective from the academic year 2023 -2024)

SOFT SKILLS

CODE: 23CH/PK/SS22

CREDITS: 2

L T P: 2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- To empower students and create opportunities for self-development.
- To instill confidence in students to face challenges.
- To manage emotions and resolve conflicts.
- To organize activities and manage time.
- To set goals and plan ahead.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	communicate with confidence and poise	K1
CO2	accept themselves and improve on their weaknesses	K2
CO3	work more effectively and complete activities on time	K3
CO4	work more effectively and complete activities on time	K4
CO5	plan their future with clarity and focus	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Behavioural Traits 1.1 Self-Awareness 1.2 Communication Skills –Verbal and Non Verbal 1.3 Leadership Qualities 1.4 Etiquette and Good Manners 1.5 Experiential Learning –Based on activities	K1-K6	6	1-5
2	Team Work 2.1. Interpersonal Skills 2.2. People Management 2.3. Creative Thinking 2.4. Critical Thinking 2.5. Experiential Learning – Based on activities	K1-K6	5	1-5

UNIT	CONTENT	CL	Hrs	CO
3	Time Management 3.1. Importance of time management 3.2. Planning and Prioritizing 3.3. Organizing skills 3.4. Action Plan 3.5. Experiential Learning – Based on activities	K1-K6	5	1-5
4	Conflict Resolution 4.1. Reasons for conflict 4.2. Consequences of conflict 4.3. Managing emotions 4.4. Methods of resolving conflicts 4.5. Experiential Learning – Based on activities	K1-K6	5	1-5
5	Career Mapping 5.1. Goal Setting and Decision Making 5.2. Career Planning 5.3. Resume Writing 5.4. Handling Interviews 5.5. Experiential Learning – Based on activities	K1-K6	5	1-5

BOOKS FOR REFERENCE

Khera. Shiv. *You Can Win*. New Delhi: Macmillan India, 2002.
Mishra. Rajiv. K. *Personality Development: Transform Yourself*. New Delhi: Rupa 2004.
Newstorm, John. W. and Scannell. Edward. E. *Games Trainers Play: Experiential Learning*.
New Delhi: Tata McGraw Hill, 1980.

PATTERN OF EVALUATION

Other Components: Total Marks: 50

Categories of other components	Cognitive levels	Marks allocation
Quiz/MCQs, open book tests/ Tests	K1 - K2	10
Assignment, Mini projects, Debate.	K3 - K4	20
Critique a concept/ Seminar/ Group Presentation	K5 - K6	20

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV- CHEMISTRY

SYLLABUS

(Effective from the academic year 2023–2024)

RESEARCH METHODOLOGY

CODE: 23CH/PC/RM34

CREDITS: 4

L T P: 3 0 2

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To provide an awareness about the developing avenues in Chemistry
- To give training in seminars, group work, communication, and thesis writing
- To equip the students in using computing techniques in solving problems, to visualize, draw the molecules and study the properties
- To enable the students to simulate spectral data for given molecules using online data

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the basics of scientific research, basic functions of software like ms excel, chemdraw and origin	K1
CO2	understand the importance of publication, citation, report writing, and interpreting the experimental data using ms excel and properties of molecules using chemdraw	K2
CO3	apply the theoretical principles in preparing research proposals, research reports and solve the problems in chemistry using ms excel, origin, and predict the properties of molecules using chemdraw.	K3
CO4	analyse the different forms of research publication and compare the methodology, to be able to use it effectively for presentations	K4
CO5	evaluate the output of a research proposal and validate the data	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Scientific Research and Chemical Literature 1.1 Scientific Research – Types of research- fundamental research vs. applied research 1.2 Chemistry literature survey –Sources of chemical literature – Primary (Research article, Review article, Short communications and Letters), secondary and tertiary	K1- K5	10	1 -5

UNIT	CONTENT	CL	Hrs	CO
	1.3 Online Literature Search- SciFinder, Chem Port and Science Direct 1.4 Citation Index, Impact Factor and h-index 1.5 Steps to publish scientific articles in a journal, Indexing (Scopus and Web of Science)			
2	Research Reports and Thesis Writing 2.1 The Art of Scientific Writing – Forms of Scientific Writing, Research Reports, Theses, Journal Articles and Books 2.2 Format of Research Report - Abbreviations, symbols, SI units, Chemical Nomenclature, Figures, Tables, Footnotes / Notes, Heading, Pagination, Citations & Bibliography, ACS and RSC formats, Citation management Software (End note), Mendeley, Proof Reading 2.3 Plagiarism, Plagiarism software, Predatory Journals, Copyright and Patent Laws 2.4 Research Ethics – Animal ethics (pharmaceutical industry)	K1- K5	8	1 -5
3	MS Excel and Mathematical Concepts in Chemistry 3.1 Components of MS Excel – Spreadsheets, Database, Chart and Building up Workbooks 3.2 Building Formulae User Mode and Statistical Functions, Formatting Cells 3.3 Managing and Organizing Data - Creating Link, Analysing Data 3.4 Plotting Data - Evaluation of Analytical Functions, Transferring Data and Graph Interpretation 3.5 Solving Problems from Physical and Analytical Chemistry (Statistical Problems) 3.6 Simple Functions and Graphs, Plotting Exercises on Most Useful Functions in Chemistry-The Exponential, The Gaussian, Polynomial Functions used in Chemistry 3.7 *Components of Origin- Plotting and Customizing Graphs, Batch Plotting graphs, Merging Graphs.	K1- K6	16	1 – 5
4	Computational Techniques in Chemistry 4.1 ChemDraw - Writing Chemical Equation Schemes using Software, Editing, Transporting Picture to Word Document 4.2 Building Molecules, Measurement of Bond Angles, Bond Energy, and Bond Length 4.3 Energy Minimization Techniques- Basic Concepts and Simple Applications to Geometry and Molecular Properties such as Dipole Moments and Thermochemical Properties 4.4 Use of the Internet in Chemical Research, Data Simulated Results from Web Sources 4.5 *Introduction to Cheminformatics - 2D and 3D Molecular Structures- Databases (PubChem, Zinc, Drug Bank) - Chemical file formats – pdb database- Retrieving drug	K1- K6	16	1-5

UNIT	CONTENT	CL	Hrs	CO
	molecules - Chemical structure drawing tools - Pharmacokinetics - ADME Prediction			
5	Seminar Presentation* 5.1 Topics on New Frontiers in Chemistry – Presentation of articles from peer-reviewed Journals	K3-K6	15	3-5

*(to be tested internally)

BOOKS FOR STUDY

Kothari C.R. and Gaurav Garg. *Research Methodology: Methods and Techniques*. New Delhi: New Age International, 2019

Gopalan, R. *Thesis Writing*. Chennai: Vijay Nicole Imprints, 2009.

BOOKS FOR REFERENCE

Christopher J. Cramer. *Essentials of Computational Chemistry Theories and Models*, New York: Wiley, 2004.

Leach A. R. *Molecular Modeling Principles and Practice*, New York: Prentice-Hall, 2014.

Lewars, Errol. *Computational Chemistry-Introduction to the Theory and Applications of Molecular and Quantum Chemistry*, New York: First Education Springer, 2016.

March, Jerry, *Advanced Organic Chemistry*, New York: WileyInterscience, 2016.

SOFTWARE

ChemDraw, MS EXCEL, ORIGIN

JOURNALS

Journal of American Chemical Society

Journal of Catalysis

Macromolecules

Nanoletters

Nature

Journal of Physical Chemistry (A,B& C)

Journal of Organic Chemistry

Journal of Material Science

WEB RESOURCES

https://www.researchgate.net/publication/2174858_Research_Methodology

<http://www.sciencedirect.com/>

<http://ww42.scifinder.com/>

<https://libguides.williams.edu/citing/acs#s-lg-box-22950701>

<https://libguides.murdoch.edu.au/ACS/sample>

PATTERN OF ASSESSMENT

Continuous Assessment: **Total Marks: 50**
Theory – 45 minutes – 25 marks (Units 1 and 2)

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1 K2	2 3	$5 \times 1 = 5$ (5 MCQs)
B	K3	10	$5 \times 2 = 10$ (Answer in a line or two) <ul style="list-style-type: none">• Seven questions to be set• Five questions to be answered out of Seven
C	K4/K4 K5/K5	5 5	$2 \times 5 = 10$ marks <ul style="list-style-type: none">• Four questions to be set (internal choice)• Questions can be set with or without subdivisions

Practical – 45 minutes – 25 marks (Units 3 and 4)

Section	Cognitive Level	Marks	Pattern
A	K1 K2 K3	2 4 4	$5 \times 2 = 10$
B	K4/K4 K5/K5 K6/K6	5 5 5	$3 \times 5 = 15$ marks <ul style="list-style-type: none">• Internal choice

Other Component: **Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: **Total Marks: 100**
Theory – 90 minutes – 50 marks (Units 1 and 2)

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1 K2	5 5	$10 \times 1 = 10$ (10 MCQs)
B	K3	20	$10 \times 2 = 20$ (Answer in a line or two) <ul style="list-style-type: none">• Twelve questions to be set• Ten questions to be answered out of Twelve
C	K4/K4 K5/K5	10 10	$4 \times 5 = 20$ marks <ul style="list-style-type: none">• Internal choice

Practical – 90 minutes – 50 marks (Units 3 and 4)

Section	Cognitive Level	Marks	Pattern
A	K1 K2 K3	4 8 8	$10 \times 2 = 20$
B	K4/K4 K5/K5 K6/K6	10 10 10	$6 \times 5 = 30$ marks <ul style="list-style-type: none">• Internal choice

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/RM34												
III	Course Title: RESEARCH METHODOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	2	3	2	3	2	3
CO 2	3	3	3	3	3	3	3	3	2	3	3	3	2
CO 3	3	3	3	3	3	3	3	2	3	3	3	3	2
CO 4	3	3	3	3	3	3	2	1	3	3	3	2	2
CO 5	3	3	3	3	3	3	3	2	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV- CHEMISTRY

SYLLABUS

(Effective from the academic year 2023–2024)

MOLECULAR SPECTROSCOPY

CODE: 23CH/PC/MS34

CREDITS: 4

L T P: 4 2 0

TOTAL HOURS: 78

OBJECTIVES OF THE COURSE

- To provide an insight into the concepts of rotational, vibrational and Raman spectroscopic techniques
- To enable students to analyse the interaction between electromagnetic radiation and matter using electronic spectroscopy
- To bring about an understanding of NMR phenomena based on various nuclei and assess the chemical structure of compounds based on NMR data.
- To impart understanding of Mass Spectrometry of organic and inorganic compounds and determine their structure based on fragmentation pattern.
- To facilitate the elucidation of organic and inorganic compounds using spectral data.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the fundamentals of spectroscopy	K1
CO2	comprehend the principle involved in the spectroscopic techniques	K2
CO3	solve problems by analysing the principles involved in various techniques	K3
CO4	elucidate the structure of organic and inorganic compounds using spectral data	K4
CO5	generate spectra for any given sample based on the knowledge acquired	K5
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1.	Rotational and Vibrational Spectroscopy 1.1 Rotational Spectroscopy: Classification of Rotors Based on Moment of Inertia, Diatomic Molecules as Rigid Rotors and Non-Rigid Rotors - Rotational Energy Levels, Transitions, Selection Rules and Effect of Isotopic Substitution. Intensity of Spectral lines – Boltzmann distribution and degeneracy. Stark Effect – First order. Inversion Phenomena – Ammonia. Rotational Spectra of Linear, Symmetric Polyatomic Molecules 1.2 Vibrational Spectroscopy: Diatomic Molecules as Harmonic and Anharmonic Oscillators – Energy Levels and Vibrational Transitions. Vibrations of Polyatomic Molecules – Fundamental Vibrations, Overtones, Combination Bands 1.3 Vibrational - Rotational Spectroscopy- Diatomic Vibrating Rotator- Energy Levels, Transitions and Selection Rules. Parallel and Perpendicular Vibrations of Linear Poly Atomic Molecules and Symmetric Top Molecules. 1.4 Interpretation of IR Spectra: Group Frequencies of various Functional Groups. Factors affecting Group Frequencies 1.5 Raman Spectroscopy- Classical and Quantum theory of Raman effect, Rotational Raman Spectra: Linear and, Symmetric molecules. Vibrational Raman spectra: symmetry and Raman active vibrations, Rule of Mutual Exclusion, Effect of Nuclear Spin – hydrogen and carbon dioxide. 1.6 Raman as Complementary to IR. Structure Determination of CO ₂ , N ₂ O, SO ₂ , NO ₃ ⁻ , ClO ₃ ⁻ and ClF ₃	K1-K5	22	1-5
2.	Electronic Absorption Spectroscopy 2.1 Principle of UV-Visible Spectroscopy, Electronic Spectra of Diatomic Molecules - Born – Oppenheimer Approximation, Franck Condon Principle, Dissociation and Predissociation Energy 2.2 Molecular Term Symbols – Hydrogen (ground and excited states) 2.3 Characterisation of Organic Compounds: Factors Affecting Absorption Spectra. Application of Woodward-Fieser Rules to Conjugated Dienes, α , β - Unsaturated Carbonyl Compounds, Benzene and its Substituted Derivatives and Polycyclic Aromatic Hydrocarbons. Fieser- Kuhn Equation – Study of Polyene Systems	K1-K5	12	1-5
3.	Magnetic Resonance Spectroscopy 3.1 NMR Phenomena, Nuclear Spin, Bloch Equations (No Derivation) and Types of Relaxation Processes 3.2 Parameters of ¹ H-NMR: Chemical Shift, Shielding and Deshielding, Factors affecting δ . Chemical Structure	K1-K5	22	1-5

UNIT	CONTENT	CL	Hrs	CO
	<p>Correlations of δ, Chemical and Magnetic Equivalence of Spins</p> <p>3.3 ^1H NMR: Spin-Spin Splitting, Application of Spin-Spin Splitting to Structure Determination. Effect of Coupling Constants – Geminal Coupling, Vicinal Coupling and Long-Range Coupling</p> <p>3.4 ^{13}C NMR: Comparison of ^{13}C and ^1H NMR, Spin Decoupling, Nuclear Overhauser Effect, Peak Intensity, Chemical Classes, Chemical Shifts, $^{13}\text{C}^1\text{H}$ and $^{13}\text{C}^{13}\text{C}$ Spin Coupling - DEPT. Structure Determination of simple Aliphatic and Aromatic Compounds</p> <p>3.5 An Introduction to NMR in Solid State, Free induction Decay, 2D and 3D NMR. ^{15}N, ^{31}P and ^{19}F NMR – Spectra of Simple Inorganic Compounds</p>			
4.	<p>Mass Spectrometry</p> <p>4.1 Basic Principles, Fragmentation Types and Rules. Interpretation of Mass Spectra Molecular Ion Peak, Isotope Peaks, Base Peak, Metastable Peak, Nitrogen Rule. Calculation of Isotopic Distributions – Carbon and Halogen Isotopes using Binomial Expressions</p> <p>4.2 Fragmentation Patterns: Cleavage of Sigma Bond- Even Electron Rule, Cleavage- Stevenson's Rule, Benzylic Bond Cleavage, Inductive Cleavage, Retro Diels-Alder Cleavage and McLafferty Rearrangement</p> <p>4.3 Structure Determination of Organic Compounds and Inorganic Compounds - Metal Halide Salts and Coordination Complexes</p>	K1-K5	14	1-5
5.	<p>Structural Elucidation</p> <p>5.1 Structural Elucidation using spectral data -Determination of structure of organic and inorganic compounds by comprehensive (UV, IR, NMR and Mass) spectral data</p>	K1-K5	8	1-5

BOOKS FOR STUDY

Banwell, C and Mckash E. *Fundamentals of Molecular Spectroscopy*. New Delhi: Tata McGraw Hill, 2013.

Kemp, W. *Organic Spectroscopy*. New Delhi: Macmillan, 3 ed 2019

Pavia, L.D. *Introduction to Spectroscopy- A Guide for students of Organic Chemistry*. Singapore: Harcourt Asia, 2001.

Sathyanarayana, D.N. *Vibrational spectroscopy*. New Delhi: New Age, 2007.

BOOKS FOR REFERENCE

Silverstein, M. Robert, Francis X. Webster and David Kiemle. *Spectrometric Identification of Organic Compounds*, New Delhi: Wiley, 2005.

Dudley, H. Williams and Ian Fleming. *Spectroscopic Methods in Organic Chemistry*. New Delhi: Tata McGraw-Hill, 2005.

Scheimann. *An Introduction to Spectroscopic Methods for Identification of Organic Compounds*. London: Pergamon Press, 2013.

Aruldas *Molecular Structure and Spectroscopy* (second edition) Prentice Hall India Learning Private Limited – 1 January 2007
 Kalsi P S *Spectroscopy of Organic Compounds*. New Delhi New Age International Publishers 9 ed 2022

JOURNALS

Journal of Spectroscopy
 Journal of Molecular Spectroscopy
 Journal of Applied Spectroscopy

WEB RESOURCES

<https://www.jasco-global.com/principle/principles-of-molecular-spectroscopy-2-basics-of-molecular-spectroscopy/>
<http://www-keeler.ch.cam.ac.uk/lectures/Irvine/>
<http://www.nmr-relax.com/>

PATTERN OF ASSESSMENT

Continuous Assessment: **Total Marks: 50** **Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none"> • Three questions to be set • Two questions to be answered out of three. • Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none"> • Three questions to be set • Two questions to be answered out of three • Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none"> • One question to be set with either/or pattern • Questions can be set with or without subdivisions

Other Component: **Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five. Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none"> Two questions to be set with either/or pattern Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/MS34												
III	Course Title: MOLECULAR SPECTROSCOPY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	3	1	3	2	3	3	2	3	2
CO 2	3	3	3	2	3	2	3	1	3	3	2	3	2
CO 3	3	3	3	2	3	2	3	2	3	3	2	3	2
CO 4	3	3	3	3	3	2	3	1	3	3	3	3	2
CO 5	3	3	3	3	3	3	3	2	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV- CHEMISTRY

SYLLABUS

(Effective from the academic year 2023–2024)

SYNTHETIC ORGANIC CHEMISTRY AND NATURAL PRODUCTS

CODE:23CH/PC/SO34

CREDITS:4

L T P:4 2 0

TOTAL TEACHING HOURS:78

OBJECTIVES OF THE COURSE

- To promote understanding of the basics of retrosynthetic analysis and identify the target molecule
- To impart the skill of designing the synthesis of a given compound
- To introduce important reagents in the synthesis of organic compounds
- To impart knowledge on the extraction and synthesis of natural products

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

CO	DESCRIPTION	CL
CO1	recall the fundamentals of organic chemistry to synthesis and structures	K1
CO2	grasp the principle of organic synthesis, reagents used and structural elucidation	K2
CO3	analyse the strategies involved in synthesis, employ the reagents appropriately and examine them for natural products.	K3
CO4	evaluate methods of synthesis by employing the principle of organic synthesis.	K4
CO5	design and develop synthetic methods to find structure of organic compounds.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	Strategies for Synthesis 1.1 Definitions, Synthons and Synthetic Equivalents, Guidelines, Functional Group Interconversion and Planning for Synthesis of Organic Compounds 1.2 Disconnection Approach – One Group C-X, Two Group C-X, One Group C-C and Two Group C-C Disconnections 1.3 Chemoselectivity, Reversal Polarity (Umpolung) and Amine Synthesis 1.4 Protection and Deprotection – Alcohols, Carbonyls, Carboxylic Acids and Amino Functional Groups 1.5 Retrosynthetic Analysis- Alternate Synthetic Routes. Synthesis of Organic Mono and Bifunctional Compounds Via Disconnection Approach	K1 -K5	18	1-5

UNIT	CONTENT	CL	HRS	CO
	1.6 Stereochemical Control of Products-Selective Aldol and Michael Reactions			
2	Reagents in Organic Synthesis 2.1 Organic Reagents for functional group transformations-I – chiral diboranes (asymmetric synthesis), 9-BBN, 2,3- Dichloro-5,6-dicyano-1,4-benzoquinone (DDQ). 2.2 Organic Reagents for functional group transformations-II Iodoxy Benzoic acid (IDX), Perbenzoic Acid, N-bromosuccinamide (NBS), Phenylisothiocyanate, N,N'- Dicyclohexylcarbodiimide (DCC)	K1 -K5	12	1-5
3	Modern Synthetic methods and Organometallic Reagents in Organic Synthesis 3.1 Kulinkovich reaction, Brook rearrangement, Metal mediated C-C and C-X coupling reaction- Heck, Suzuki coupling, Sonagashira coupling, Nozaki-Hiyami, Buchwald-Hartwig, Noyori asymmetric hydrogenation, Click reaction. 3.2 Organometallic reagents of Li, Al, Zn and Cu. LDA, Lombardo, Gillman reagent, Ullmann Reaction	K1 -K5	16	1-5
4	Alkaloids, Terpenoids and Steroids 4.1 Classification - General Methods of Structure Determination of Alkaloids, Terpenoids and Steroids 4.2 Structural Elucidation of Papaverine and Reserpine (Alkaloids), Zingiberine and Longifolene (Terpenoids) 4.3 Constitution of Cholesterol – Structure of the Nucleus, Position of the Hydroxyl Group and Double Bond, nature and position of the side-chain, position of the angular methyl Group	K1 -K5	14	1-5
5	Natural Pigments 5.1 Natural Pigments – Classification based on source and structure. 5.2 Anthocyanins– Introduction, Isolation, Determination of Structure of Anthocyanins and general methods for the synthesis of Anthocyanidins. Structural elucidation of Cyanin (Anthocyanin). 5.3 Flavones and Flavonols: Introduction, Classification, Isolation, General Properties, Basic Structure of Flavones and Flavonols, General Methods for Determination of the Structure of Flavones. 5.4 Structural Elucidation of Apigenin (Flavones), Quercetin (Flavonols) and Daidzein (Isoflavones) 5.5 Distinction of Flavonoids by Characteristic Colour Reactions and Absorption Spectra (UV- Visible)	K1 -K5	18	1-5

BOOKS FOR STUDY

Warren, Stuart. S. *Organic Synthesis- the Disconnection Approach*. New York: Wiley, 2013.
Finar, I.L. *Organic Chemistry*. Volume 2: Stereochemistry and the Chemistry of Natural Products, 5th Edition, London: ELBS, 2002.
Agarwal, O.P. *Chemistry of Organic Natural Products*. Meerut: Krishnan Prakasan, 2010.

BOOKS FOR REFERENCE

Sanyal, S.N. *Reactions, Rearrangements and Reagents*. New Delhi: Bharathi Bhawan, 2013.
Singh, J., S.M. Ali and Jaya Singh. *Natural Products Chemistry*. Meerut: Pragati Prakashan, 2010.
Singh, Jagadamba and L.D.S. Yadav. *Advanced Organic Chemistry*. Meerut: Pragati Prakashan, 2010.
Jonathan, Clayden, Nick Greeves, Stuart Warren. *Organic Chemistry*. New York: Oxford University Press, 2012.
Carey, A. Francis and Richard J. Sundburg. *Advanced Organic Chemistry Part B: Reactions and Synthesis*. New York: Springer, 2007.
Harmata, Michael, *Strategies and Tactics in Organic Synthesis*. London: Academic Press, 2008.
Norman, R.O.C and J.M. Coxon. *Principles of Organic Synthesis*. New York: CRC Press, 2012.
Bhat, V. Sujata, Bhimsa A. Nagasampagi, Meenakshi Siva Kumar. *Chemistry of Natural Products*, India: Narosa, 2005.

JOURNALS

Journal of the American Chemical Society
The Journal of Organic Chemistry
Tetrahedron Letters
Journal of Natural Products

WEB RESOURCES

www.oxfordBOOKS FOR STUDY.co.uk/orc/clayden2e/
<http://pubs.acs.org/doi/abs/10.1021/jm500941m>

PATTERN OF ASSESSMENT

Continuous Assessment:		Total Marks: 50	Duration: 90 minutes
Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks • Three questions to be set • Two questions to be answered out of three. • Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks • Three questions to be set • Two questions to be answered out of three • Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks • One question to be set with either/or pattern • Questions can be set with or without subdivisions

Other Component:**Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none"> • Five questions to be set • Four questions to be answered out of five. • Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none"> • Five questions to be set • Four questions to be answered out of five • Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none"> • Two questions to be set with either/or pattern • Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/SO34												
III	Course Title: SYNTHETIC ORGANIC CHEMISTRY AND NATURAL PRODUCTS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	1	2	1	3	3	2	3	2
CO 2	3	3	3	2	3	1	2	2	3	3	2	3	2
CO 3	3	3	3	2	3	2	3	1	3	3	2	3	2
CO 4	3	3	3	2	3	2	3	1	3	3	3	3	2
CO 5	3	3	3	3	3	3	3	2	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV- CHEMISTRY

SYLLABUS

(Effective from the academic year 2023–2024)

PHYSICAL CHEMISTRY PRACTICAL

CODE: 23CH/PC/P333

CREDITS: 3

L T P: 0 0 4

TOTAL HOURS: 52

OBJECTIVES OF THE COURSE

- To enhance the understanding of the principles of physical chemistry through laboratory techniques
- To impart analytical and technical skills in evaluating reactions through kinetics, conductivity, phase system, pH study
- To instill the importance of data analysis for the results obtained from experiments

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	retrieve and understand the principles associated with various physical chemistry experiments	K1, K2
CO2	implement experiments based on theoretical knowledge	K3
CO3	analyse the results in all the experiments	K4
CO4	perform calculation and report the data graphically and make comparisons	K5
CO5	design experiments and evaluate the processes	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Phase Rule 1.1 Three Component system (Water- Chloroform- Acetic Acid)	K1-K6	8	1-5
2	Solubility Product 2.1 Variation of the Solubility of Calcium Sulphate with Ionic Strength Determination of Thermodynamic Solubility Product (Complexometric Titration with EDTA)	K1-K6	6	1-5
3	Chemical Kinetics 3.1 Effect of Ionic Strength on the Reaction Rate: Persulphate and Potassium Iodide Reaction 3.2 Study the kinetics of the reaction between acetone and iodine in acidic medium by half-life method and determine the order with respect to iodine and acetone. 3.3 Adsorption of oxalic acid on charcoal (Freundlich isotherm only).	K1-K6	8	1-5

UNIT	CONTENT	CL	Hrs	CO
4	Conductometry 4.1 Determination of Critical Micelle Concentration Conductometrically 4.2 Titration of Mixture of Three Acids (Trichloroacetic Acid, Monochloroacetic Acid and Acetic Acid) conductometrically	K1-K6	12	1-5
5	pH metry 5.1 Determination of pKa Values of Phosphoric Acid potentiometrically using Glass Electrode 5.2 Potentiometric redox titration of $K_3Fe(CN)_6$ with $Co(II)$ to find out the concentration of the latter in a given solution.	K1-K6	12	1-5
6	Partial Molal Quantities 6.1 Determination of Partial Molal Volume of Methanol in Dilute Aqueous Solutions (Method of intercepts)	K1-K6	6	1-5

BOOKS FOR REFERENCE

Athawale, V.D., Mathur, Paul. *Experimental Physical Chemistry*. New Delhi: New Age International Publishers, 2008.
 B. Viswanathan, and P. S. Raghavan, *Practical Physical Chemistry*, Viva Books, 2010
 A. M. Halpern, and G. C. McBane, *Experimental Physical Chemistry: A Laboratory Text Book*, 3rd Edition, W. H. Freeman, 2006
 C. Garland, J. Nibler and D. Shoemaker, *Experiments in Physical Chemistry*, McGraw Hill Education; 8th Edn., 2008.

PATTERN OF ASSESSMENT

Continuous Assessment	Total Marks: 50	Duration: 3 hours
Procedure	- 10 marks	
Viva voce	- 10 marks	
Reported value	- 30 marks	
End Semester Examination	Total Marks: 50	Duration: 3 hours
Procedure	- 10 marks	
Viva voce	- 10 marks	
Reported value	- 30 marks	

Section	Cognitive Level	Marks	Pattern
Viva	K1-K2	10	Subjective
Theoretical Principles and Procedure	K1-K2	10	Subjective
Experiment	K3-K6	30	Subjective

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/P333												
III	Course Title: PHYSICAL CHEMISTRY PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	2	3	3	3	3	2
CO 2	3	3	3	3	3	1	3	1	3	3	3	3	2
CO 3	3	3	3	3	3	3	3	2	3	3	3	3	2
CO 4	3	3	3	3	3	2	3	1	3	3	3	3	2
CO 5	3	3	3	3	3	3	3	2	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

ANALYTICAL INSTRUMENTATION PRACTICAL

CODE: 23CH/PC/P433

CREDITS: 3

L T P: 0 0 4

TOTAL HOURS: 52

OBJECTIVES OF THE COURSE

- To introduce different analytical tools for the analysis of different samples
- To demonstrate the different analytical methods used in the estimation and separation of chemicals
- To give hands-on training in handling the instruments, analyzing the data, and estimating the given substance

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the simple laws pertaining to analytical chemistry	K1
CO2	explain the principle and working of different instrumental techniques	K2
CO3	apply the principles to perform the experiments for the estimation and separation of different substances.	K3
CO4	analyse the results by plotting the graph with the data obtained.	K4
CO5	estimate the concentration of constituents in the given unknown solutions	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Colorimetry 1.1 Estimation of Vitamin- A / Cholesterol 1.2 Determination of stability constants of complexes – Job's method 1.3 Determination of the amount of dichromate and permanganate ions simultaneously	K1-K6	12	1 – 5
2	Spectrophotometry 2.1 Estimation of DNA / RNA 2.2 Determination of aspirin from commercial samples	K1-K6	12	1 – 5
3	Fluorimetry 3.1 Estimation of Riboflavin/Thiamine/ Fluorescein	K1-K6	6	1 – 5
4	Flame Photometry 4.1 Estimation of Sodium/Potassium	K1-K6	6	1 – 5

UNIT	CONTENT	CL	Hrs	CO
5	Chromatography (To be tested internally) 5.1 Rf determination and separation of a mixture of amino acids by thin layer chromatography 5.2 Separation of caffeine and aspartame by HPLC 5.3 Separation of KMnO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$ by column chromatography	K1-K6	6	1 – 5
6	Spectral Analysis [Demonstration] 6.1 Identification of functional groups using IR spectra 6.2 Determination of Band gap for ZnO using Diffusive UV technique. 6.3 Estimation of Chromium using Atomic absorption spectroscopy.	K1-K4	6	1 – 4
7	Voltammetry [Demonstration] 7.1 To study the redox behaviour of $\text{K}_3[\text{Fe}(\text{CN})_6]/\text{K}_4[\text{Fe}(\text{CN})_6]$ by cyclic voltammetry	K1-K4	4	1 – 4

BOOKS FOR REFERENCE

Plummer, David.T. *An Introduction to Practical Biochemistry*. New Delhi: Tata McGraw Hill, 2017.

Sadasivam, S. and Manickam A. *Biochemical Methods*. New Delhi: New Age International, 2022.

Venkateswaran, V., Veerasamy, R. Kulandaivelu A. R. *Principles of Practical Chemistry*. New Delhi : Sultan Chand, 2012

PATTERN OF ASSESSMENT

Continuous Assessment

Total Marks: 50

Duration: 3 hours

Procedure	-	10 marks
Viva voce	-	10 marks
Reported value	-	30 marks

End Semester Examination

Total Marks: 50

Duration: 3 hours

Procedure	-	10 marks
Viva voce	-	10 marks
Reported value	-	30 marks

Section	Cognitive Level	Marks	Pattern
Viva	K1-K2	10	Subjective
Theoretical Principles and Procedure	K1-K2	10	Subjective
Experiment	K3-K6	30	Subjective

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/P433												
III	Course Title: ANALYTICAL INSTRUMENTATION PRACTICAL												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	3	3	2	3	3	3	3	2
CO 2	3	3	3	3	3	3	3	2	3	3	3	3	2
CO 3	3	3	3	3	2	3	3	2	3	3	3	3	3
CO 4	3	3	3	3	2	2	2	1	3	3	3	2	1
CO 5	3	3	3	3	2	3	2	2	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.Sc. DEGREE: BRANCH IV– CHEMISTRY

SYLLABUS

(Effective from the academic year 2023 – 2024)

SUMMER INTERNSHIP

CODE: 23CH/PN/SI32

CREDITS: 2

OBJECTIVE OF THE COURSE

- To enhance the experiential learning of the students by observing and hands on training at research institutes / chemical industries.
- To introduce various experimental and analytical techniques employed in quality research.
- To enhance their skills in application - oriented courses.
- To inculcate scientific temperament and curiosity

COURSE LEARNING OUTCOME

On successful completion of the course, students will be able to

- gain hands on experience and practical training in various aspects of their research work
- demonstrate various experimental and analytical techniques used in quality research
- employ their skills in diverse fields

FIELD WORK: (4 Weeks)

Summer Internship: a minimum period of four weeks during the summer holidays between the second and third semesters

EVALUATION:

SUMMER INTERSHIP: 50 Marks

(Presentation: 20 + Report: 20 + Attendance: 10)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

ORGANIC SYNTHESIS AND PURIFICATION PRACTICAL

CODE: 23CH/PC/P544

CREDITS: 4

L T P: 0 0 6

TOTAL HOURS: 78

OBJECTIVES OF THE COURSE

- To introduce the basic principles of organic synthesis
- To demonstrate the methods of organic synthesis through single and double-stage preparations
- To develop knowledge in green synthesis by preparing compounds through the microwave method

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the principles of different organic reactions and green methodologies used in organic synthesis	K1, K2
CO2	understand the mechanisms involved in the organic reaction	K3
CO3	perform chemical reactions under laboratory conditions using safety precautions and standard procedure	K4
CO4	analyse experimental results such as yield and purity of the prepared compounds	K5
CO5	synthesize organic compounds using single-stage, double-stage and microwave methods of preparation	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1.	Organic Preparation- Single stage 1.1 Preparation of methyl orange (Diazotisation) 1.2 Preparation of Benzpinacol (Photoreduction) 1.3 Preparation of Benzoic acid and benzyl alcohol (Cannizzaro Reaction) 1.4 Preparation of Benzil (Oxidation)	K1-K6	24	1-5
2.	Organic Preparation - Double stage 2.1 Preparation of p-bromo acetanilide from aniline (Acetylation, Bromination) 2.2 Preparation of 1,3,5 - tribromo benzene from aniline (Bromination, Reduction) 2.3 Preparation of m-nitroaniline from nitrobenzene (Nitration, Reduction)	K1- K6	36	1-5

UNIT	CONTENT	CL	Hrs	CO
3.	Microwave assisted Preparations 3.1 Preparation of Schiff's base / acetyl salicylic acid / paracetamol 3.2 Preparation of Fluorescein (Xanthene dye) 3.3 Preparation of Benzalacetophenone (Claisen Schmidt condensation) 3.4 Preparation of ethyl-2-cyano-3-(4-methoxy phenyl) propenoate (Knovenagel reaction)	K1- K6	18	1-5

Note: Recrystallisation

Determination of melting point

Spectroscopic identification / purification by chromatographic methods

A comprehensive viva will be conducted during the practical hours.

BOOKS FOR REFERENCE

Mohan, J. *Organic Analytical Chemistry – Theory and Practice*. New Delhi: Narosa, 2003.
 Bansal, K. Raj. *Laboratory Manual of Organic Chemistry*. New Delhi: Wiley Eastern, 2003.
 Vogel, A.I. *Elementary Practical Organic Chemistry Part I, Small Scale Preparation*. New Delhi: CBS, 2010

PATTERN OF ASSESSMENT

Continuous Assessment (Internal)

Total Marks: 50

Procedure	-	05 marks
Viva voce	-	10 marks
Preparation (Double stage preparation /Two single stage preparations)	-	35 marks
Quantity of product 01	-	15 marks
Quantity of product 02	-	15 marks
Quality of final product (recrystallisation and melting point)	-	05 marks
Total	-	35 marks
Total	-	50 marks

End-Semester Examination:

Total Marks: 50

Duration: 6 Hours

Procedure	-	05 marks
Viva voce	-	10 marks
Preparation (Double stage preparation /Two single stage preparations)	-	35 marks
Quantity of product 01	-	15 marks
Quantity of product 02	-	15 marks
Quality of final product (recrystallisation and melting point)	-	05 marks
Total	-	35 marks
Total	-	50 marks

Section	Cognitive Level	Marks	Pattern
Theoretical Principles and Viva	K1-K4	10	Subjective
Procedure	K1-K2	05	Subjective
Experiment	K3-K6	35	Subjective

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PC/P544												
IV	Course Title: Organic synthesis and purification practical												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	2	3	2	3	2	3	2	3
CO 2	3	3	3	3	3	3	3	2	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	1	3	3	3	2	3
CO 5	3	3	3	3	2	2	2	2	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023–2024)

DISSERTATION

CODE: 23CH/PC/DS49

CREDITS: 9

OBJECTIVES OF THE COURSE

- To provide understanding of the principles and concepts of the project topic
- To facilitate critical thinking and problem solving
- To impart skills required to carry out chemical reactions in a laboratory
- To encourage independent research and report writing

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define a research problem and plan the course of action	K1
CO2	demonstrate critical thinking, problem solving and analytical reasoning to solve scientific problems	K2
CO3	perform chemical reactions in a laboratory using standard procedure and safety precautions	K3
CO4	communicate the results of the scientific work done following research ethics and publish research articles in reputed journals	K4
CO5	design and carry out scientific experiments, record and analyse the results of the experiments	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

GUIDELINES FOR PROJECT

- Project should be done individually.
- Each student will choose a topic of her interest and the student will be assigned to a supervisor.
- The project will require practical work with the submission of a project report. It should include experimental lab work.
- The duration of the project work is 3 months.
- The project report should be submitted in the prescribed format containing a minimum of 50 pages. References should not be counted with the main pages. The report should be enhanced with graphs, spectra, tables and/or photographs.
- Each candidate has to give three periodical reviews to the internal guide on the scheduled dates prescribed by the department.
- Each candidate must prepare 4 hard copies of the thesis - 1 copy for the candidate and 3 copies for the department.
- The project should be submitted on the scheduled date prescribed by the Department.
- The student should appear for viva voce before a panel comprising the External Examiner, the supervisor and the Head of the Department.

PATTERN OF EVALUATION

INTERNAL

Total Marks: 100

CONTENT	COGNITIVE LEVEL	MARKS
Research statement and methodology	K1-K2	20
Documentation	K1-K4	30
Design of Experiment, Analysis of results and conclusions derived from the work.	K1-K6	50

EXTERNAL

Total Marks: 100

CONTENT	COGNITIVE LEVEL	MARKS
Dissertation	K1-K6	60
Viva	K1-K6	40

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

ANALYTICAL INSTRUMENTATION

CODE: 23CH/PE/AI15

CREDITS: 5

L T P: 5 0 0

TOTAL HOURS: 65

OBJECTIVES OF THE COURSE

- To provide understanding of different analytical techniques and their importance
- To introduce the applications of important analytical techniques in industries and research laboratories
- To give an insight into the correct handling of instruments used for characterisation of materials
- To impart understanding of principles and concepts through instrumentation and applications

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recollect the principles involved in analytical techniques	K1
CO2	describe the instrumentation and working of various instruments	K2
CO3	examine material characteristics based on data obtained from different techniques	K3
CO4	apply the principles of various characterization techniques to interpret the results for the sample under study	K4
CO5	evaluate the appropriate techniques to completely characterize a given sample	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1.	Spectroscopic Techniques 1.1 Spectropolarimeter (Optical Rotatory Dispersion) and Spectrophotometer (Circular Dichroism) 1.2 Atomic Absorption and Emission Spectroscopy - introduction, principle and instrumentation 1.3 Inductively Coupled Plasma Atomic Emission Spectroscopy (ICPAES) - Principle, instrumentation and applications 1.4 Infrared Spectroscopy - Comparison of Dispersive and Fourier Transform Spectroscopy	K1-K5	18	1-5

UNIT	CONTENT	CL	Hrs	CO
	1.5 Raman Spectroscopy - Principle and instrumentation, theory of Resonance Raman and Surface enhanced Raman Techniques 1.6 Mossbauer effect and Mossbauer Spectroscopy Mossbauer energy levels with isomer shift, quadrupole splitting and hyperfine interaction			
2.	Surface Characterisation Techniques Principle, Instrumentation and Applications of - 2.1 Photoelectron Spectroscopy Ultraviolet and X-Ray Photoelectron Spectroscopy (UPS and XPS), Auger Electron Spectroscopy (AES). 2.2 Electron Microscopy: Scanning Electron Microscopy (SEM), Transmission Electron Microscopy (TEM) 2.3 Probing Microscopy: Scanning Tunnelling Microscopy (STM), Atomic Force Microscopy (AFM) 2.4 Low Energy Electron Diffraction	K1-K5	15	1-5
3.	Electrochemical Techniques I Principle, Instrumentation and Applications of - 3.1 Cyclic Voltammetry, Anodic and Cathodic Stripping Voltammetry 3.2 Coulometry - Current-Voltage relationship during electrolysis, Coulometric methods of analysis, Potentiostatic Coulometry, Coulometric Titrations (Amperostatic Coulometry)	K1-K5	9	1-5
4.	Electrochemical Techniques II 4.1 Amperometry, Amperometric Titrations, Biamperometry 4.2 Chronomethods - Chronoamperometry, Chronopotentiometry and Chronocoulometry 4.3 Impedance Spectroscopy: Fundamentals of Electrochemical Impedance Spectroscopy - concept of complex impedance, complex dielectric, modulus and impedance data representations.	K1-K5	9	1-5
5.	Thermoanalytical and Radiochemical Techniques 5.1 Thermogravimetry (TG), Differential thermal analysis. Differential scanning calorimetry - Principle, instrumentation, factors affecting Thermogram and applications, evolved gas analysis 5.2 Thermometric Titrations - Principle, working and applications 5.3 Radiochemical Methods - Hot Atom Chemistry, the Szilard-Chalmers Process, Neutron Activation Analysis - Principle, instrumentation and applications	K1-K5	14	1-5

BOOKS FOR STUDY

Skoog D. A., Holler F. J. and Crouch S. R. *Principles of Instrumental Analysis*. Singapore: Haracourt Asia, 2001.

Sharma, B. K. *Instrumental Methods of Chemical Analysis*. Meerut: Goel, 2004.

BOOKS FOR REFERENCE

Anjaneyulu Y., Chandrasekhar. K and Manickam V. *A Text Book of Analytical Chemistry*. India: Pharma Book Syndicate, 2006.

Brown R. D. *Introduction to Instrumental Analysis*. Singapore: McGraw Hill, 1987.

Eland J. H. D. *Photoelectron Spectra*. London: Butterworths, 1984.

Skoog D. A., West D. M. and Holler J. F. and Crouch S. R. *Fundamentals of Analytical Chemistry*. New York: Saunders, 2004.

Ewing W. G. *Instrumental Methods of Chemical Analysis*. New York: McGraw Hill, 1985.

Bard A. J. and Faulkner L. R. *Electrochemical Methods - Fundamentals and Applications*. New York: Wiley, 2006.

Fifield F. W. and Kealy D. *Principles and Practice of Analytical Chemistry*. USA: Blackwell Science, 2004.

Christian G. D. and O'Reilly J. E. *Analytical Chemistry*. New York: John Wiley, 2004.

JOURNALS

Journal of Analytical Chemistry

Journal of Spectroscopy

Journal of Electrochemistry

WEB RESOURCES

www.annualreviews.org/doi/abs/10.1146/annurev.pc.06.100155.001041

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks • Three questions to be set • Two questions to be answered out of three. • Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks • Three questions to be set • Two questions to be answered out of three • Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks • One question to be set with either/or pattern • Questions can be set with or without subdivisions

Other Component:**Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five.• Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none">• Two questions to be set with either/or pattern• Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PE/AI15												
I	Course Title: ANALYTICAL INSTRUMENTATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	2	1	3	3	3	3	2
CO 2	3	3	3	3	3	2	2	1	3	3	3	3	2
CO 3	3	3	3	3	3	3	2	2	3	3	3	2	2
CO 4	3	3	3	3	3	2	1	3	3	3	3	3	2
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

INDUSTRIAL WASTE MANAGEMENT

CODE: 23CH/PE/IM15

CREDITS: 5

L T P: 5 0 0

TOTAL HOURS: 65

OBJECTIVES OF THE COURSE

- To educate on the causes and consequences of environmental degradation
- To create an understanding of the nature of industrial wastes
- To work towards effective and efficient management of industrial wastes
- To give an overview of Environmental Management, Environmental Impact
- To assess Pollution Control measures for working towards Green Earth

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	remember key concepts related to environmental toxicology and the toxicity of various pollutants.	K1
CO2	comprehend the toxic effects of various pollutants on human health and the environment.	K2
CO3	apply principles of environmental impact assessment in real-world scenarios.	K3
CO4	analyze the effectiveness of legal and regulatory frameworks in environmental management.	K4
CO5	develop strategies for waste minimization and recycling programs and recommend mitigation strategies.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1.	Air Pollution Control 1.1 Air Quality Standards (for varied industries), Industrial safety, Classification of Air Pollutants, Sources of Air Pollution, Ozone Depletion, Green House Effect – Causes and Consequences 1.2 Pollution Control of Particulates – Gravity Settling Chamber, Cyclone Collector, Filters, Wet Scrubbers, Electrostatic Filters, Electrostatic Precipitator 1.3 Control of CO, Oxides of Nitrogen, Oxides of Sulphur, Hydrocarbons, Photochemical Pollutants, Green House Gases	K1-K5	12	1-5

UNIT	CONTENT	CL	Hrs	CO
2.	Treatment and Disposal of Industrial Effluents 2.1 Water Quality Standards, Sources of Water Pollution, Characterisation of Waste Water by Physical and Chemical methods 2.2 Primary Treatment: Sedimentation, Neutralization, Coagulation, Equalization, Grid Removal. Secondary Treatment: Aerobic Treatment, Oxidation Ponds, Oxidation Ditches, Trickling Filters, Activated Sludge Process, Aerated Lagoons, Anaerobic Treatment. Tertiary Treatment: Reverse Osmosis, Electrodialysis, Desalination 2.3 Industrial Effluents: Characteristics and Treatment Options for Effluents from various Industries: Textiles and Dyes, Paper and Pulp, Leather, Food and Dairy, Fertilizers, Electroplating Industries, Distilleries 2.4 Sewage Treatment 2.5 Water Conservation, Recycling of Waste Water and Rain Water Harvesting	K1-K5	15	1-5
3.	Solid Waste Management 3.1 Solid Wastes- Types, Characteristics 3.2 Solid Waste Disposal – Sanitary Landfills, Composting, Vermi Composting, Incineration 3.3 Waste Minimization and Recycling	K1-K5	12	1-5
3	Environmental Toxicology 4.1 Toxicity, Threshold Limiting Value of Pollutants, LD50 4.2 Toxic Effects of Pb, As, Cd, Hg, PCBs, Pesticides, Heavy Metals, Nanoparticles 4.3 Case Studies: Arsenic Toxicity, Fukushima disaster, oil spills in Indian ocean	K1-K5	10	1-5
5	Environmental Management 5.1 Sustainable Development: Definition, sustainability Cycle, Biodiversity, Problems of Urbanization and Steps towards Sustainable Development 5.2 Environmental Impact Assessment: Concept, Environmental Risk Assessment, Legal and Regulatory Aspects in India- Environmental (Protection) Act 1986, Air (Prevention and Control of Pollution) Act 1981, Water (Prevention and Control of Pollution) Act 1981, ISO 14000, Tsunami Disaster 5.3 Industrial Safety and Health: EPA, OSHA – Regulations, Polluter Pays Principle 5.3 Global and National Efforts: Steps taken towards Green Future at the National and Global Level 5.4 Coastal Management (National Standards)	K1-K5	16	1-5

BOOKS FOR STUDY

Sharma B.K. and Kaur H. *Environmental Chemistry*, Meerut: Goel, 2014.

Gaur G. *Soil and Solid Waste Pollution and its Management*, New Delhi: Sarup, 2000.

BOOKS FOR REFERENCE

Engel T. and Reid P. *Physical Chemistry*. Pearson: Pearson Education Limited, 2014.

Viswanathan B. and Sundaram S., Venkataraman R., Rengarajan K. and Raghavan P. S. *Electrochemistry – Principles and Applications*. Chennai: Viswanathan, 2007.

Gupta M. C. *Statistical Thermodynamics*. New Delhi: New Age International, 2003.

JOURNALS

Journal of Electrochemistry

Journal of Surface Science

Journal of Physical Chemistry (A, B and C)

Langmuir

Statistical Thermodynamics

WEB RESOURCES

<https://www.acs.org/careers/chemical-sciences/areas/physical-chemistry.html>

<http://www.annualreviews.org/journal/physchem>

<https://maritimeindia.org/legacies-learnings-a-case-study-of-oil-spills-in-the-indian-ocean-region/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three.• Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none">• One question to be set with either/or pattern• Questions can be set with or without subdivisions

Other Component:

Total Marks: 50

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five. Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none"> Two questions to be set with either/or pattern Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PE/IM15												
I	Course Title: Industrial Waste Management												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	3	3	2	3	2	2	1	3
CO 2	3	2	3	2	2	3	3	2	3	2	2	1	3
CO 3	3	3	3	2	2	3	3	3	3	2	2	1	3
CO 4	3	3	3	3	3	3	3	3	3	2	3	2	3
CO 5	3	2	3	2	3	3	3	3	3	2	2	1	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

POLYMER MATERIALS AND APPLICATIONS

CODE: 23CH/PE/PM15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To introduce the basic concepts in polymer science
- To enable the understanding of the specialty polymers and their applications
- To enhance the knowledge of the synthesis and processing of polymers
- To provide awareness of modern instrumental techniques that can be used to analyse the structure and properties of polymeric materials.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the basic terminologies of polymers – preparation, characterization and kinetics	K1
CO2	explain the importance of specialty polymers, their synthetic route and properties	K2
CO3	classify polymers based on the source, processing, molecular weight and mechanical properties	K3
CO4	analyse the properties of polymers and select the best synthetic route appropriate for its application	K4
CO5	evaluate the specialty polymers based on the spectral and mechanical properties	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Polymer Materials 1.1 Polymer Chain Structure and Configuration: Nomenclature, Functionality, Method of Linking 1.2 Classification of polymers (based on source, thermal properties and applications) Structure, properties and applications of - Natural Polymers (starch and cellulose). Synthetic Polymers - Polyurethane, polymethylmethacrylate, Silicone Polymers), Rubbers-Natural rubber, Synthetic rubber- (StyreneButadieneRubber and Neoprene)	K1 - K5	18	1 – 5

UNIT	CONTENT	CL	Hrs	CO
	1.3 Specialty Polymers-Conducting, IPN, Thermally Stable, Hydrogels, Biodegradable polymers (poly lactic acid and sodium alginate), Functional dendrimers, Structure, Properties and Applications 1.4 Types of Degradation (Thermal, Mechanical, Ultrasound, Photo, Biodegradation and Non-Biodegradation) 1.5 Polymer waste reduction- source reduction, reuse/repair, recycling related to packaging films and containers			
2	Mechanism, Kinetics of Polymerisation and Fabrication of Polymers 2.1 Types of Polymerisation – Addition, Condensation and Co-Polymerisation 2.2 Mechanism - Free Radical and Ionic Polymerisation 2.3 Coordination Polymerisation with special reference to Ziegler-Natta 2.4 Kinetics of Free Radical Polymerisation 2.5 Polymerisation Techniques (Bulk, Emulsion, Solution and Suspension) 2.6 Basic Processing Operations (Extrusion, mastication, Molding and Calendaring) 2.7 Polymer Additives - Fillers, Plasticizers, Antioxidants, Heat Stabilizers, Ultraviolet Stabilizers, Flame Retardants and Colorants	K1 - K5	13	1 – 5
3	Molecular Weight Distribution of Polymers 3.1 Significance of Degree of Polymerisation and Molecular Weight of Polymers 3.2 Number Average and Weight Average Molecular Weight 3.3 Methods of Determination of Absolute Molecular Weight - Vapour Phase Osmometry, Ultracentrifugation, Light Scattering Method, GPC, Viscometry and End Group Analysis	K1-K5	12	1 – 5
4	Physical Chemistry of Polymers 4.1 Amorphous and Crystalline Polymers, Conformation of the Polymer Chain(natural rubber and gutta percha), Liquid Crystal Polymers-Terminology, Properties of Mesogens 4.2 Glass Transition Temperature- Factors Influencing Heat Distortion and Crystallisability 4.3 Thermodynamics of Polymer Solution, Flory Huggins Theory (no derivation) Phase Equilibrium, Solubility Parameter 4.4 Melt Rheology of Polymers (Polyvinylchloride, Polystyrene), Stress-Strain Properties and Visco Elastic Behaviour of Polymers, Newtonian and Non-Newtonian Behaviour of Polymers, Flow Properties of Polymer Melts and Solutions	K1-K5	12	1 – 5

UNIT	CONTENT	CL	Hrs	CO
5	Characterisation and Testing of Polymers 5.1 Thermal Properties, Thermal Conductivity, Thermal Expansion, TGA, DTA, DSC and DMA (special reference to Polyethyleneterephthalate and Polymethylmethacrylate) 5.2 Mechanical Properties and tests of Polymers - Hardness, Impact Strength, Stress, Relaxation, Elasticity Mechanical tests: tensile testing, flexural testing, Impact Testing 5.3 Synthesis and characterization of PS and formaldehyde resin and its characterization by IR (practical component internally tested)	K1-K5	10	1 – 5

BOOKS FOR STUDY

Gowariker, V.R., N.V Viswanathan, Jaydev Sreedhar. *Polymer Science*, New Delhi: New Age International, 2022.

Billmeyer, F.W. *Text Book of Polymer Science*. New York :Wiley Interscience, 2007.

BOOKS FOR REFERENCE

Bhatnagar, M.S. *Text book of Polymers*. New Delhi: S.Chand, 2004.

Brandolini, J. Anita and Deborah D. Hills. *NMR Spectra of Polymers and Polymer Additives*. New York : Marcel Decker, 2000.

Gupta, B.R. *Applied Rheology in Polymer Processing*. New Delhi: Asian Books, 2005.

Joel ,Fried. *Polymer Science and Technology*. New Delhi: Prentice Hall, 2005.

Misra, G.S. *Introduction to Polymers*. New Delhi: New Age International, 2001.

Munk, P. *Introduction to Macro Molecular Science*. New York: John Wiley, 2002.

Stuart ,H. Barbara. *Polymer Analysis*. New Delhi: Narosa, 2002.

Young R.P., Lovell. *Introduction to Polymers*. London: Chapman & Hall, 2011.

JOURNALS

Macromolecules

Journal of Polymer Science

Journal of Applied Polymer Science

WEB RESOURCES

http://www.mpikg.mpg.de/886863/Liquid_Crystals.pdf

http://www.perkinelmer.com/CMSResources/Images/44-4546GDE_IntroductionToDMA.pdf

<https://www.nobelprize.org/uploads/2018/06/advanced-chemistryprize2000.pdf>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none"> • Three questions to be set • Two questions to be answered out of three. • Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none"> • Three questions to be set • Two questions to be answered out of three • Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none"> • One question to be set with either/or pattern • Questions can be set with or without subdivisions

Other Component:**Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none"> • Five questions to be set • Four questions to be answered out of five. • Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none"> • Five questions to be set • Four questions to be answered out of five • Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none"> • Two questions to be set with either/or pattern • Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PE/PM15												
IV	Course Title: POLYMER MATERIALS AND APPLICATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	3	3	1	3	3	2	2	2
CO 2	3	3	3	3	2	3	3	2	3	3	3	3	2
CO 3	3	3	3	3	2	2	2	2	3	3	3	3	2
CO 4	3	3	3	3	3	3	3	2	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	2	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

ESSENTIALS OF BIOCHEMISTRY

CODE: 23CH/PE/BC15

CREDITS: 5

L T P: 5 0 0

TOTAL HOURS: 65

OBJECTIVES OF THE COURSE

- To enable understanding of the structure-function relationship of biomolecules
- To give an insight into the metabolic pathways and the consequences of deviation from normal
- To instill interest to pursue research in Biochemistry
- To promote understanding of biomolecules and biocatalysts and their role in biochemical processes

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the concepts of biochemistry, biomolecules, bioenergetics and metabolism	K1
CO2	understand the role of buffers, biomolecules and biocatalysts in metabolism.	K2
CO3	apply concepts of structural biochemistry to real-world biochemical scenarios	K3
CO4	evaluate the role of biomolecules in metabolic pathways and analyse deviations in biochemical processes and their impact on health and disease	K4
CO5	explain the structure, biochemical reactions and metabolic pathways of biomolecules and propose solutions for biochemical challenges and problems in healthcare	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1.	Introduction to Biochemistry 1.1 Scope of Biochemistry, Relationship between Biochemistry and Medicine; Normal Biochemical Process – Basis of Health 1.2 Water as a Biological Solvent and its Importance in Maintaining the Structure of Biomolecules	K1-K5	12	1-5

UNIT	CONTENT	CL	Hrs	CO
	1.3 Acid Base Balance, Biological Buffers - Bicarbonate, Phosphate, Protein and Haemoglobin - Acidosis and Alkalosis			
2.	Bioenergetics 2.1 Bioenergetics: Conventions in Biochemical Energetics 2.2 ATP as the Universal Currency for Free Energy in Biological Systems 2.3 Free Energy of Hydrolysis of ATP and other Organophosphates 2.4 Structural Basis for the High Group Transfer Potential of ATP 2.5 Standard Free Energy Changes for Representative Chemical Reactions 2.6 Inter-Conversion of Adenine Nucleotides	K1-K5	12	1-5
3.	Biomolecules 3.1 Biomolecules: Elementary Structure of Proteins, Nucleic Acids and Membrane Bilipids (Fluid Mosaic Structure) 3.2 Relationship between the Structure and Function of Proteins and the Consequences of Deviation from Normal	K1-K5	16	1-5
4.	Biocatalysts – Enzymes 4.1 Enzymes, Definition, Co-Factor, Apoenzyme 4.2 General Properties, Active Site, Factors affecting Enzyme Action 4.3 Enzyme Regulation; Allosteric, Feedback Regulation, Product Inhibition 4.4 Immobilization of Enzymes, Methods and Applications	K1-K5	12	1-5
5.	Metabolism 5.1 Definition, Terminology and Functions of Metabolism 5.2 Cellular respiration - electron transport chain and oxidative phosphorylation 5.3 Metabolism of Carbohydrates – Glycolysis, Gluconeogenesis, Glycogen Metabolism, and TCA Cycle 5.4 Proteins – Oxidative Deamination, Transamination and Urea Cycle 5.5 Lipids – Beta Oxidation of Fatty Acids and Biosynthesis of Fatty Acids, Triglycerides and Cholesterol 5.6 Xenobiotics - General Methods of Detoxification	K1-K4	13	1-4

BOOKS FOR STUDY

Albert, Lehninger. *Biochemistry*. New York: Worth, 2008.

Jain, J.L. *Fundamentals of Biochemistry*. New Delhi: S.Chand, 2016.

BOOKS FOR REFERENCE

Brandon and Tooze. *Introduction to Protein Structure*. New York: Garland, 2000.
Glick, R. Bernard and Pasternak J. Jack. *Molecular Biotechnology-Principles and Applications of Recombinant DNA*. Washington: ASM Press, 2005.
Lubert, Stryer. *Biochemistry*. New York: W.H. Freeman, 2009.
Jeremy, M. Berg. *Biochemistry*. New York : W.H. Freeman, 2002.
Voet, D. and Voet. G. *Biochemistry*. New York: John Wiley, 2007.

JOURNALS

Journal of Biochemistry
Journal of Clinical Biochemistry
Nature

WEB RESOURCES

<http://www.csun.edu/~hcchm001/biosites.htm>
<http://themedicalbiochemistrypage.org/>
https://onlinecourses.nptel.ac.in/noc22_cy06/preview

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three.• Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none">• One question to be set with either/or pattern• Questions can be set with or without subdivisions

Other Component:

Total Marks: 50

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none"> • Five questions to be set • Four questions to be answered out of five. • Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none"> • Five questions to be set • Four questions to be answered out of five • Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none"> • Two questions to be set with either/or pattern • Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PE/BC15												
IV	Course Title: ESSENTIALS OF BIOCHEMISTRY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	1	3	3	3	3	2
CO 2	3	3	3	3	3	1	3	1	3	3	3	3	2
CO 3	3	3	3	3	3	3	3	2	3	3	3	3	2
CO 4	3	3	3	3	3	2	1	3	3	3	3	3	2
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV- CHEMISTRY

SYLLABUS

(Effective from the academic year 2023 – 2024)

CORROSION AND ITS PREVENTION

CODE: 23CH/PE/CP15

CREDITS: 5

L T P: 5 0 0

TOTAL HOURS: 65

OBJECTIVES OF THE COURSE

- To relate the principles of electrochemistry to corrosion
- To describe the various types of corrosion and the theories involved
- To facilitate understanding of electrode kinetics and polarisation studies as applied to corrosion
- To give an overview of the various methods of corrosion control and testing

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

CO	DESCRIPTION	CL
CO1	outline the principles of electrochemistry and corrosion	K1
CO2	associate electrochemical phenomena to corrosion and demonstrate methods to study and control corrosion	K2
CO3	investigate the types of corrosion and methods of control	K3
CO4	evaluate the corroded material and available solutions	K4
CO5	design and develop methods to combat corrosion	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1.	Corrosion and Electrochemistry 1.1 Introduction to corrosion Significance of corrosion Cost of corrosion Economic loss- Social and environmental issues 1.2 Electrochemistry- Basic principles- Electrochemical cell representation- EMF Series and its significance. Relation between EMF and Free energy, equilibrium constant. 1.3 Potential vs current, surface coverage vs. potential, potential vs. pH, concentration profile vs. distance from the electrode Evans diagram, Pourbaix diagram: Construction of Fe-H ₂ O-O ₂ diagram	K1-K5	10	1-5
2.	Principles and Types of Corrosion 2.1 Types of Corrosion - Chemical Corrosion, Electrochemical Corrosion. amount of corrosion and its rate (Problems)	K1-K5	14	1-5

UNIT	CONTENT	CL	Hrs	CO
	2.2 Types of Electrochemical Corrosion – Galvanic Corrosion, Concentration Cell Corrosion, Pitting Corrosion, Stress Corrosion, Inter-granular Corrosion. 2.3 Factors influencing corrosion, EMF and Galvanic series. 2.4 Microbially influenced corrosion (MIC) – Electrochemical aspects and general mechanisms.			
3.	Polarisation Phenomena and Electrode Kinetics 3.1 Electrode – Solution Interface – Polarisation Techniques Corrosion Rate Determination. 3.2 Overvoltage – formations of cells – polarization of electrodes 3.3 Mixed Potential Theory – concepts and basics bimetallic couples, activation and diffusion- controlled processes	K1-K5	15	1-5
4.	Methods of Corrosion Prevention 4.1 Protection against corrosion – Material selection and Proper Designing Principles, inhibitors and surface engineering 4.2 Cathodic Protection – Principles and Classification – Sacrificial Anodic Protection and Impressed Current Cathodic Protection. Stray Current Corrosion. Anodic Protection 4.3 Passivity – Definition and parameters influencing passivity, design of Corrosion Resistant Alloys 4.4 Coatings – Metallic Coatings – Organic and Polymer Coatings – Phosphating	K1- K5	14	1-5
5.	Corrosion Testing 5.1 NACE test methods – Open-circuit Potential – Time measurements – Cyclic polarization – Tafel plot for aluminium alloys 5.2 Linear polarisation – Potentiostatic steady state experiments, Small Amplitude Cyclic Voltammetry (SACV) 5.3 AC impedance methods – Slow strain rate test.	K1-K5	12	1-5

BOOKS FOR STUDY

J. O. M. Bockris and A. K. N Reddy, Modern Electrochemistry. Vol. I and II, New York: Plenum Press, 2000.

Jain P.C. and Monika Jain, Engineering Chemistry, New Delhi, Dhanpat Rai Publishing Company, 2011.

M. G. Fontana, Corrosion Engineering, New York, McGraw-Hill Book Company, 2017.

BOOKS FOR REFERENCE

Edward McCafferty Introduction to Corrosion Science Hardcover – Illustrated, 2010

H. H. Uhlig and R. W. Revie, Corrosion and Corrosion Control, New York, Wiley, 2000.

B. J. Little, Microbiologically Influenced corrosion, New York, Wiley-Interscience, 2007.

JOURNALS

Corrosion Science

Materials and Corrosion

Corrosion Reviews

WEB RESOURCES

https://archive.nptel.ac.in/content/syllabus_pdf/113108051.pdf

<https://www.corrosionpedia.com/>

PATTERN OF ASSESSMENT

Continuous Assessment: **Total Marks: 50** **Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three.• Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none">• One question to be set with either/or pattern• Questions can be set with or without subdivisions

Other Component: **Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: **Total Marks: 100** **Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five.• Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none">• Two questions to be set with either/or pattern• Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PE/CP15												
IV	Course Title: CORROSION AND ITS PREVENTION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	3	2	3	1	3	3	2	3	2
CO 2	3	3	3	2	3	2	3	1	3	3	2	3	2
CO 3	3	3	3	2	3	3	3	3	3	3	2	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

GREEN CHEMISTRY

CODE: 23CH/PE/GC15

CREDITS: 5

L T P: 5 0 0

TOTAL HOURS: 65

OBJECTIVES OF THE COURSE

- To enable understanding of the concepts and principles of green chemistry in order to achieve environmental sustainability
- To introduce the importance of green solvents, reagents, catalyst, techniques and synthetic routes in green chemistry.
- To facilitate application of green chemistry concepts and methodologies in the synthesis of organic compounds

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recollect the principles and concepts of green chemistry in the synthesis of compounds	K1
CO2	compare and discuss green solvents, catalysts, reagents, techniques and the synthetic routes employed in the preparation of organic compounds	K2
CO3	classify and apply non-conventional energy sources in the synthesis of compounds	K3
CO4	analyse suitable substrates, reagents, catalyst and reagents used in green synthesis which can develop sustainability	K4
CO5	evaluate the synthesis of some organic compounds by green approach methods and investigate the current trends in the field of education and industry	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1.	Introduction to Green Chemistry 1.1 Need and goals of green chemistry. Twelve principles of Green Chemistry – Concept of atom economy and selectivity in organic reactions 1.2 Designing a green synthesis: selecting suitable substrates, reagents, catalyst and solvents 1.3 Green reagents - dimethyl carbonate and polymer supported reagents - peracids, chromic acid, thioanisoyl resins, N-bromosuccinimide, polystyrene carbodiimide, polystyrene anhydride, sulfonazide polymer.	K1-K5	10	1-5
2.	Green Chemistry in sustainable development 2.1 Introduction- Scope of green chemistry in industries - Energy conservation – Green Chemistry in education 2.2 Sustainable chemistry: Prospects of green chemistry in sustainable development – Current status: Biobased renewable, Green engineering in education for sustainability of developing countries and compressed CO ₂ : Eco friendly solvent 2.3 Future trends in chemistry: Introduction – biomimetic, multifunctional reagents – proliferation of solventless reactions – combinatorial green chemistry 2.4 United Nations Environment Programme (UNEP) – Objectives of Green and Sustainable Chemistry	K1-K5	10	1-5
3.	Green Catalysts and Solvents in Organic synthesis 3.1 Catalyst - acid, basic, oxidation and polymer supported catalyst. 3.2 Phase Transfer Catalyst (PTC): introduction - applications of PTC in organic synthesis - generation of carbenes (dihalocarbenes and vinylidene carbenes), C, N, S- alkylation and crown ethers in saponification, esterification, anhydride formation, displacement reaction and superoxide anion reaction. (in preliminary level) 3.3 Biocatalyst: Introduction - Biochemical oxidations and reductions (Microbial) and Enzymes Catalyzed hydrolytic processes. 3.4 Ionic liquids: Introduction - green solvents, Reactions in Acidic and neutral ionic liquids - application of ionic liquids in synthesis of pharmaceutical compounds.	K1-K5	15	1-5
4.	Applications of non-conventional energy sources 4.1 Microwave assisted reactions in water, organic solvents and solvent- free reactions. Neat reaction of microwave Technology for the synthesis of Heterocyclic Compounds - synthesis of 1,2 - dihydrotriazine Derivatives, Benzimidazoles and 2,3-dihydro imidazo[1,2-c]pyrimidine derivatives.	K1-K5	15	1-5

	4.2 Ultrasound assisted reactions and their applications in hydroboration, Coupling reactions, Bouveault reaction, Strecker reaction and synthesis of chromenes 4.3 Some Organic Synthesis involving Green Chemistry: Introduction - Synthesis of styrene, catechol, 3-dehydroshikimic acid, Urethane, methyl methacrylate, Ibuprofen, Furfural, Paracetamol and Citral			
5.	Organic synthesis in aqueous and solid phase 5.1 Aqueous Phase Reaction - Introduction - electrochemical synthesis of Adiponitrile, sebacic acid and miscellaneous reaction in isomerisation of alkenes, carbonylation, hydroformylation of olefins, homologation of 1,3 - dihydroxyacetone, Weiss-Cook reaction and synthesis of Octadienols. 5.2 Solid Supported Organic Synthesis: Synthesis of Aziridines, Coumarins, Quinoline, Oxadiazepines and Thiadiazepines	K1-K5	15	1-5

BOOKS FOR STUDY

Sankar Prasad Dey, Nayim Sepay, *A text book of Green Chemistry*, TECHNO WORLD, First Edition 2021.

V.K. Ahluwalia, M. Kidwai, *New Trends in Green Chemistry*, Anamaya Publishers, New Delhi, 2004

V. Kumar, "An Introduction to Green Chemistry" Vishal publishing Co. Reprint Edition 2010

Rashmi Sanghi, M.M Srivastava "Green Chemistry" Fourth Reprint - 2009

BOOKS FOR REFERENCE

V. K. Ahluwalia, *Green Chemistry – Environmentally benign reactions* –. Ane Books India (Publisher). (2006).

Rashmi Sanghi & M. M. Srivastava, *Green Chemistry – Environment friendly alternatives*, Narora Publishing House, (2003).

C.N.R. Rao, A. Muller, A.K. Cheetam (Eds), *The Chemistry of Nanomaterials*, Vol.1, 2, Wiley – VCH, Weinheim, 2004.

Kenneth J. Klabunde (Ed), *Nanoscale materials in Chemistry*, Wiley- Interscience, New York, 2001.

Matlack A. S. *Introduction to Green Chemistry*, Marcel Dekker: New York, NY, 2001.

JOURNALS

Green Chemistry

Journal of Current Research in Green and Sustainable Chemistry

Journal of Sustainable Chemistry & Engineering

WEB RESOURCES

Basics of Green Chemistry | US EPA

12 Principles of Green Chemistry - American Chemical Society (acs.org)

Principles of Green Chemistry | Center for Green Chemistry & Green Engineering at Yale

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three.• Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none">• One question to be set with either/or pattern• Questions can be set with or without subdivisions

Other Component:

Total Marks: 50

Seminar / Quiz / Problem Solving / Assignment / Case Study

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five.• Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none">• Two questions to be set with either/or pattern• Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PE/GC15												
I	Course Title: Green Chemistry												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	1	2	3	3	3	3	2	2	1	3
CO 2	3	3	3	1	2	3	3	3	3	3	2	1	3
CO 3	3	3	3	1	2	3	3	3	3	2	2	1	3
CO 4	3	2	3	1	2	3	3	3	3	2	2	1	3
CO 5	3	3	3	1	3	3	3	3	3	3	2	1	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

NANOCHEMISTRY

CODE: 23CH/PE/NC15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To introduce the basic concept of Nanochemistry and changes in chemical and physical properties due to size reduction.
- To familiarize the students with the synthesis, characterization, and application of nano-materials.
- To sensitize the students on the environment and biological systems impact of nanomaterials
- To enable understanding of nanocomposites and their applications

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand and appreciate the fundamental principles of nanoscience	K1
CO2	apply the basic knowledge of nanomaterials in synthesizing, characterizing, and understanding their properties	K2
CO3	demonstrate appropriate synthetic routes, and characterization techniques to fabricate nanomaterials for specific applications	K3
CO4	explain the physical and chemical properties of nanomaterials based on different analytical tools.	K4
CO5	evaluate the suitable method of fabrication, characterization, application, and environmental impact of nanomaterials	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Nanoscience 1.1 Concepts of Nanoscience and Nanotechnology, Nanosized effects, Surface to Volume ratio, Quantum structures, Quantum confinement effects 1.2 Classification of Nano systems based on origin (natural and artificial), dimensionality and structural configuration (Carbon-based, Metal-based, Dendrimers, Composites)	K1-K5	12	1 – 5

UNIT	CONTENT	CL	Hrs	CO
	1.3 Special nanomaterials: Carbon Nanotubes, Fullerenes, Graphene and Self Assembled monolayers (SAMs), Nanoclusters 1.4 Applications of Nanomaterials in electronics (Nanowires), catalysis (gold nanoparticles), Medicine and Drug Delivery (Nanomechanics, nanobots and Quantum dot devices) 1.5 Improved energy efficiency, nanotechnology-based water treatment strategies			
2	Fabrication of Nanomaterials 2.1 Techniques for Synthesis of Nanophase Materials – Top-down vs Bottom-up Approach 2.2 Physical Methods of Synthesis-High energy Ball milling, Arc discharge, Plasma synthesis, Aerosol synthesis, Physical and Chemical Vapour deposition, Electrodeposition 2.3 Chemical Methods of Synthesis-Chemical reduction, Solvothermal, Hydrothermal, Microemulsion, Sol-gel method 2.4 Synthesis and applications of Pure Metal nanoparticles (Gold and Silver) and metal oxide nanoparticles (ZnO, TiO ₂) 2.5 Nanomaterial fabrication techniques- Lithography, Electrosinning	K1-K5	15	1 - 5
3	Nanocomposites 3.1 Definition of composite materials: Classification based on matrix and reinforcements, Properties and Processing of nanocomposites 3.2 Types of nanocomposites: polymer-clay nanocomposites, conducting nanocomposites, types of nanofiller- metal oxides, layered silicates, nanowires, nanotubes and quantum dots. 3.3 Bionanocomposites- Introduction, methods of preparation and components 3.4 Application of nanocomposites	K1-K5	15	1 – 5
4	Properties and Characterisation Techniques of Nanophase Materials 4.1 Size Dependent properties of Nanomaterials: Optical properties (Surface Plasmon Resonance), mechanical, electrical, magnetic, and thermal properties. Kinetic and Thermodynamic Features of Nanomaterials 4.2 Characterisation techniques* (with reference to nanomaterials): UV-visible spectroscopy-band Gap calculation, X-ray diffraction (determination of average particle size), Wide angle extended Xray absorption technique, Electron Microscopy-SEM, TEM, DLS, Defects in Nanomaterials, Co-relation of XRD and TEM	K1-K5	18	1 – 5

UNIT	CONTENT	CL	Hrs	CO
	4.3 Electron Spectroscopy – XPS, UPS, AES, Scanning Probe Microscopes - AFM, STM. *Instrumentation not required			
5	Nanotoxicology 5.1 Nanomaterials and the Environment – Exposure, fate transport and transformation 5.2 Nanomaterials and Biological Systems – Exposure routes, Absorption, Metabolism and health impact of nanomaterials	K1 - K5	5	1 – 5

BOOKS FOR STUDY

Guozhong C. *Nanostructures & Nanomaterials: Synthesis, Properties & Applications*, World scientific, 2011

Ramachandra R., Singh S, *Nanoscience and Nanotechnology-Fundamentals and Frontiers*. New Delhi, Wiley, 2013

Bréchnignac C., Houdy P. and Lahmani M. *Nanomaterials and Nanochemistry*, Germany: Springer-Verlag Berlin and Heidelberg, 2010.

Das A. K. and Das M. *An Introduction to Nanomaterials and Nanoscience*, Chennai: CBS Publishers and Distributors, 2019.

Murty B.S., Shankar P., Baldev Raj, Rath B. B. and Murday J. *Textbook of Nanoscience and Nanotechnology*, Springer, 2016.

BOOKS FOR REFERENCE

Atkins, Peter, T.Overton, J.Rourke, M.Weller and F.Armstrong, *Shriver and Atkins' Inorganic Chemistry*.Chennai: Oxford University Press, 2015.

Kenneth, J.Klabunde. *Nanoscale Materials in Chemistry*.New York: John Wiley, 2001.

Poole,C.P. and F.J.Owens. *Introduction to Nanotechnology* Hoboken:Wiley-Interscience, 2003.

Ratner, M. and D.Ratner. *Nanotechnology- The Next Big Idea*. New York: Prentice Hall, 2003.

Steed,J. W., D. R.Turner, K.Wallace *Core Concepts in Supramolecular Chemistry and Nanochemistry* New York:Wiley, 2007.

Thomas S, Thomas S, Zachariah A. K (edited by) *Thermal and Rheological Measurement Techniques for Nanomaterials Characterisation*. Cambridge: Elsevier,2017

Grassian V.H., *Nanoscience and Nanotechnology-Environmental and Health Impacts*, New York :Wiley, 2008

Pradeep,T.*Nano: The Essentials - Understanding Nanoscience and Nanotechnology*.NewDelhi:Tata McGraw Hill, 2017.

WEB SOURCES

<https://doi.org/10.1590/S1516-14392009000100002>

<https://pubs.rsc.org/en/content/articlelanding/2006/CS/b517312b>

<http://dx.doi.org/10.4172/JREAC.1000e109>

[doi:10.1016/j.polymer.2008.04.017](https://doi.org/10.1016/j.polymer.2008.04.017)

[http://sphinxsai.com/vol3.no2/chem/chempdf/CT=03\(534-538\)AJ11.pdf](http://sphinxsai.com/vol3.no2/chem/chempdf/CT=03(534-538)AJ11.pdf)

http://www.ijscce.org/attachments/File/Vol-1_Issue-6/F0342121611.pdf

JOURNALS

Nanoletters

Journal of composite Materials

Surface science

ACS Nano

Nature Nanotechnology

Advanced Materials

Nanoscale

Nanotechnology

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three.• Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none">• One question to be set with either/or pattern• Questions can be set with or without subdivisions

Other Component:

Total Marks: 50

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five. Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none"> Two questions to be set with either/or pattern Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PE/NC15												
IV	Course Title: NANOCHEMISTRY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	3	3	2	2	2	1	3	2	1	2	3
CO 2	3	3	3	3	2	3	3	2	3	3	3	3	2
CO 3	3	3	3	3	2	3	3	2	3	3	3	3	3
CO 4	3	3	3	3	2	3	3	1	3	3	3	2	3
CO 5	3	3	3	3	2	3	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV – CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

PHYTOCHEMISTRY

CODE: 23CH/PE/PY15

CREDITS: 5

L T P: 5 0 0

TOTAL HOURS: 65

OBJECTIVES OF THE COURSE

- To introduce the fundamental concepts of Phytochemistry
- To enable understanding of the methods of isolation and screening of natural products
- To communicate the importance of structural elucidation of phytochemical constituents in natural products
- To impart understanding of the approaches used in the standardization of herbal drugs

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the analytical principles used in the isolation, extraction and screening of natural products	K1
CO2	categorise phytochemical constituents in natural products based on their properties	K2
CO3	demonstrate knowledge of the methods used in the isolation and extraction of natural products	K3
CO4	distinguish between various natural products based on their applications	K4
CO5	evaluate the use of natural products in drug design and development	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1.	Overview of Natural Product Extraction 1.1 Extraction Techniques-Counter Current Extraction, Supercritical Fluid Extraction, Solid Phase Extraction, Microwave Assisted Extraction, Ultrasound Extraction (Sonication), Phytonics Process, Parameters for Selecting Appropriate Extraction Method, Steps in Extraction Process (Size Reduction, Extraction, Filtration, Concentration and Drying)	K1-K5	14	1-5

UNIT	CONTENT	CL	Hrs	CO
	1.2 Essential Oil Extraction: Distillation (Mechanism and Types), Expression Methods, Enfleurage and Defleurage. Modern Methods of Essential Oil Extraction, SCF 1.3 Non-Chromatographic Separation Techniques: Fractional Distillation, Fractional Liberation, Sublimation, Chemical Derivatisation, Fractional Crystallisation, Centrifugation, Froth Flotation Techniques 1.4 Chromatographic Techniques: Use of HPLC and Column in Isolation of Natural Products (Demonstration of HPLC)			
2.	Phytochemical Screening of Crude Drugs 2.1 Solvent Extraction: Extraction, Isolation, Purification of Alkaloids: Piperine, Ergometrine, Glycosides: Rhein, Flavonoids: Green Tea Flavonoids, Terpenoids: Taxol, Saponins: Diosgenin 2.2 Supercritical Fluid Extraction: Capsaicinoids, Flavonoids, Resveratrol (Vitis Vinifera), Astaxanthin (Red Yeast) and Mycotoxins	K1-K5	15	1-5
3.	Structural Elucidation of Phyto constituents 3.1 Glycyrrhizic acid, Morphine, Pilocarpine, Ergometrine- Structural Elucidation by Physical, Chromatographic and Spectroscopic methods of Characterisation	K1-K5	12	1-5
4.	Standardisation of Herbal Drugs 4.1 Sources of Variation in Chemical Make-Up of Plant Derived Drugs: Genotypic, Ecotypic and Biotypic Variations and variations resulting during Processing and Storage 4.2 Conventional Methods used in Herbal Drug Standardization and their Limitations. WHO Parameters used in Herbal Drug Standardization 4.3 Overview of New Approaches (System Biology Approach; Phytometabolomics, DNA Micro-Array)	K1-K5	12	1-5
5.	Pharmacological Screening Methods 5.1 Brief Introduction to Pharmacological Screening Methods with Examples of the following category of Medicinal Herbs: Hepatoprotectives, Anti-diabetics, Anti-asthmatic, Hypolipidemics, Anti-oxidants, Anti-inflammatory, Analgesics and Anti-cancer	K1-K5	12	1-5

BOOKS FOR STUDY

Chatwal G. R. *Organic Chemistry of Natural Products - Vol. I and II*. New Delhi: Himalaya Publishing House, 2010.

Finar I. L. *Organic Chemistry: Stereochemistry and the Chemistry of Natural Products*. London: Pearson, 2005.

BOOKS FOR REFERENCE

Evans W. C. and Trease G. E. *Trease and Evan's Pharmacognosy*. USA: W. B. Saunders, 2002.
Rangari V. D. *Pharmacognosy & Phytochemistry - Vol I and II*. Nashik: Career Publications, 2009.

Satyajit D. S., Latif Z. and Gray A. I. *Natural Products Isolation*. New Jersey: Humana Press, 2006.

JOURNALS

Biological and Pharmaceutical Bulletin

Indian Journal of Pharmacology

Natural Products Research

Journal of Ethnopharmacology

WEB RESOURCES

<https://nptel.ac.in/courses/104106075>

<https://www.sciencedirect.com/journal/phytochemistry>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three.• Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none">• One question to be set with either/or pattern• Questions can be set with or without subdivisions

Other Component:

Total Marks: 50

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five. Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none"> Five questions to be set Four questions to be answered out of five Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none"> Two questions to be set with either/or pattern Questions can be set with or without subdivisions

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CH/PE/PY15												
IV	Course Title: PHYTOCHEMISTRY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	3	2	3	3	3	3	2	2
CO 2	3	3	3	2	3	3	2	3	3	3	3	2	2
CO 3	3	3	3	2	3	3	2	3	3	3	3	2	2
CO 4	3	3	3	3	3	3	2	3	3	3	3	3	2
CO 5	3	3	3	3	3	3	2	3	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

**Post Graduate Elective Course offered by the Department of Chemistry for
M.A. / M.Sc. / M.Com. Degree Programmes**

SYLLABUS

(Effective from the academic year 2023-2024)

MEDICINES AND HEALTH CARE

CODE: 23CH/PE/MH23

CREDITS: 3

L T P: 3 0 0

TOTAL HOURS: 39

OBJECTIVES OF THE COURSE

- To introduce the fundamental concepts of Pharmaceutical Chemistry
- To give an overview of medicines used in everyday life
- To create awareness of the different types of drugs used for various disorders and diseases

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recognise the importance of health care and pharmaceuticals	K1
CO2	discuss the causes and treatment methods of various diseases	K2
CO3	classify diseases and disorders based on the medicines used	K3
CO4	evaluate the importance of medicines in everyday life	K4
CO5	correlate drugs with the diseases for which they are prescribed	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1.	General Introduction to Drugs 1.1 Terminology - Pharmacy, Pharmacology, Pharmacodynamics, Pharmacokinetics, Antimetabolites, Mutation, Pharmacognosy, Toxicology, Pharmacotherapeutics, Chemotherapy, therapeutic index. 1.2 Chemical Classification of Drugs 1.3 Diseases - Communicable and Non-communicable, Pathogens - Bacteria, Virus, Fungi, Protozoans	K1-K3	5	1-3
2.	Common Diseases and their Treatment 2.1 Common Diseases: Insect borne - Malaria, Air Borne - Whooping Cough and Tuberculosis. Waterborne – Cholera and Typhoid - Etiology, Symptoms, Prevention and Remedy 2.2 Common Disorders of the Digestive System – Hepatitis A and B; Respiratory system - Asthma;	K1-K5	8	1-5

UNIT	CONTENT	CL	Hrs	CO
	Nervous system - Epilepsy. Prevention and Treatment. 2.3 Covid-19, Nipah, Dengue and AIDS – Awareness, Prevention and Treatment			
3.	Blood and Haematological Agents 3.1 Composition of Blood – plasma, erythrocytes, leukocytes and thrombocytes 3.2 Haemophilia and sickle cell anaemia – causes, symptoms and treatment. 3.3 Blood Pressure, Hypertension - Causes, Diet, Prevention. Antihypertensive Agents. 3.4 Haematological Agents, Anaemia – Causes and Control- Anti-anaemic Drugs	K1-K5	8	1-5
4.	Drugs in daily life 4.1 Anaesthetics - Types - General, Local, Intravenous – (Ether, CHCl ₃ , Halothane, Nitrous Oxide, Cocaine – no structures), - Advantages and Disadvantages 4.2 Antiseptics and Disinfectants- (Phenols, Chloramines, Bleaching Powder, Dyes - Crystal Violet) 4.3 Analgesics, Antipyretic and Anti-Inflammatory Agents - Narcotic and Non-Narcotic Drugs- Morphine, Source, activity and uses – Aspirin, Paracetamol, Non-steroidal anti-inflammatory drugs (NSAIDS)	K1-K5	8	1-5
5.	Drugs of importance 5.1 Antibiotics - Classification - Therapeutic uses of Chloramphenicol, Penicillin, Streptomycin and Tetracyclines. Resistance to antibiotics. 5.2 Antipsychotic Drugs - Tranquiliser (Piperazine, Benzamides), Adverse effects; Antidepressants- Sedatives and Hypnotics - Barbiturates 5.3 Diabetes – Types – Hypoglycemic Agents, Sugar Substitutes. 5.4 Cancer – Types and Treatments - Antineoplastic Drugs – Hormone therapy and Radioactive isotope therapy.	K1-K5	10	1-5

BOOKS FOR STUDY

Craig R., Robert. E. and Stitzel. *Modern Pharmacology*. USA: Little Brown, 2004.
Ghosh J. *A text book of Pharmaceutical Chemistry*. New Delhi: Sultan Chand and Sons, 2014.

BOOKS FOR REFERENCE

Craig R. and Stitzel R. E. *Modern Pharmacology*. Boston: Little Brown, 2000.
Kar A. *Medicinal Chemistry*, 2nd Ed., New Delhi: New Age, 2002.
Patrick G, *Instant Notes in Medicinal Chemistry*, New Delhi: Viva Books, 2002.

Lemke T. L., Zito W. S., Roche V. F. and Williams D. A. *Essentials of Foye's Principles of Medicinal Chemistry*. Chennai: Wolters Kluwer India, 2016.
Mukherjee K. L. *Medical Laboratory Technology*. New Delhi: Tata McGraw-Hill, 2005.

JOURNALS

Journal of Medicinal Chemistry
Health Care Science
Medicine and Health

WEB RESOURCES

<https://nptel.ac.in/courses/104106106>
<https://www.frontiersin.org/journals/chemistry/sections/medicinal-and-pharmaceutical-chemistry>
https://onlinecourses.nptel.ac.in/noc23_hs93/preview

PATTERN OF ASSESSMENT

Continuous Assessment: **Total Marks: 50** **Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three.• Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none">• One question to be set with either/or pattern• Questions can be set with or without subdivisions

Other Component: **Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five.• Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none">• Two questions to be set with either/or pattern• Questions can be set with or without subdivisions

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600086

**Post Graduate Elective Course offered by the Department of Chemistry for
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SYLLABUS

(Effective from the academic year 2023–2024)

COSMETICS AND HERBAL PRODUCTS

CODE: 23CH/PE/CH23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- To introduce the concept of cosmetology and human anatomy
- To instil a keen interest in personal care
- To enlighten the importance of natural herbal products and remedies for beauty care

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recognize the importance of cosmetics in skin care, and hair care and identify the various ingredients present in cosmetics	K1
CO2	classify cosmetics based on ingredients, skin type and hair type	K2
CO3	examine the nature of cosmetics suitable for each skin/hair type and provide a suitable beauty treatment	K3
CO4	investigate different skin/hair types and select the appropriate beauty treatment	K4
CO5	formulate herbal or chemical cosmetics for different personal care applications	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Cosmetology 1.1 Cosmetics- Definition, purpose, classification, significance. 1.2 History of Cosmetics – Cosmetology, cosmeceuticals, therapeutics 1.3 Ingredients present in cosmetics – Water, emulsifier, preservative, thickener, emollient, colour, fragrance and pH stabilizer 1.4 Quality characteristics – Regulation and Safety	K1-K5	6	1-5
2	Skin care 2.1 Skin- structure and functions- pH and moisture balance, maintenance of skin	K1-K5	8	1-5

UNIT	CONTENT	CL	Hrs	CO
	2.2 Types of skin: dry skin, oily skin, wrinkled skin 2.3 Cleansing of the skin, creams and lotions, astringent and skin tonics, skin lighteners, depilatories, food habits related to skin care.			
3	Scalp and Hair Treatments 3.1 Structure of hair, growth and type of hair, 3.2 Shampoos and conditioners, hair styling products, hair ironing and methods of colouring / dyeing - Precautionary measures 3.3 Personal care and cleanliness of hair.	K1-K5	8	1-5
4	Beauty Treatments 4.1 Facials-types-advantages and disadvantages, 4.2 Lipstick, eyeliner, mascara, eye shadow - chemical composition 4.3 AHA exfoliation, Facials: galvanic, high frequency, aroma therapy 4.4 Toxicology of cosmetics – Allergy and testing	K1-K5	8	1-5
5	Herbal Cosmetics 5.1 Nomenclature, characteristics and classification of herbs used for hair care. 5.2 Hair cleansing: Shikakai, Amla. Hair growth: Brahmi, Manjistha 5.3 Anti-dandruff: Tulsi, Neem, Wheat Gram Oil 5.4 Fruits and Vegetables as skin care - Carrot, Cucumber, honey, lemon, mint, tomato, yogurt and tea 5.5 Use of herbs and their incorporation in cosmetics formulation	K1-K5	9	1-5

BOOKS FOR STUDY

Gem Mathew, G.D., *Chemistry in Everyday Life*, Vishal Publishers, 2013

Wilkinson J B E and Moore R J, *Harry's Cosmetology*, London, Chemical Publishers, 1982

BOOKS FOR REFERENCE

T. Mitsui, *New Cosmetic Science*, Elsevier, 1997.

André O. Barel, Marc Paye, Howard I. Maibach, *Handbook of Cosmetic Science and Technology*, CRC Press, 2014.

NIIR Board, *Handbook on Herbal Products (Medicines, Cosmetics, Toiletries, Perfumes)* Vol. 2, National Institute of Industrial Research, 2002.

JOURNALS

International journal of cosmetic science

Cosmetics, Dermatological Sciences and Applications

WEB RESOURCES

<https://cosmeticsinfo.org>

<https://www.encyclopedia.com/sports-and-everyday-life/fashion-and.../cosmetics>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none"> • Three questions to be set • Two questions to be answered out of three. • Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none"> • Three questions to be set • Two questions to be answered out of three • Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none"> • One question to be set with either/or pattern • Questions can be set with or without subdivisions

Other Component:**Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none"> • Five questions to be set • Four questions to be answered out of five. • Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none"> • Five questions to be set • Four questions to be answered out of five • Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none"> • Two questions to be set with either/or pattern Questions can be set with or without subdivisions

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI-600086

**Post Graduate Elective Course Offered by the Department of Chemistry for
M.A. / M.Sc. / M.Com. Degree Programmes**

SYLLABUS

(Effective from the academic year 2023-2024)

FOOD CHEMISTRY AND NUTRITION

CODE: 23CH/PE/FN23

CREDITS: 3

L T P: 3 0 0

TOTAL HOURS: 39

OBJECTIVES OF THE COURSE

- To equip the students on the effective usage of the food guide
- To create awareness on the chemistry of different constituents of food like carbohydrates, proteins, and vitamins
- To introduce students to various nutrients, their nutritional value, functions and storage

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

CO	DESCRIPTION	CL
CO1	identify the food groups and the organisations that help in fighting malnutrition	K1
CO2	discuss the food groups, nutrients and relate the different types of food and diseases	K2
CO3	classify the food groups and diseases caused by their deficiency and ways to fight the deficiency	K3
CO4	analyse the role of carbohydrates, fats, protein, vitamins, and essential nutrients in health.	K4
CO5	create a personal food guide and evaluate ways of cooking	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Food Chemistry and Nutrition 1.1 Food Guide- Basic Food Groups, Usage of the Food Guide, reading food labels 1.2 Introduction to Nutrition –Definition of Nutrition and Nutrients, Interrelationship between Nutrition and Health, Malnutrition. Basal Metabolism and Determination of BMR 1.3 Recommended Dietary Allowances (RDA) - Factors affecting RDA, General Principles of Deriving RDA, Determination of RDA of Different Nutrients, designing a food plate	K1-K5	8	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Carbohydrates and Lipids 2.1 Sources, Classification, Functions and Recommended Dietary Allowance of Carbohydrates. Glycemic index. Artificial Sweetening Agents (Structure not required) 2.2 Effect of Cooking on Carbohydrates and Storage of Carbohydrates 2.3 Lipids: Sources, Chemical Classification, Functions. Essential Fatty Acids.	K1-K5	8	1-5
3	Minerals and Vitamins 3.1 Sources, Functions, Deficiency and Recommended Dietary Allowance of following Minerals: Calcium, Iron, Iodine and Phosphorous 3.2 Vitamins- Classification, Sources, Functions and Deficiency (Elementary Treatment) of the following Vitamins: Fat Soluble Vitamins- A, D, E and K , Water Soluble Vitamins- Ascorbic Acid, Thiamine, Riboflavin, Niacin, other members of B-Complex such as B6, Folic Acid and B12 3.3 Effect of Cooking on Vitamins and Minerals	K1-K5	8	1-5
4	Proteins 4.1 Sources, Classification, Functions, Nutritional Classification and Recommended Dietary Allowance of Proteins 4.2 Protein Energy Malnutrition (PEM) –Marasmus and Kwashiorkor. Steps that can be taken to aid in the Prevention of PEM	K1-K5	8	1-5
5	Role of International and National Agencies in Combating Malnutrition 5.1 International Agencies- World Health Organisation, Food and Agriculture Organization, United Nations Children's Fund 5.2 National Agencies-Indian Council of Agricultural Research (ICAR), Indian Council of Medical Research (ICMR), National Institute of Nutrition, Food and Nutrition Board 5.3 Nutrition Education- Methods used in Nutrition Education- Reference to Special nutrition programme, Balwadi Nutrition programme, Mid-day meal scheme	K1-K5	7	1-5

BOOKS FOR STUDY

Fennema, R. Owen. Food Chemistry. New York: Marcel Decker, 2007.
 Srilaksmi, B. Nutrition Science. New Delhi: New Age International, 2012.

BOOKS FOR REFERENCE

Potter, N. Norman. Food Science. New Delhi: CBS, 2007.
 Mayer, William Hogoland. Food Chemistry. New Delhi: CBS, 2009.
 Manay, Shankunthala N., Shadaksharswamy, M. Food –Facts and Principles. Chennai: New Age International, 2001.

JOURNALS

Journal of Nutrition

Journal of Food Science

Proceedings of Nutrition Society of India

WEB RESOURCES

<https://www.healthline.com/health/food-nutrition>

<https://www.who.int/news-room/fact-sheets/detail/healthy-diet>

https://cftri.res.in/engineering_science

<https://niohenviis.nic.in/newsletters.html>

PATTERN OF ASSESSMENT

Continuous Assessment: **Total Marks: 50** **Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	5	$5 \times 1 = 5$ (5 MCQs)
B	K2	5	$5 \times 1 = 5$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	12	$2 \times 6 = 12$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three.• Questions can be set with or without subdivisions
D	K4/K4	16	$2 \times 8 = 16$ marks <ul style="list-style-type: none">• Three questions to be set• Two questions to be answered out of three• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	12	$1 \times 12 = 12$ marks <ul style="list-style-type: none">• One question to be set with either/or pattern• Questions can be set with or without subdivisions

Other Component: **Total Marks: 50**

Seminar / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100**Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five.• Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none">• Two questions to be set with either/or pattern• Questions can be set with or without subdivisions

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV - CHEMISTRY

SYLLABUS

(Effective from the academic year 2023-2024)

INTRODUCTION TO FORENSIC CHEMISTRY

CODE: 23CH/PI/IF24

CREDITS: 4

OBJECTIVES OF THE COURSE

- To equip students with the knowledge of forensic science
- To give an insight into diagnostic testing
- To encourage students to work in the area of investigation and pursue research in Forensic Science.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

CO	DESCRIPTION	CL
CO1	recall the history and importance of forensic science	K1
CO2	associate evidences to detect wrongdoing and track using analytical techniques	K2
CO3	implement toxicology and analytical techniques for study of evidence and detection of crime	K3
CO4	deconstruct the event using evidence, technical knowledge and trace materials	K4
CO5	make a judgement based on evidences available and application of various techniques.	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	CO
1	Forensic Science 1.1 Brief History of Forensic Science, Function of Forensic Science in the Laboratory 1.2 Processing the Scene of Crime and Forensic Photography	K1-K5	1-5
2	Physical Evidence (Tracks and trails) 2.1 Physical evidence–Classification. Significance of fingerprints and palm prints, footprints, Shoe and Tyre Impression 2.2 Trace Evidence-Soil, Glass, Paint 2.3 Biological Material-Blood, Hair, Bones, Teeth-Application of DNA Profiling	K1-K5	1-5

3	Toxicology and Analysis Techniques 3.1 Radioactive Decay Reactions and Neutron Activation Analysis 3.2 Atomic Absorption Spectroscopy and X-Ray Analysis to detect Samples 3.3 Poisons-Classification. Symptoms and Antidotes for some common Poisons	K1-K5	1-5
4	Tracking Forgery 4.1 Disputed Documents-Types-Document Examination. Use of UV Rays in Detection of Counterfeit Currency and Stamp Paper 4.2 Identification of Forgery in Hand Written and Typed Document 4.3 Paper Chromatography of ink	K1-K5	1-5
5	Fire-Arson and Explosives 5.1 Characteristics of Accidental Fires 5.2 Arson-Evidence from Fire affected area to detect the cause of the Fire 5.3 Explosive-Classification-Evidence from the scene of explosion to detect the cause of explosion	K1-K5	1-5

BOOKS FOR STUDY

Nabar, B.S., Forensic Science in Crime Investigation, 3rd Edition, Hyderabad Asia Law House, 2007

Sharma, B.R. *Forensic Science in Criminal Investigation and Trials*. New Delhi: Universal Law Pub Co Pvt 2007

BOOKS FOR REFERENCE

Russel, Max, M. Houck, Jay A Siegel. *Fundamentals of Forensic Science*. Amsterdam: Elsevier, 2006.

Henry, C. Lee, Palmbach T., Miller M C. *Henry Lee's Crime Scene Hand book*. Amsterdam: Elsevier, 2001.

JOURNALS

Journal of Forensic Science

Journal of Forensic Research

Forensic Science Communication

Journal of Forensic Psychology

WEB RESOURCES

<http://www.all-about-forensic-science.com/>

https://onlinecourses.swayam2.ac.in/cec20_ge10/preview

https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S001608/P001746/M022163/ET/1504500890et.pdf

PATTERN OF ASSESSMENT

End-Semester Examination: Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five.• Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none">• Two questions to be set with either/or pattern• Questions can be set with or without subdivisions

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600086

M.Sc. DEGREE: BRANCH IV - CHEMISTRY

SYLLABUS

(Effective from the academic year 2019-2020)

CHEMISTRY OF NATURAL PRODUCTS

CODE:23CH/PI/NP24

CREDITS:4

OBJECTIVES OF THE COURSE

- To enable understanding of the origin and classification of natural products
- To introduce the physiological functions of natural products and their derivatives
- To facilitate understanding of structure determination of natural products using various techniques

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

CO	DESCRIPTION	CL
CO1	identify preparation, properties and structures of natural products	K1
CO2	discuss the different types of natural products and their biological role	K2
CO3	classify the different types of natural products and elucidate their structure	K3
CO4	investigate different types of alkaloids based on their colour, absorption, and chemical properties	K4
CO5	recommend natural products for varied applications depending on their characteristics	K5
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	CO
1	Amino Acids, Peptides and Proteins 1.1 Introduction to Amino Acids 1.2 General Methods of Preparation and Properties of Amino Acids 1.3 Naturally Occurring Peptides and Nomenclature of Poly Peptides 1.4 General Principle of Polypeptide Synthesis 1.5 Representation of Polypeptides. Determination of Structure of Peptides 1.6 Classification of Proteins. Primary, Secondary and Tertiary Structure of Proteins	K1-K5	1-5

UNIT	CONTENT	CL	CO
2	Steroids 2.1 Nomenclature and Stereochemistry (Configuration of Substituent, Ring and Side Chain) 2.2 Classification of Sterols and Related Colour Reactions 2.3 Cholesterol- Occurrence, Isolation, Clinical Significance, Structure Elucidation and Total Synthesis 2.4 Steroid Hormones- Synthesis of Estrogen and Progesterone	K1-K5	1-5
3	Terpenoids Source and Extraction 3.1 Classification and Isolation 3.2 General Methods of Structure Determination of Terpenoids 3.3 Structure Elucidation of Carvone-D, Longifolene, Abeitic Acid and β - Carotene	K1-K5	1-5
4	Alkaloids 4.1 Occurrence and Functions 4.2 Classification and Nomenclature 4.3 General Methods of Structure Determination and Pharmaceutical Applications 4.4 Structure Elucidation of Conine, Nicotine and Caffeine	K1-K5	1-5
5	Plant Pigments 5.1 Representation of Flavonoids, Flavones, Flavonols and Isoflavones 5.2 Glycosides of Flavones and Flavonols 5.3 General Methods of Structure Determination of Flavonoids 5.4 Structure Elucidation of Apigenin and Quercetin 5.5 Anthocyanidins and Anthocyanins - General Methods of Structure Determination 5.6 Structure Elucidation of Cyanidin and Hirsutidin 5.7 Structural Relationship between Flavonols (Quercetin), Anthocyanidin (Cyanidin) and Catechins (Epicatechin)	K1-K5	1-5

BOOKS FOR STUDY

Bhat, S. V., Nagasampagi B. A. and Sivakumar M. *Chemistry of Natural Products*. New Delhi: Narosa Publishing, 2006.

Ahluwalia, V.K., Sanjiv Kumar, Lalita S. Kumar. *Chemistry of Natural Products*. New Delhi: CRC Press, 2007.

BOOKS FOR REFERENCE

Stanforth ,P.Stephen. *Natural Product Chemistry at a Glance*, Hoboken:Wiley Blackwell, 2006.

JOURNALS

Journal of Natural Products

Natural Product Research

Journal of Asian Natural Products

Indian Journal of Natural Products and Resources

WEB RESOURCES

<https://www2.chemistry.msu.edu/faculty/reusch/virttxtjml/biomol.htm>

<https://nptel.ac.in/courses/104103068>

PATTERN OF ASSESSMENT

End-Semester Examination: Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	$10 \times 1 = 10$ (10 MCQs)
B	K2	10	$10 \times 1 = 10$ (Answer in a line or two or Fill in the blanks)
C	K3/K3	24	$4 \times 6 = 24$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five.• Questions can be set with or without subdivisions
D	K4/K4	32	$4 \times 8 = 32$ marks <ul style="list-style-type: none">• Five questions to be set• Four questions to be answered out of five• Questions can be set with or without subdivisions
E (Internal Choice)	K5/K5	24	$2 \times 12 = 24$ marks <ul style="list-style-type: none">• Two questions to be set with either/or pattern• Questions can be set with or without subdivisions



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

M.A. Degree
Branch II(E) INTERNATIONAL STUDIES
(CHOICE BASED CREDIT SYSTEM)

OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF INTERNATIONAL STUDIES

M.A. DEGREE: BRANCH II (E) - INTERNATIONAL STUDIES

PROGRAMME DESCRIPTION

The Master's degree in International Studies is a unique programme with an interdisciplinary approach to understanding contemporary issues in international relations. The programme is designed to provide students with a broad foundation for analytical thinking and greater understanding on topics such as international law, politics, economics, security, cooperation and peace. A comprehensive elective and area studies track is a distinct part of the curriculum with a focus on specific regions such as the Middle East, Latin America, the Asia Pacific and South Asia. The programme provides both theoretical and in-depth analysis of the concepts, approaches and various debates in international relations. The programme includes a Summer Internship and submission of a dissertation that allows students to choose topics across various courses taught. The programme offers appropriate knowledge and skill sets needed to choose a variety of careers.

VISION OF THE DEPARTMENT

We aspire to international recognition as a premier school of International Studies in India preparing women students in national and international careers

MISSION OF THE DEPARTMENT

We strive to provide an atmosphere of inquiry, which encourages students to think independently, act decisively and emerge as leaders in the study and practice of international affairs

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

PROGRAMME SPECIFIC OUTCOMES (PSOs)

On successful completion of the M.A. International Studies programme, the students will be able to:

PSO1	Create a comprehensive understanding of the theories, concepts, methodologies used in the field of International Studies
PSO2	Develop critical thinking, analytical and research skills to assess the complex international issues, conflicts and challenges
PSO3	Demonstrate the ability to analyse and respond sensitively to a wide array of historical, social, cultural, economic and environmental issues.
PSO4	Function as responsible citizens who will utilize their domain specific skills and knowledge to proficiently navigate the intricacies of local, national and international contexts
PSO5	Equip students with necessary preparation for diverse career paths including but not limited to diplomacy, international organisations, non-governmental organisations, research and academia

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
DISTRIBUTION OF CREDITS AND HOURS
M.A. International Studies 2023-2024

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	5	4	5	4	5	4	5	16	20
	4	5	4	5	4	5	4	5	16	20
	4	5	4	5	4	5	4	5	16	20
	4	5	4	5					8	10
Dissertation							7	9	7	9
PE-dept.	5	5			5	5	5	5	15	15
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PA	2	2							2	2
PN					2				2	0
Library		3		3		5		1	0	12
TOTAL	23	30	23	30	24	30	24	30	94	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.A. DEGREE: BRANCH II (E) - INTERNATIONAL STUDIES

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
SEMESTER-I									
23IS/PC/IH14	International History (1648-1945)	4	4	1	0	3	50	50	100
23IS/PC/IR14	International Relations Since 1945	4	4	1	0	3	50	50	100
23IS/PC/IS14	International Security	4	4	1	0	3	50	50	100
23IS/PC/IP14	International Political Economy	4	4	1	0	3	50	50	100
	PA/PL								
	Department Elective I								
SEMESTER-II									
23IS/PC/TR24	Theories of International Relations	4	4	1	0	3	50	50	100
23IS/PC/IL24	International Law I	4	4	1	0	3	50	50	100
23IS/PC/IF24	India's Foreign Policy	4	4	1	0	3	50	50	100
23IS/PC/IO24	International Organisations	4	4	1	0	3	50	50	100
23IS/PK/SS22	Soft Skills	2	2	0	0	-	50	-	100
CD / ET	Value Education								
	Common Elective I								
SEMESTER-III									
23IS/PC/RM34	Research Methodology	4	4	1	0	-	50	-	100
23IS/PC/UR34	Foreign Policy of Major Powers USA and Russia	4	4	1	0	3	50	50	100
23IS/PC/IL34	International Law II	4	4	1	0	3	50	50	100
23IS/PN/SI32	Summer Internship	2	0	0	0	-	50	-	100
CD / ET	Value Education								
	Department Elective II								
	Common Elective II								
SEMESTER-IV									
23IS/PC/HR44	Human Rights	4	4	1	0	3	50	50	100
23IS/PC/PS44	Introduction to Peace and Conflict Studies	4	4	1	0	3	50	50	100
23IS/PC/GP44	Government and Politics of China	4	4	1	0	3	50	50	100
23IS/PC/DS47	Dissertation	7	0	0	9	-	-	100	100
	Department Elective III								
Postgraduate Elective Courses Offered to Parent Department									
23IS/PE/IT15	International Terrorism	5	5	0	0	3	50	50	100
23IS/PE/GL15	Globalisation	5	5	0	0	3	50	50	100
23IS/PE/MS15	Maritime Trade, Shipping and Port Management	5	5	0	0	3	50	50	100
23IS/PE/PG15	Political Geography and International Relations	5	5	0	0	3	50	50	100
23IS/PE/LA15	Latin American: Polity, Economy and Society	5	5	0	0	3	50	50	100
23IS/PE/ME15	Contemporary Issues of the Middle East	5	5	0	0	3	50	50	100
23IS/PE/PT15	Introduction to Political Thought	5	5	0	0	3	50	50	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.A. DEGREE: BRANCH II (E) - INTERNATIONAL STUDIES

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
23IS/PE/IN15	Emergence of the Indo-Pacific: Prospects and Challenges	5	5	0	0	3	50	50	100
23IS/PE/AW15	Government and Politics of Africa	5	5	0	0	3	50	50	100
Postgraduate Elective Courses Offered to Other Departments									
23IS/PE/GE23	Global Environmental Policy and Issues	3	3	0	0	3	50	50	100
23IS/PE/SC23	Politics, Society and Cinema	3	3	0	0	-	50	50	100
23IS/PE/PP23	Indian Polity and Politics for Competitive Exams	3	3	0	0	3	50	50	100
The Department will offer one Social Awareness Course									
Social Awareness									
23IS/PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100
23IS/PA/CR12	Child Rights	2	2	0	0	-	50	-	100
23IS/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100
23IS/PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100
23IS/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100
23IS/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100
23IS/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100
23IS/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100
23IS/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100
Independent Elective Courses									
23IS/PI/EC24	Ethnicity Culture and International Relations	4	0	0	0	3	-	100	100
23IS/PI/TW24	Third World Development Challenges	4	0	0	0	3	-	100	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH II (E) - INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023 – 2024)

INTERNATIONAL HISTORY (1648-1945)

CODE: 23IS/PC/IH14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To enable the students to comprehend key seminal concepts in International Relations
- To familiarise the students with important historical events that shaped International Relations
- To trace the events that led to the emergence of the contemporary world order

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify the seminal concepts, key events, actors in world history.	K1
CO2	relate the impact of philosophical debates in the evolution of international political systems.	K2
CO3	interpret historical sources to gain insights into the complexities of international relations.	K3
CO4	compare and contrast different nations and regions throughout history.	K4
CO5	critique and analyze the relevance of historical analysis, research and writing to international relations.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	State and International Relations 1.1 Evolution of State – Tribalism, City-States, Nation-States 1.2 Thirty Years War – Church-State Relations 1.3 Peace of Westphalia and Sovereignty 1.4 Emergence of Modern Nation-State 1.5 Changing Notions of the State System	K1-K5	13	1-5
2	Rise of Democratic Ideas 2.1 Origins of Democracy: Greek and Roman 2.2 Age of Enlightenment: Hobbes, Locke, Rousseau, Montesquieu 2.3 Revolutions: French Revolution, American	K1-K5	13	1-5

	War of Independence 2.4 Waves of Democratization 2.5 Democracy in the Twenty First Century			
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UNIT	CONTENT	CL	HRS	CO
3	Imperialism and Colonialism 3.1 Theories of Imperialism 3.2 Emergence of Mercantilism, Capitalism, Marxism 3.3 Imperialism and Colonialism in Asia 3.4 Imperialism and Colonialism in Africa 3.5 Imperialism and Colonialism in South America	K1-K5	13	1-5
4	World War I 4.1 Eastern Question, Alliances and Counter Alliances in Europe 4.2 World War I – Course and Consequences 4.3 League of Nations 4.4 Interwar Period – Great Depression 4.5 Rise of ‘isms’ – Nazism, Fascism, Militarism	K2-K6	13	2-5
5	World War II 5.1 Policy of Appeasement and Outbreak World War II 5.2 Formation of Axis and Allied Powers 5.3 United States – From Neutrality to War 5.4 Allied Victory – War Time Conferences, Formation of the UN 5.5 Beginning of the Cold War	K2-K6	13	2-5

BOOK FOR STUDY

Derek McKay, H.M. Scott. The Rise of the Great Powers 1648 – 1815, USA Routledge, 2014.
 Nicholas Doumanis. The Oxford Handbook of European History, 1914-1945, New York, Oxford University Press, 2016.
 Roy Bridge, Roger Bullen. The Great Powers and the European States System 1814-1914, USA Routledge, 2014.

BOOKS FOR REFERENCE

Antony Best, Jussi Hanhimaki, International History of the Twentieth Century and Beyond, USA Routledge, 2008.
 Bartlett, C.J. The Global Conflict, U.K: Longman, 1994.
 Baycroft, Timothy, Nationalism in Europe (1789-1945), London: Cambridge University Press, 1999.
 Carlton J.H Hayes, World History, London: Macmillan and Co Ltd, 1950 Carr E.H., The Twenty Years' Crisis 1919-1939: An Introduction To The Study of International Relations, U.K: Palgrave, 1939.
 Cornwell R.D, World History In The Twentieth Century, London: Longman, 1975.
 Craig Gordon A, Abhilasha Kumar, Europe 1815-1914, New York: Dryden Press, 1979. Eric Hobsbawm . Age Of Revolution: 1789-1848, London, Phoenix Press. 2010
 Geoffrey Parker. The Thirty Years' War, USA Routledge, 2006. Gordon Martel A Companion to International History 1900-2001, London: Blackwell, 2007.
 Grant A.J Europe In The 19th And 20th Centuries (1815-1939), New York: Oxford University Press, 1969.

H. L. Wesseling. The European Colonial Empires: 1815-1919, H. L. Wesseling, New York, Routledge 2013
 Jeremy Black. European International Relations 1648-1815, Palgrave Macmillan, 2002.

John Hirst. The shortest History of Europe, Australia, Black Inc, 2012.
 Kennedy, Paul, Rise and Fall of the Great Powers, NY: Random House, 1987.

Keylor, William R. The Twentieth Century World: An International History, New York: Oxford University Press, 1984.

Nye, Jr., Joseph S. Understanding International Conflict: An Introduction to Theory and History, New York: Longman, 1997.

PATTERN OF ASSESSMENT

Continuous Assessment

Total Marks: 50

Duration: 90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	2x2=4 (30 Words) Answer any 2 out of 4
B	K2	8	1x8=8 (250 words) Answer any 1 out of 2
C	K3	10	1x10=10(250words) Answer any 1 out of 2
D	K4	12	1x12=12 (350 words) Answer any 1 out of 2
E	K5	16	1x16=16 (1000words) Answer any 1 out of 2
	Total	50	

Other Components

Seminars, quiz, written assignments, mini projects, presentations. Two to three other components for each course for 50 marks.

End Semester Examination

Total Marks: 100

Duration: 3 Hours

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	12	6x2=12 (30 words) Answer 6 out of 8 questions
B	K2	24	3x8=24 (250 words) Answer any 3 out of 5
C	K3	20	2x10=20 (350 words) Answer any 2 out of 4
D	K4	24	2x12=24 (500 words) Answer any 2 out of 4
E	K5	20	1x20=20(1000words) Answer any 1 out of 2
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/IH14												
	Course Title: International History (1648-1945)												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	2	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH II (E) - INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023 – 2024)

INTERNATIONAL RELATIONS SINCE 1945

CODE: 23IS/PC/IR14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To acquaint the students with various issues and events related to Cold War and post-Cold War development
- To highlight the relevance of geopolitical, geostrategic and geo-economics changes in the international system influenced by the Cold War
- To understand the emerging World Order in the Post Cold War era

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the key events that occurred during the cold war	K1
CO2	discuss the important terms and concepts associated with the cold war era	K2
CO3	trace the role of the united states and soviet union as superpowers in alliances, counter-alliances and proxy wars	K3
CO4	analyse the shifting global power dynamics, the rise of regional actors and growing influence of non-state actors	K4
CO5	appraise the impact of the cold war on the emerging trends and shifts in international relations	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Decolonisation & Origins and Development of the Cold War 1.1 Decolonisation - Africa, Asia, Latin America 1.2 Origins and Development of the Cold War 1.3 Arms Race & Nuclearisation 1.4 Berlin Blockade, Korean War, Berlin Wall 1.5 Cuban Missile Crisis	K1-K5	13	1-5
2	The Detente Era 2.2 An Era of normalization 1972-73 2.3 Sino-American Rapprochement	K1-K5	13	1-5

UNIT	CONTENT	CL	HRS	CO
	2.3 Stagflation and Trials of Detente 2.4 Detente and Europe 2.5 Vietnam War and Superpower confrontation			
3	Confrontation to Communist Collapse 3.1 The Second Cold War 3.2 Afghanistan War 1979 3.3 Strategic Defence Initiative 3.4 Conflicts in the Middle East – Arab-Israel Wars, Iranian Revolution, Iran-Iraq War 3.5 Collapse of Soviet Union and Disintegration of Eastern Europe-Yugoslavia	K1-K5	13	1-5
4	The Post-Cold War World 4.1 Stability and Instability in Less Developed world-Middle East, Latin America, Africa, Asia 4.2 Formation of CIS and Central Asian Republics (CAR) 4.3 Gulf War I and II 4.4 US Predominance and Search of Post-Cold war order 4.5 Unipolarity to Multipolarity	K2-K6	13	2-5
5	Emerging Trends in the 21st century 5.1 Russia-Ukraine War 5.2 North Korea's Nuclear Ambition 5.3 China's Rise & its Impact 5.4 European Union- Issues and Challenges 5.5 Emergence of New Cold War	K2-K6	13	2-5

BOOK FOR STUDY

McMahon, R. J. (2021). The Cold War: A Very Short Introduction. United Kingdom: OUP Oxford.

The Oxford Handbook of the Cold War. (2013). United Kingdom: OUP Oxford.

Trachtenberg, M. (2012). The Cold War and After: History, Theory, and the Logic of International Politics. United Kingdom: Princeton University Press.

BOOKS FOR REFERENCE

Allison T Graham, Essence of Decision: Explaining The Cuban Missile Crisis, 2 edition U.K, Longman, 1999

Bache Ian , George Stephen, Politics in the European Union, 2 edition, New York, Oxford University Press, 1999

Bartlett, C.J, The Global Conflict, U.K., Longman, 1994

Brodie, Bernard, War and Politics, U. K Longman. 1974

Cini, M, The European Union Politics, Manchester , 2 edition Oxford University Press,1996

Dunbabin, John, International Relations Since 1945, 2 Vols. U.K., Longman, 1994

Goldstein S Joshua, International Relations, Longman, U.K, 2005

Hastedt P. Glenn, International Politics, Enduring Concepts of Contemporary Issues, U.K, Longman, 2003

Mcaulay Martin, Russia, America And The Cold War 1945-1991, London, Longman, 1998

McCauley Martin, Afghanistan And Central Asia : A Short History, U.K, Longman, 2002
 McCormick J, Understanding The European Union : A Concise Introduction, Basingstoke: Macmillan. U.K, 1999
 Muller, Quiet Cataclysm : Reflections On The Recent – Transformation Of World Politics, U.K, Longman,1995
 Nye S Joseph , Understanding International Conflict: An Introduction To Theory and History, U.K ,Longman,2000
 Papp Daniel S. Contemporary International Relations: Frameworks for Understanding, U.K., Longman, 2002
 Raymond Duncan, W, World Politics In The 21st Century, Longman, U.K, 2004
 Richard K Betts, Conflict After The Cold War, U.K, Longman, 2005
 Robert J Art, International Politics: Enduring Concepts And Contemporary Issues, Longman, U.K., 2004

PATTERN OF ASSESSMENT

Continuous Assessment

Total Marks: 50

Duration: 90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	2x2=4 (30 Words) Answer any 2 out of 4
B	K2	8	1x8=8 (250 words) Answer any 1 out of 2
C	K3	10	1x10=10(250words) Answer any 1 out of 2
D	K4	12	1x12=12 (350 words) Answer any 1 out of 2
E	K5	16	1x16=16 (1000words) Answer any 1 out of 2
	Total	50	

Other Components – Seminars, quiz, written assignments, mini projects, presentations.

Two to three other components for each course for 50 marks.

End Semester Examination

Total Marks: 100

Duration: 3 Hours

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	12	6x2=12 (30 words) Answer 6 out of 8 questions
B	K2	24	3x8=24 (250 words) Answer any 3 out of 5
C	K3	20	2x10=20 (350 words) Answer any 2 out of 4
D	K4	24	2x12=24 (500 words) Answer any 2 out of 4
E	K5	20	1x20=20(1000words) Answer any 1 out of 2
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/IR14												
	Course Title: International Relations Since 1945												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH II (E) - INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023 – 2024)

INTERNATIONAL SECURITY

CODE: 23IS/PC/IS14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To provide a basic knowledge on various concepts and theories relevant to security studies
- To understand the changing dynamics of contemporary warfare and technology
- To study the emerging trends and dynamics in the area of non-traditional security threats

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify concepts, terms and definitions of international security.	K1
CO2	understand the causes and consequences of traditional and non-traditional security threats in the international system	K2
CO3	explain the role of state and non-state actors in shaping global security environment	K3
CO4	examine various theoretical perspectives and approaches to international security studies	K4
CO5	apply critical thinking and problem-solving skills to propose strategies and policies in the field of international security.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	The Nature and Significance of Security Studies 1.1 Nature and Significance of Security Studies 1.2 Emergence of Security Studies: Traditional vs Copenhagen 1.3 Emergence of Classical Strategic Thought: Kautilya, Sun Tzu, Clausewitz 1.4 Linkage between Security and Foreign Policy 1.5 Actors in International Security – State, Non-State and International Organisations	K1-K5	13	1-5

UNIT	CONTENT	CL	HRS	CO
2	The Dynamics of National Security 2.1 Definition, Nature and Scope 2.2 National Power and National Security 2.3 Securitization – Barry Buzan 2.4 State and Security: Liberal, Authoritarian, Failed 2.5 Emerging Paradigms of Security: Human Security	K1-K5	13	1-5
3	Dimensions of International Conflict 3.1 Definition and Causes of Conflict 3.2 Inter State and Intra State Conflicts 3.3 Proxy Wars 3.4 Ethnic and Religious Conflicts 3.5 Ideological Conflicts	K1-K5	13	1-5
4	The Nature and Significance of Contemporary Warfare 4.1 Technological Advancements in Warfare - RMA 4.2 Hybrid Warfare 4.3 Cyber and Internet Warfare 4.4 Asymmetric Warfare 4.5 Future Trends in Warfare	K2-K6	13	2-5
5	Emerging Trends in International Security 5.1 Proliferation: Small Arms and WMDs 5.2 Transnational Security Threats 5.3 Health and Pandemics 5.4 International Migration 5.5 Environmental Security – Climate Change	K2-K5	13	2-5

BOOK FOR STUDY

Buzan, Barry People, States and fear: The National Security Problem in International Relations, Boulder Co. Lynne Rienner Publisher, 1991

Kenneth Waltz, Man, The State and War: A Theoretical Analysis, U.K, Columbia University Press, 1959

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Ayoob, Mohammed, The Third World Security Predicament, U.K. Boulder Co. Lynne Rienner, 1995

Booth, Ken, New Thinking about Strategy and International Security London, Harper Collins, 1991

Buzan, Barry, An Introduction to Strategic Studies, Military Technology and International Relations, New York, St. Martin's Press, 1987

Carl Von Clausewitz, J J Graham, On War, U.K, Taylor and Francis, 2005 Klane, Michael T., (1991), World's Security: Trends and Challenges at the Century's end, U.K. St. Martin's Press Maroof Raza, Low Intensity Conflicts: The New Dimension to India's Military Commitments, Meerut, Karthikeya Publishers, ,1995

Martin Van Creveld, The Changing face of war: Lessons of Combat from the Marne to Iraq, U.K, Random House, 2007
 Martin Van Creveld, Transformation of War, U.K Free Press, 1991
 Peter Hugh, Understanding Global Security, U.K. Pearson,2004
 Scott Sagan & Kenneth Waltz, The Spread of nuclear weapons: A Debate Renewed, W.W. New York, Norton & Company, 2003
 Sun-Tzu, The Art of Warfare, Modern Library Paperback ,2000
 Thomas Shelling, The Strategy of Conflict, U.K., Cambridge University Press ,1980

PATTERN OF ASSESSMENT

Continuous Assessment

Total Marks: 50

Duration: 90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	2x2=4 (30 Words) Answer any 2 out of 4
B	K2	8	1x8=8 (250 words) Answer any 1 out of 2
C	K3	10	1x10=10(250words) Answer any 1 out of 2
D	K4	12	1x12=12 (350 words) Answer any 1 out of 2
E	K5	16	1x16=16 (1000words) Answer any 1 out of 2
	Total	50	

Other Components – Seminars, quiz, written assignments, mini projects, presentations.

Two to three other components for each course for 50 marks.

End Semester Examination

Total Marks: 100

Duration: 3 Hours

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	12	6x2=12 (30 words) Answer 6 out of 8 questions
B	K2	24	3x8=24 (250 words) Answer any 3 out of 5
C	K3	20	2x10=20 (350 words) Answer any 2 out of 4
D	K4	24	2x12=24 (500 words) Answer any 2 out of 4
E	K5	20	1x20=20(1000words) Answer any 1 out of 2
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/IS14												
	Course Title: International Security												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH II (E) - INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023 – 2024)

INTERNATIONAL POLITICAL ECONOMY

CODE: 23IS/PC/IP14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To explore the intersection of politics and economics at the global level
- To understand the significance and effect of international institutions and the multilateral frameworks on the domestic, regional and global orders
- To analyse the impact of Globalisation on the world economy

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the concepts and approaches to international political economy	K1
CO2	explain the complex relationship between politics and economics in international relations	K2
CO3	interpret the impact of globalisation on developing economies	K3
CO4	examine the emerging trends in international political economy	K4
CO5	evaluate the role of institutions and policies related to international finance, trade and investment	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to IPE 1.1 Meaning of International Political Economy 1.2 Schools of IPE - Mercantilism, Liberalism and Marxism 1.3 Emergence of International Political Economy – Susan Strange, Robert Keohane and Joseph Nye 1.4 Institutions of International Political Economy 1.5 Globalisation and the International Economy - theoretical perspectives	K1-K5	13	1-5
2	International Trade System 2.1 Regionalism and Multilateralism 2.2 Preferential Trading and Regional Trading Arrangements - ASEAN, SAARC, NAFTA, MERCOSUR	K1-K5	13	1-5

UNIT	CONTENT	CL	HRS	CO
	2.3 Emergence of a multilateral trading system 2.4 GATT & WTO 2.5 EU and Brexit			
3	Domestic Responses 3.1 Protectionism 3.2 Free Trade vs. Protection 3.3 Tariffs, Quotas, VERS, NTBs 3.4 North - South divide and NIEO 3.5 Washington Consensus and Beijing Consensus	K1-K5	13	1-5
4	International Monetary System 4.1 Origins of Bretton Woods Institutions 4.2 The IMF - Functions and Criticism 4.3 The World Bank - Functions and Criticism 4.4 Politics of Lending 4.5 Exchange Rates and Cryptocurrency	K2-K6	13	2-5
5	Developing Countries and the International Political Economy 5.1 Foreign Direct Investment in Developing Economies- Role of MNCs 5.2 Developing Country Debt and Global Imbalances 5.3 Third World Developmental Challenges and Inequalities 5.4 Domestic and International Migration in IPE 5.5 Financial Crises and stabilisation- Asian Financial Crisis, Eurozone crisis and the Global Recession	K2-K6	13	2-5

BOOK FOR STUDY

Global Political Economy. (2020). Spain: Oxford University Press.

Cohn, T. H. (2016). Global Political Economy: Theory and Practice. United States: Taylor & Francis.

Gilpin, R. (2016). The Political Economy of International Relations. United States: Princeton University Press.

Oatley, Thomas, International Political Economy: Interests And Institutions In The Global Economy, U.K.: Pearson / Longman, 2003

Polanyi, Karl, Stiglitz, Joseph E. Block, Fred L. The Great Transformation: The Political and Economic Origins of Our Time

E. Stiglitz, Joseph, Globalization and its Discontents

Cherunilam, Francis International Economics McGraw Hill Education; 5th edition , July 2017

BOOKS FOR REFERENCE

Acemoglu, Daron and Robinson, James A, Why Nations Fail, London ,2012

Burch, Kurt and Robert Allen Denemark, Constituting International Political Economy, Colorado: Lynne Rienner Publishers, 1997.

Cohn ,Theodore H., Global Political Economy, Pearson Education Inc, 2009

Dunn and Chase, Christopher K.ed, The Historical Evolution of the International Political Economy, U.K: Edward Elgar Publication. Co, 1995.

Friedens, Jeffrey & Lake, David, International Political Economy: Perspectives on Global Power and Wealth, U.K.: Routledge, 2000.

Gilpin, Robert , Global Political Economy: Understanding the International Economic Order, Princeton: Princeton University Press, 2001.

Gilpin, Robert, Global Political Economy: Understanding the International Economic Order, U.K.: Orient Blackswan, 2003.

Hoekman, Bernard M, The Political Economy Of The World Trading System The WTO And Beyond, New Delhi: Oxford University Press, 2001.

Ian, Clark, Globalisation and Fragmentation: International Relations in the Twentieth Century, U.K.: Oxford University Press, 1997.

Krasner, Stephen D, International Régimes, New York: Cornell University Press, 1983.

Lipson, Charles and Cohen, Benjamin J., Theory And Structure In International Political Economy: An International Organization Reader, USA: MIT Press. Mill,John Stuart, Principles of Political Economy,BNP Publishing,2012

Miller, Raymond C, International Political Economy: Contrasting World Views, U.K.: Taylor & Francis Group, 2008.

Polanyi, Karl, The Great Transformation: The Political and Economic Origins of Our Time Beacon Press,Boston 2001

Ravenhill,John, Global Political Economy, Oxford University Press,2013

PATTERN OF ASSESSMENT

Continuous Assessment

Total Marks: 50

Duration: 90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	2x2=4 (30 Words)Answer any 2 out of 4
B	K2	8	1x8=8 (250 words) Answer any 1out of 2
C	K3	10	1x10=10(250words) Answer any 1out of 2
D	K4	12	1x12=12 (350 words) Answer any 1 out of 2
E	K5	16	1x16=16 (1000words) Answer any 1 out of 2
	Total	50	

Other Components

Total Marks: 50

Seminars, quiz, written assignments, mini projects, presentations.

Two to three other components for each course for 50 marks.

End Semester Examination**Total Marks: 100****Duration : 3 Hours**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	12	6x2=12 (30 words) Answer 6 out of 8 questions
B	K2	24	3x8=24 (250 words) Answer any 3 out of 5
C	K3	20	2x10=20 (350 words) Answer any 2 out of 4
D	K4	24	2x12=24 (500 words) Answer any 2 out of 4
E	K5	20	1x20=20(1000words) Answer any 1 out of 2
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/IP14												
	Course Title: International Political Economy												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

THEORIES OF INTERNATIONAL RELATIONS

CODE: 23IS/PC/TR24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To develop a comprehensive foundational theories of International Relations
- To analyse international events through theoretical lens
- To apply theoretical framework to real-world situations
- To explore alternative perspectives within the field of IR theories
- To explain how international relations theories adapt to address evolving global challenges

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the evolution of IR theory	K1
CO2	explain the non-western perspectives and approaches to IR	K2
CO3	apply various theories of IR to make sense of the world	K3
CO4	critique the advantages and disadvantages of IR theories	K4
CO5	integrate diverse IR theories purporting to explain substantive patterns in world politics.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to International Relations Theory 1.1 Evolution of International Relations Theory 1.2 Political Thought & its Influence on IR Theory- Socrates, Plato, Aristotle 1.3 World Wars I and II and development of IR Theory – The Great Debates 1.4 Importance of theory in understanding International Relations 1.5 Debate on the Western centricity of IR Theory	K1- K5	13	CO1-5
2	Non-Western IR Theories and Approaches 2.1 Chinese political thought – Harmony, Hierarchy and Non-interference 2.2. Indian political thought – Dharma, Karma, Ahimsa 2.3. African perspective on IR – Identity and Pan-Africanism, dependency, subaltern voices, decolonisation 2.4. Latin American perspective on IR – Anti-imperialism, economic inequality, development and dependency, regional integration 2.5 Orientalism and the Middle East	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
3	Key Theories in International Relations 3.1 Idealism 3.2 Realism and Neo-Realism 3.3 Liberalism and Neoliberalism 3.4 Methodological Debate: Traditional vs Behavioural approaches 3.5 Constructivism	K1- K5	13	CO1-5
4	Behavioural Approaches to IR Theory 4.1. Systems approach 4.2. Functional approach 4.3 Integration Theories 4.4 Decision-making theory 4.5. Game Theory	K3- K5	13	CO3-5
5	Critical Theories 5.1 Marxism 5.2 Feminism & Postmodernism 5.3 The English School 5.4 Green Theory 5.5 Normative IR Theories: Ethics and Morality	K3- K5	13	CO3-5

BOOK FOR STUDY

Burchill S., & Linklater A (eds), Theories of International Relations. New York, Palgrave, 2001.
 Baylis J, Steve Smith, Patricia Owens, The Globalization of World Politics: An Introduction to International Relations.
 Sørensen, G., Møller, J., Jackson, R. H. (2022). Introduction to International Relations: Theories and Approaches. United Kingdom: Oxford University Press.

BOOKS FOR REFERENCE

Adam Watson, International Relations and The Practice of Hegemony, University of UK, Westminster, 2002.
 Buzan Barry & Richard Little, International Systems in World History: Remaking The Study Of International Relations, U K, Oxford University Press, 2000.
 Buzan Barry and Waever Ole, Regions and Powers: The Structure of International Security, UK, Cambridge University Press, 2000.
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 Buzan Barry, International Security Possible? In Ken Booth (ed), New Thinking About Strategy And International Security,London, Harper Collins, 2000
 Columbia, Theodore & Wofe James, Introduction to International Relations Power and Justice, New Delhi, Prentice Hall, 1990.
 Dougherty, James & Pfatzgraft, Robert, Contending Theories of International Relations, New York, Harper and Row, 2001
 Dunne Tim, Milja Kurki, Steve Smith, International Relations Theories, OUP Oxford, 2013
 Griffiths Martin, International Relations Theory for twenty-first century: An Introduction, London, Routledge Publication, 2008.
 John M Hobson, The State and International Relations, Cambridge University Press.2000
 Kegley, C.W., and E. Wittkopf, World Politics: Trend and Transformation, New York, St. Martins Press, 2016.

Light, M., and A.J.R. Groom, (eds), International Relations : A Handbook of Current Theory, London Frances Printer 2016.

Luche Charles & Saide Abdul, Concepts of International Politics In Global Perspective, New Jersey, Prentice Hall, Engelwood and Cliffs, 1995.

Michael Cos, Time Dunne & Ken Booth (eds.) Empires, Systems and States Great Transformations In International Politics, UK, Cambridge University Press, 2002.

Mingst, Karen A, Essentials of International Relations, New York, W. W. Norton and Company, 2004.

Patrick M. Morgan, Deterrence Now, UK, Cambridge University Press, 2000

Sylvester C, Feminist Theory And International Relations In A Postmodern Era, Cambridge Publication, U .K, 1994.

WEB SOURCES

www.theory-talks.org.

<https://www.e-ir.info/>

<https://thedisorderofthings.com/>

JOURNALS

International Theory - <https://www.cambridge.org/core/journals/international-theory>

Journal of International Political Theory - <https://journals.sagepub.com/home/ipt>

European Journal of International Relations - <https://journals.sagepub.com/home/ejt>

Journal of International Studies - <https://journals.sagepub.com/home/MIL>

PATTERN OF ASSESSMENT

Section A - Objective type questions

Section B - Short answers

Section C - Short essays (assertion, reasoning)

Section D - Medium length essays

Section E - Long essay

No Unit should be left out

Continuous Assessment Test:

Total Marks :50

Duration:90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	Answer any 2 out of 4 2x2=4 (30 Words)
B	K2	8	Answer any 1 out of 2 1x8=8 (250 words)
C	K3	10	Answer any 1 out of 2 1x10=10 (250words)
D	K4	12	Answer any 1 out of 2 1x12=12 (350 words)
E	K5	16	Answer any 1 out of 2 1x16=16 (1000words)
	Total	50	

Other Components**Total Marks: 50**

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End Semester Examination:**Total Marks:100****Duration:3 Hours**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	12	Answer 6 out of 8 questions 6x2=12 (30 words)
B	K2	24	Answer any 3 out of 5 3x8=24 (250 words)
C	K3	20	Answer any 2 out of 4 2x10=20 (350 words)
D	K4	24	Answer any 2 out of 4 2x12=24 (500 words)
E	K5	20	Answer any 1 out of 2 1x20=20 (1000words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/TR24												
	Course Title: Theories of International Relations												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

INTERNATIONAL LAW I

CODE: 23IS/PC/IL24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To familiarise the students with the core concepts of International Law
- To enable the students to comprehend the interaction between International Relations and International Law
- To emphasise the role and significance of State and Statehood in IL
- To explore contemporary developments and challenges in IL
- To foster strong research and analytical skills in IL

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	describe the evolution of International Law and identify the sources	K1
CO2	identify and comprehend the interface between International Law and Municipal Law	K2
CO3	apply various principles and norms of International Law to relate to present day developments	K3
CO4	illustrate the expansion and increasing scope of International Law	K4
CO5	critique and evaluate the inherent weakness of International law and challenges to its effective enforcement	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction 1.1 Evolution and development of International Law 1.2 Definitions, Concepts and basis of International Law 1.3 Sources of International Law 1.4 Municipal law and International law 1.5 Classification and Codification of International Law	K1- K4	13	CO1-4
2	State and International Law 2.1 Sovereignty 2.2 Territory and Jurisdiction 2.3 Recognition 2.4 Succession 2.5 State Responsibility	K1- K5	13	CO1-5
3	The Individual in International Law 3.1 The emergence of Individual as an international persona/actor	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
	3.2 Nationality and Statelessness 3.3 Asylum 3.4 Extradition 3.5 Diplomatic Immunities and Privileges			
4	International Justice System 4.1 Formation and structure -ICJ, ICC, Tribunals, Commissions 4.2 Jurisdiction- ICJ, ICC, Tribunals, Commissions 4.3 Functioning – Scope and limitations- ICJ, ICC, Tribunals, Commissions 4.4 War Crime Tribunals and special courts – Rwanda, Former Yugoslavia 4.5 Alternative Dispute Resolution-Negotiation, Arbitration Mediation and Conciliation	K3- K5	13	CO3-5
5	India and International Law 5.1 India's contribution to International Law 5.2 Indian constitution and International Law 5.3 India and Treaty Compliance Mechanism 5.4 Indian judiciary and IL - Vishaka case, Kulbhushan Sudhir Jadhav 5.5 The international judiciary and Settlement of Disputes -Sir Creek, India - Bangladesh maritime boundaries	K3- K5	13	CO3-51

BOOK FOR STUDY

Verma, S. K, An Introduction To Public International Law, New Delhi 2022
Singh, Rakesh Kumar, A Textbook on Public International Law, Lexis Nexis, 2017
Agarwal, H.O, International Law and Human Rights, New Delhi, Central Law Publishers, 2002.
Brownlie, I, Principles Of Public International Law, UK, Oxford University Press, 2003.
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Armstrong, David, International Law and International Relations, London, Cambridge University Press, 2007.
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Kapoor, S.K, International Law and Human Rights, Allahabad, Central Law Agency, 2004.
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Reus-Smit, Christian (ed), The Politics of International Law, UK, Cambridge University. Press, 2004.

WEB SOURCES

www.icj-cij.org
www.icc-cpi-int
www.legal.un.org/ilc
www.law.cornell.edu
www.scholar.google.com

JOURNALS

European Journal of International Law - <https://academic.oup.com/ejil>
American Journal of International Law - <https://www.cambridge.org/core/journals/american-journal-of-international-law>
Indian Journal of International Law - <https://link.springer.com/journal/40901/volumes-and-issues>
Stanford Journal of International Law - <https://law.stanford.edu/sjil/>

PATTERN OF ASSESSMENT

Section A - Objective type questions
Section B - Short answers
Section C - Short essays (assertion, reasoning)
Section D - Medium length essays
Section E - Long essay
No Unit should be left out.

Continuous Assessment Test:

Total Marks :50

Duration:90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	Answer any 2 out of 4 2x2=4 (30 Words)
B	K2	8	Answer any 1 out of 2 1x8=8 (250 words)
C	K3	10	Answer any 1 out of 2 1x10=10(250words)
D	K4	12	Answer any 1 out of 2 1x12=12 (350 words)
E	K5	16	Answer any 1 out of 2 1x16=16 (1000words)
	Total	50	

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End Semester Examination:**Total Marks:100****Duration:3 Hours**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	12	Answer any 6 out of 8 questions 6x2=12 (30 words)
B	K2	24	Answer any 3 out of 5 3x8=24 (250 words)
C	K3	20	Answer any 2 out of 4 2x10=20 (350 words)
D	K4	24	Answer any 2 out of 4 2x12=24 (500 words)
E	K5	20	Answer any 1 out of 2 1x20=20 (1000words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/IL24												
	Course Title: International Law I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

INDIA'S FOREIGN POLICY

CODE: 23IS/PC/IF24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To develop a historical understanding and to identify the key determinants of India's Foreign Policy.
- To provide an overview of India's foreign relations with the neighbouring countries and major powers.
- To investigate the intersection between India's foreign policy with national security concerns
- To explore India's engagement with various regional, international and other multilateral organisations
- To analyse key policy frameworks and principles that underpin India's foreign policy

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	describe the evolution of India's foreign policy and identify its determinants	K1
CO2	explain India's foreign policy under various Prime Ministers	K2
CO3	classify the different approaches in Indian diplomacy	K3
CO4	examine and analyse India's role in the emerging world order	K4
CO5	evaluate India's foreign policy responses to contemporary world affairs.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to India's Foreign Policy 1.1 Evolution of India's foreign policy 1.2 Principles and Objectives of India's Foreign Policy 1.3 Determinants of India's Foreign Policy - Domestic and International 1.4 Institutions of foreign policy making - Parliament, PMO, MEA, NSAB, MOD, CC 1.5 India and Soft Power Diplomacy	K1- K4	13	CO1-4
2	Prime Ministers and Foreign Policy Decision Making 2.1 Jawaharlal Nehru – NAM, Sino-Indian War 1962 2.2 Indira Gandhi – Liberation of Bangladesh, Pokhran I 2.3 P. V. Narasimha Rao – Look East Policy, New Economic Policy 2.4 Atal Bihari Vajpayee – Kargil War, Pokhran II 2.5 Narendra Modi – Digital India, Act East, Make in India, QUAD, G20	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
3	India and her Neighbours 3.1 India and Pakistan 3.2 India and Bangladesh 3.3 India and Sri Lanka 3.4 India and Nepal, Bhutan & Maldives 3.5 India and IOR	K1- K5	13	CO1-5
4	India and Major Powers 4.1 India USSR and Russia 4.2 India-USA 4.3 India-China 4.4 India-West Asia 4.5 India-Europe	K3- K5	13	CO3-5
5	India in the 21st century 5.1 India and multilateral institutions - BIMSTEC, SCO, BRICS, G20 5.2 India's Global Outreach -Vaccine Diplomacy, Humanitarian Assistance & Disaster Relief 5.3 India's initiatives in climate action and sustainable development 5.4 India and Economic Growth, Demographic Dividend and Resilience 5.5 India ascendancy in the world order	K3- K5	13	CO3-5

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J. Bandyopadhyaya, The Making of India's Foreign Policy, Allied publishers Pvt Lmt, New Delhi, 2006.
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Ramesh Trivedi, India's Relations with Her Neighbours, Gyan Publishing House, 2008. Richard Sisson, Shivshankar Menon, Choices: Inside the Making of India's Foreign Policy, UK Penguin, 2018.
Shyam Saran, How India Sees the World: Kautilya to the 21st Century, Juggernaut Books, 2017.
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www.idsa.in
www.orf.online.org
www.carnegieindia.in

JOURNALS

Indian Council of World Affairs - <https://www.icwa.in/index.php>

Indian Foreign Affairs Journal -

<http://www.associationdiplomats.org/publications/ifaj/ifajgeneral.htm>

Indian Politics and Policy - <https://www.ippjournal.org/>

Studies in Indian Politics - <https://journals.sagepub.com/home/INP>

PATTERN OF ASSESSMENT

Section A - Objective type questions

Section B - Short answers

Section C - Short essays (assertion, reasoning)

Section D - Medium length essays

Section E - Long essay

No Unit should be left out.

Continuous Assessment Test:

Total Marks :50

Duration:90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	Answer any 2 out of 4 2x2=4 (30 Words)
B	K2	8	Answer any 1 out of 2 1x8=8 (250 words)
C	K3	10	Answer any 1 out of 2 1x10=10(250words)
D	K4	12	Answer any 1 out of 2 1x12=12 (350 words)
E	K5	16	Answer any 1 out of 2 1x16=16 (1000words)
	Total	50	

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End Semester Examination:

Total Marks:100

Duration:3 Hours

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	12	Answer any 6 out of 8 questions 6x2=12 (30 words)
B	K2	24	Answer any 3 out of 5 3x8=24 (250 words)
C	K3	20	Answer any 2 out of 4 2x10=20 (350 words)
D	K4	24	Answer any 2 out of 4 2x12=24 (500 words)
E	K5	20	Answer any 1 out of 2 1x20=20 (1000words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/IF24												
	Course Title: India's Foreign Policy												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

INTERNATIONAL ORGANISATION

CODE: 23IS/PC/IO24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To develop a comprehensive understanding of the concept of international organisations including their historical development, roles and function
- To provide an overview of the types, structure and functions of International Organisations.
- To explore key issues and challenges facing international organisations including questions of sovereignty, effectiveness and accountability
- To enable students to critically analyse the role played by International Organisations in international relations.
- To assess the role of international organisations in facilitating multilateral diplomacy and cooperation among states

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe various types International, Regional Inter-governmental & Non- governmental organisations	K1
CO2	classify the types and functions of various International Organisations	K2
CO3	analysing and debating on the relevance of the UN and the need for reform	K3
CO4	analyse the role and contribution of Regional organisations, IGOs and NGOs in development	K4
CO5	hypothesising and Simulating the role of organisations through role play, mock simulations and activities	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to International Organisation 1.1 Historical evolution of International Organisations 1.2 Definition, Nature and Characteristics of International Organisations 1.3 Theoretical approaches to International Organisations – Realism, Neo-realism, Functionalism, Liberalism, Neo-liberalism, Trans-national advocacy theory 1.4 Typologies of International Organisations – Regional Organisations, Inter-governmental organisations, international non-governmental organisations, Non-governmental Organisations, TNCs and MNCs 1.5 International Organisations as Actors in International Politics	K1- K4	14	CO1-4

UNIT	CONTENT	CL	Hrs	CO
2	United Nations Organisation 2.1 Historical Development of the UN 2.2 Basic Principles, Objectives and Functions of the UN 2.3 Principal Organs and their Functions 2.4 Strengths and Weaknesses of the UN - Need for Reform 2.5 Challenges to global governance	K1- K5	13	CO1-5
3	Role of UN and its Agencies 3.1 UN and Peacekeeping – Kosovo, Haiti, Syria, East Timor 3.2 UN and Disarmament – IAEA, Disarmament and Arms Limitation Treaties 3.3 UN and Global Health – WHO, FAO 3.4 UN and Environment, Culture and Heritage – UNEP, UNFCCC, UNESCO 3.5 UN, Development and Trade – UNCTAD, UNDP	K1- K5	14	CO1-5
4	Scope and Significance of Regional Organisations, IGOs, INGOs 4.1 Regional Organisations – EU, ASEAN 4.2 Intergovernmental Organisations – OPEC, NATO 4.3 International Non-Governmental Organisations – UNICEF, Green Peace, IUCN 4.4 MNCs and TNCs – SONY, Amazon, Google, Shell 4.5 Role of civil societies and NGOs	K3- K5	14	CO3-5
5	Workshop/Agency visit/Simulation/Mock UN- Not to be tested <ul style="list-style-type: none"> • Simulated UNSC scenario/Simulated UNGA scenario • Trade dispute case study • INGO or NGO campaign design • Group discussions, Case study analysis • Group activities and practical exercises 	K6	10	CO3-5

BOOK FOR STUDY

Karns P Margret, Mingst Karen, Kendall W. Stiles. International Organisations: The Politics and Process of Global Governance, 3rd.USA: Lynne Rienner Publishers, Boulder, 2015. Jacob Katz Cogan, Ian Hurd, Ian Johnstone, The Oxford Handbook of International Organisations, oxford University Press, U.K. 2016.

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Claude Inis L. Sword into Plowshare, The Problem and Progress of International Organisations.3rd ed. New York: Random House, 1984.

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John Trent, Laura Schnurr, A United Nations Renaissance: What the UN is, and what it could be, Verlag Barbara Budrich, 2017.

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Thomas G. Weiss, Rorden Wilkinson, International Organisation and Global Governance, Taylor & Francis, 2018.

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www.worldbank.org
www.imf.org
www.who.org
www.eu.org
www.iom.org

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International Organization - <https://www.cambridge.org/core/journals/international-organization>
The review of International Organization - <https://www.springer.com/journal/11558>
International Organization Research Journal - <https://iorj.hse.ru/en/>
International Organization Law Review - <https://brill.com/view/journals/iolr/iolr-overview.xml>

PATTERN OF ASSESSMENT

Section A - Objective type questions

Section B - Short answers

Section C - Short essays (assertion, reasoning)

Section D - Medium length essays

Section E - Long essay

No Unit should be left out.

Continuous Assessment Test:

Total Marks :50

Duration:90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	Answer any 2 out of 4 $2 \times 2 = 4$ (30 Words)
B	K2	8	Answer any 1 out of 2 $1 \times 8 = 8$ (250 words)
C	K3	10	Answer any 1 out of 2 $1 \times 10 = 10$ (250 words)
D	K4	12	Answer any 1 out of 2 $1 \times 12 = 12$ (350 words)
E	K5	16	Answer any 1 out of 2 $1 \times 16 = 16$ (1000 words)
	Total	50	

Other Components:**Total Marks: 50**

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End Semester Examination:**Total Marks:100****Duration:3 Hours**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	12	Answer any 6 out of 8 questions 6x2=12 (30 words)
B	K2	24	Answer any 3 out of 5 3x8=24 (250 words)
C	K3	20	Answer any 2 out of 4 2x10=20 (350 words)
D	K4	24	Answer any 2 out of 4 2x12=24 (500 words)
E	K5	20	Answer any 1 out of 2 1x20=20 (1000words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/IO24												
	Course Title: International Organisation												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

**M.A. DEGREE: INTERNATIONAL STUDIES
SYLLABUS**

(Effective from the academic year 2023 -2024)

SOFT SKILLS

CODE: 23IS/PK/SS22

CREDITS: 2

L T P: 2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- To empower students and create opportunities for self-development.
- To instill confidence in students to face challenges.
- To manage emotions and resolve conflicts.
- To organize activities and manage time.
- To set goals and plan ahead.

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	communicate with confidence and poise	K1
CO2	accept themselves and improve on their weaknesses	K2
CO3	work more effectively and complete activities on time	K3
CO4	work more effectively and complete activities on time	K4
CO5	plan their future with clarity and focus	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Behavioural Traits 1.1 Self-Awareness 1.2 Communication Skills –Verbal and Non Verbal 1.3 Leadership Qualities 1.4 Etiquette and Good Manners 1.5 Experiential Learning –Based on activities	K1-K6	6	1-5
2	Team Work 2.1. Interpersonal Skills 2.2. People Management 2.3. Creative Thinking 2.4. Critical Thinking 2.5. Experiential Learning – Based on activities	K1-K6	5	1-5
3	Time Management 3.1. Importance of time management 3.2. Planning and Prioritizing 3.3. Organizing skills 3.4. Action Plan	K1-K6	5	1-5

UNIT	CONTENT	CL	Hrs	CO
	3.5. Experiential Learning – Based on activities			
4	Conflict Resolution 4.1. Reasons for conflict 4.2. Consequences of conflict 4.3. Managing emotions 4.4. Methods of resolving conflicts 4.5. Experiential Learning – Based on activities	K1-K6	5	1-5
5	Career Mapping 5.1. Goal Setting and Decision Making 5.2. Career Planning 5.3. Resume Writing 5.4. Handling Interviews 5.5. Experiential Learning – Based on activities	K1-K6	5	1-5

BOOKS FOR REFERENCE

Khera. Shiv. *You Can Win*. New Delhi: Macmillan India, 2002.
 Mishra. Rajiv. K. *Personality Development: Transform Yourself*. New Delhi: Rupa 2004.
 Newstorm, John. W. and Scannell. Edward. E. *Games Trainers Play: Experiential Learning*.
 New Delhi: Tata McGraw Hill, 1980.

PATTERN OF EVALUATION

Other Components: Total Marks: 50

Categories of other components	Cognitive levels	Marks allocation
Quiz/MCQs, open book tests/ Tests	K1 - K2	10
Assignment, Mini projects, Debate.	K3 - K4	20
Critique a concept/ Seminar/ Group Presentation	K5 - K6	20

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

RESEARCH METHODOLOGY

CODE: 23IS/PC/RM34

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To develop a strong philosophical and ontological understanding of the key concepts, in Research Methodology
- To equip the students with the skills to design research projects, formulate hypothesis and research questions
- To acquaint with research methods, sources of data, and the methods of data analysis and social science research
- To promote an understanding of ethical principles and guidelines governing research
- To produce a well structured academically rigorous thesis that contribute significantly to their chosen field of study

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recognize the fundamental tenets of research	K1
CO2	articulate the importance of methodology and data collection	K2
CO3	demonstrate the application of research techniques	K3
CO4	compare and contrast the different methods of research	K4
CO5	formulate a well-grounded research proposal	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Research in International Relations 1.1 International Relations as a social science: Positivist and Post-positivist approach 1.2 Epistemology and Ontology of research in International Relations 1.3 Developing research questions, Importance of research questions. 1.4 Sources of data- primary, secondary, tertiary, internet, websites, 1.5 Types of documents- archives, chronology	K1- K4	13	CO1-4
2	Review of Literature 2.1 Meaning of review of literature 2.2 Objectives of review of literature 2.3 Sources of literature 2.4 Methods of conducting literature review 2.5 Writing a review of literature for a proposal	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
3	Methods of data collection- Qualitative and Quantitative 3.1 Case study and survey methods 3.2 Phenomenology 3.3 Questionnaires and interviews 3.4 Grounded theory and feminism 3.5 Comparative and historical methods	K1- K5	13	CO1-5
4	Hypothesis 4.1 Nature and significance of hypothesis 4.2 Testing of hypothesis 4.3 Kinds of hypothesis 4.4 Functions of hypothesis 4.5 Hypothesis construction	K3- K6	13	CO3-5
5	Writing of a Research Proposal/Proposal Submission 5.1 Selection of a problem 5.2 Methodology and research design 5.3 Theoretical Model 5.4 Data collection and analysis 5.5 Proposal submission and viva voce	K3- K6	13	CO3-5

BOOK FOR STUDY

Creswell, J. W. Research design: Qualitative, Quantitative And Mixed Methods Approaches, Thousand Oaks, CA: Sage, 2018

Kothari C R, Research Methodology: Methods and Techniques, New Age International limited, 2013

Gowan Peter, Research methods in International Relations, Routledge 2009

Roselle Laura & Sharon Spray, Research & Writings in International Relations, Routledge, 2016 APA Citation Style - Quick Guide. 6th edition. 2011

BOOKS FOR REFERENCE

Gibaldi, Joseph, MLA Hand Book For Writers of Research Papers. New Delhi, Affiliated East West Press Pvt Ltd, 2000

Kothari, H.C, Research Methods in Social Sciences, Wishwa Publications, 2000

Pennings, Paul, Hans Keman and Jan Kleinnijenhuis, Doing Research in Political Science: An Introduction to Comparative Methods and Statistics. London, Sage Publications, 2006. Punch, Keith. F, Introduction to Social Research: Quantitative and Qualitative Approaches. London, Sage Publications, 2006

Neuman, Lawrence. W.. Social Research Methods: Qualitative and Quantitative New Delhi, Approaches. Pearson Education. 2006

Emerson, Robert M. Contemporary Field Research: A Collection of Readings. Illinois Waveland Press, Inc. Prospect Heights, 1983.

WEB SOURCES

[www.research methodology knowledgebase](http://www.researchmethodologyknowledgebase.com)

[www.university of pretoria](http://www.universityofpretoria.ac.za)

[www.qualitative research guidelines project](http://www.qualitative-research.net)

[www.apa research methods](http://www.apa.org/pubs/journals/psp)

[www.sage research methods](http://www.sagepub.com)

JOURNAL

Journal of Research in Social Science and Humanities - <http://www.jrssh.org/index.php/jrssh>

Political Science Research Methods - <https://www.cambridge.org/core/journals/political-science-research-and-methods>

Research and Politics - <https://journals.sagepub.com/home/rap>

Review of International Studies - <https://www.cambridge.org/core/journals/review-of-international-studies>

PATTERN OF ASSESSMENT

Section A - Objective type questions

Section B - Definitions and short answers

Section C - Short essays (assertion, reasoning)

Section D - Short essays

Section E - Long essay

No Unit should be left out.

Continuous Assessment:**Total Marks: 50****Duration: 90 minutes**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	Answer any 2 out of 4 $2 \times 2 = 4$ (30 Words)
B	K2	8	Answer any 1 out of 2 $1 \times 8 = 8$ (250 words)
C	K3	10	Answer any 1 out of 2 $1 \times 10 = 10$ (250 words)
D	K4	12	Answer any 1 out of 2 $1 \times 12 = 12$ (350 words)

Other Components:**Total Marks: 25**

Book review/data collection technique

Rubrics for Evaluation	Marks	Cognitive Level
Formulating topic/problem statement	10	K2
Methodology and Research Design	10	K2-K3
Literature review	10	K2-K3
Data Collection and analysis	10	K4 - K5
Explaining the conceptual /theoretical framework	20	K3-K4
Final proposal submission, presentation and viva voce	40	K5 - K6

No End Semester Examination

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/RM34												
	Course Title: Research Methodology												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

FOREIGN POLICY OF MAJOR POWERS: USA AND RUSSIA

CODE: 23IS/PC/UR34

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To provide a comprehensive understanding of the historical evolution of US and Russian foreign policy
- To analyse the contemporary foreign policy strategies of the US and Russia
- To identify and assess the various factors that drive the foreign policy of US and Russia
- To examine the bilateral and multilateral relations of US and Russia including their interactions with international organisations
- To evaluate the global impacts of US and Russian foreign policies including their impact on the international system

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the historical evolution of US and Russian foreign policies	K1
CO2	discuss the key drivers of US and Russian foreign policies	K2
CO3	interpret the contemporary foreign policy issues and challenges	K3
CO4	compare and contrast US and Russian Foreign policy strategies	K4
CO5	evaluate the impact of US and Russian foreign policy	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction to Foreign Policy 1.1 Theoretical approaches to foreign policy 1.2 Realism, Neo-realism 1.3 Liberalism, Neo-liberalism 1.4 Constructivism 1.5 Foreign Policy Decision Making	K1- K4	13	CO1-4
2	Understanding American Perspectives of International Relations 2.1 Historical context and future of American foreign policy 2.2 Foreign policy making institutions – President, Congress, Public Opinion, media and Interest Groups 2.3 US Presidents and Foreign Policy – Cold War and Post-Cold War 2.4 The US military and Revolution in Military Affairs 2.5 The Intelligence Community – NSC, CIA, Homeland Security	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
3	The United States Foreign Relations 3.1 US – Europe 3.2 US – Middle East 3.3 US – China 3.4 US – Indo Pacific 3.5 US - India	K1- K5	13	CO1-5
4	Understanding Russian perspectives of IR 4.1 Understanding Post-Soviet Russian Foreign Policy Making 4.2 Drivers of Russia's foreign policy 4.3 Key actors in Russian Foreign Policy 4.4 Russia's Military and Nuclear Posture 4.5 Russian Security Doctrine	K3- K5	13	CO3-5
5	Russia's Foreign Relations 5.1 Russia – China 5.2 Russia – West 5.3 Russia – India 5.4 Russia – Europe 5.5 Russia – Middle East	K3- K5	13	CO3-5

BOOK FOR STUDY

Cox Michael & Doug Stokes, US Foreign Policy, Oxford University Press, 2018
Hook, Steven W and Spanier John, American Foreign Policy Since World War II, Washington DC, CQ Press, 2016.
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www.chathamhouse.org
www.kenaninstitute.org
www.randcorporation.org
www.yandex.ru

JOURNAL

American Political Science Review - <https://www.cambridge.org/core/journals/american-political-science-review>
American Foreign Policy Interests - <https://www.tandfonline.com/journals/uafp20>
Journal of International Relations and Foreign Policy - <http://jirfp.com/>
Russian Politics and Law - <https://www.tandfonline.com/toc/mrup20/current>

PATTERN OF ASSESSMENT

Section A - Objective type questions
Section B - Short answers
Section C - Short essays (assertion, reasoning)
Section D - Medium length essays
Section E - Long essay
No Unit should be left out.

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	Answer any 2 out of 4 $2 \times 2 = 4$ (30 Words)
B	K2	8	Answer any 1 out of 2 $1 \times 8 = 8$ (250 words)
C	K3	10	Answer any 1 out of 2 $1 \times 10 = 10$ (250 words)
D	K4	12	Answer any 1 out of 2 $1 \times 12 = 12$ (350 words)
E	K5	16	Answer any 1 out of 2 $1 \times 16 = 16$ (1000 words)
	Total	50	

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End Semester Examination:

Total Marks: 100

Duration: 3 Hours

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	12	Answer any 6 out of 8 $6 \times 2 = 12$ (30 words)
B	K2	24	Answer any 3 out of 5 $3 \times 8 = 24$ (250 words)
C	K3	20	Answer any 2 out of 4 $2 \times 10 = 20$ (350 words)
D	K4	24	Answer any 2 out of 4 $2 \times 12 = 24$ (500 words)
E	K5	20	Answer any 1 out of 2 $1 \times 20 = 20$ (1000 words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/UR34												
	Course Title: Foreign Policy of Great Powers: USA and Russia												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

INTERNATIONAL LAW II

CODE: 23IS/PC/IL34

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To enable the students to understand the evolution of IHL
- To familiarise the students with key concepts in maritime, environmental and Outer Space Laws
- To highlight the emerging trend in IPR legal regimes and soft laws
- To explore the UN Conventions on the Law of the Sea and its provisions related to territorial waters
- To examine the legal principles and agreements governing International Environmental Law
- To apply legal principles and framework to real-world scenarios and case studies

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	describe the evolution of International Humanitarian Law difference between International Humanitarian Law and Human Rights Law	K1
CO2	demonstrate an understanding of the new developments under UNCLOS III	K2
CO3	examine the new developments in Outer Space and IPR regimes	K3
CO4	analyse the evolution of Soft Law Principles and their impact	K4
CO5	hypothesise and apply the precedents to resolve contentious issues in the international system	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Laws of war and armed conflicts and humanitarian law 1.1 Hague conventions and conduct of hostilities-Jus in bello and jus ad bellum 1.2 Emergence of International Humanitarian Law-Geneva Conventions 1.3 Geneva convention III and the Treatment of Prisoners of War 1.4 Illegality of Nuclear warfare - Advisory opinion of the ICJ 1.5 Neutral States – Rights and Duties	K1- K4	13	CO1-4
2	Laws of the Sea 2.1 Changing concepts of maritime frontiers 2.2 Laws of the sea – UNCLOS I, II & III 2.3 Territorial Sea, Contiguous Zone, Continental Shelf, High Seas, EEZ 2.4 Archipelagic and Landlocked States, Deep-Sea Bed and Mining, ITLOS 2.5 Marine Environment and its Protections	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
3	Laws of Outer Space 3.1 Outer Space and State Sovereignty 3.2 Outer space treaty and fundamental principles of Space Law 3.3 UN and other outer space conventions - Rescue Agreement, Liability Convention, Registration Convention, Moon Agreement 3.4 Demilitarization of Outer space 3.5 Uses and benefits of Outer space and space technology	K1- K5	13	CO1-5
4	International Environmental Law 4.1 History and evolution of International Environmental Law 4.2 Guiding Principles of International Environmental Law 4.3 Major International Environmental Legislations 4.4 The Marine environment and International law 4.5 State responsibility in Environmental Law	K2- K5	13	CO3-5
5	Intellectual Property Rights and Cyber law 5.1 The Intellectual Property Rights Regime 5.2 WIPO and its treaty base 5.3 Copyright and Patents Trademarks and Service Marks 5.4 Geographical Indications and Industrial Design 5.5 Data Protection Cyber Security	K1 -K5	13	CO3-5

BOOK FOR STUDY

Kapoor, S.K International Law And Human Rights ,New Delhi ,Central Law Agency (2016)
Shaw, N, Malcolm. International Law 8th Edition Cambridge University Press 2017
Brownlie, I, Principles Of Public International Law, UK, Oxford University Press, 2003.
Fleck, Dieter, The Handbook Of International Humanitarian Law, 2021, Oxford University Press
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Armstrong, David, International Law and International Relations, London, Cambridge University Press, 2007.
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Ahuja, V.K, Law Relating To Intellectual Property Rights, 2017
Birnie, P W & Boyle, A.E, International Law and the Environment, UK Oxford University Press, 2008
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Myneni S.R, International Environmental Law. New Era Law Publication 2020
 Oxford publication, UK Shahid, Mohd, International Law and Politics of Intervention, New Delhi, Raj Publishing, 2003.
 Sanoj,Rajan, International Humanitarian law in India – A handbook .2021 ,Thomson Reuters
 Shaw, Malcolm N, International Law, U.K., Cambridge University Press, 2003.
 Reus- Smit, Christian (ed), The Politics of International Law, UK, Cambridge University. Press, 2004

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www.unep.org

JOURNAL

Journal of International Humanitarian legal Studies - <https://jihls.net/>
 Journal on International Humanitarian Law and Conflict Studies - <https://www.rgnul.ac.in/116/JIHLCS>
 Conflict and Security Law - <https://academic.oup.com/jcsl>
 Journal of Environmental Law - <https://academic.oup.com/jel>
 Journal on International Property Law and Practice - <https://academic.oup.com/jiplp>

PATTERN OF ASSESSMENT

Section A - Objective type questions
 Section B - Short answers
 Section C - Short essays (assertion, reasoning)
 Section D - Medium length essays
 Section E - Long essay
 No Unit should be left out.

Continuous Assessment Test:

Total Marks : 50

Duration: 90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	Answer any 2 out of 4 2x2=4 (30 Words)
B	K2	8	Answer any 1 out of 2 1x8=8 (250 words)
C	K3	10	Answer any 1 out of 2 1x10=10(250words)
D	K4	12	Answer any 1 out of 2 1x12=12 (350 words)
E	K5	16	Answer any 1 out of 2 1x16=16 (1000words)
	Total	50	

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End Semester Examination:**Total Marks:100****Duration: 3 Hours**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	12	Answer any 6 out of 8 6x2=12 (30 words)
B	K2	24	Answer any 3 out of 5 3x8=24 (250 words)
C	K3	20	Answer any 2 out of 4 2x10=20 (350 words)
D	K4	24	Answer any 2 out of 4 2x12=24 (500 words)
E	K5	20	Answer any 1 out of 2 1x20=20 (1000words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/IL34												
	Course Title: International Law II												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

SUMMER INTERNSHIP

CODE: 23IS/PN/SI32

CREDITS: 2

OBJECTIVES OF THE COURSE

- To provide the necessary hands-on-experience in their field of study to address real world situations and challenge
- To develop and refine a range of professional skills including communication, problem solving and teamwork
- To cultivate critical thinking and problem solving skills
- To set clear objectives and to contribute meaningfully to the organisation or project
- To encourage and build professional relationship with colleagues and supervisor and foister valuable connections for future career opportunities

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	to understand the working of the internship agency	K2
CO2	to identify potential employment opportunities and scope for research	K2
CO3	to implement the acquired theoretical knowledge at the institution	K3
CO4	to test and relate the theories to praxis	K4
CO5	develop and formulate independent thinking and creativity	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PN/SI32												
	Course Title: Summer Internship												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

HUMAN RIGHTS

CODE: 23IS/PC/HR44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To develop a comprehensive understanding of the foundational principles, norms and values underpinning the concept of human rights
- To analyse key international human rights instruments including treaties, conventions and declarations
- To explore cases of human rights violations and abuses both historical and contemporary
- To enable the students to become advocates for human rights by examining strategies and methods for promoting and protecting human rights
- To discuss the ethical and legal framework of human rights in India

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	define and identify various concepts in Human Rights	K1
CO2	describe and explain the various Human Rights violations and relevant international instruments	K2
CO3	demonstrate and interpret the role and efficiency of the monitoring and protection roles of specialised agencies	K3
CO4	examine and analyse the various issues and challenges to human rights, design and create stories/booklets/ documentaries and reports on relevant issues	K4 ,K5,K6
CO5	assess the role of various Human Rights bodies in India and their role through simulations ,group discussions and case study /court trial study/	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction 1.1 Nature, Meaning and Concept of Human Rights 1.2 Evolution of Human Rights-Magna Carta to UDHR 1.3 Theoretical framework of human rights - Individual, Societal and Civic Theories 1.4 Classification of Human Rights 1.5 International instruments – UDHR, ICCPR ICSECR	K1- K4	13	CO1-4

UNIT	CONTENT	CL	Hrs	CO
2	International Organisations – Monitoring, Enforcement and Protection 2.1 United Nations – United Nations Commission on Human Rights, UN High Commissioner for Refugees, ILO 2.2 Amnesty International, ICRC 2.3 Role of INGO's, NGO's and Global Civil Society 2.4 Effectiveness of International Protection and Enforcement 2.5 Global governance and Human Rights	K1- K5	13	CO1-5
3	Challenges to Human Rights 3.1 Gender based discrimination and violence 3.2 Crimes against Children 3.3 Refugees, IDPs and Stateless persons 3.4 Prisoners of Conscience, Political prisoners 3.5 Racial discrimination, Genocide and Ethnic cleansing	K1- K5	13	CO1-5
4	Development Rights 4.1 Democracy, transparency and accountability 4.2 Human Development - Poverty and Illiteracy 4.3 Development induced displacement 4.4 Rights of farmers and agricultural sector 4.5 Impact of Globalisation on human rights	K3- K6	13	CO3-5
5	Human Rights in India 5.1 Constitutional safeguards 5.2 Role and function of NHRC and SHRC 5.3 Minorities Commission, National Commission for Women 5.4 Condition of women and children in India 5.5 Dalits and socio-cultural issues	K3- K6	13	CO3-5

BOOK FOR STUDY

Das, Jatindra Kumar Human Rights Law And Practice, New Delhi 2016
 Srikanth, Rajini and Elora Halim Chowdhury (Ed) Interdisciplinary Approaches to Human Rights: History, Politics, Practice, Routledge, New York, 2017
 Gankidi Sudarsanam (Ed), Human Rights In India: Prospective and Retrospective
 Chopra, Geeta, Child Rights In India : Challenges and Social Action, Springer, New Delhi 2021
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Ahluwalia B.K.B.R. Ambedkar And Human Rights. New Delhi: Vivek Publishing Company, 1981.
 Alstar Philip (edited) The UN And Human Rights: A Critical Appraisal. USA: Oxford University Press, 1995.
 Arsdale, Peter W. Van, Global Human Rights: People, Processes, and Principles, USA 2017
 Bajwa, G.S. Human Rights In India - Implementation And Violence. New Delhi: Anmol Publications Pvt. Ltd, 1997.
 Chandra U. Human Rights. Allahabad: Allahabad Law Agency Publications, 1990. Donnelly, Jack and Daniel J. Whelan, International Human Rights 5 th Edition West view Press, 2018
 Fischlin, Daniel and Nandorfy, Martha, The Concise Guide to Global Human Rights, Canada 2007
 Garling Marguerite. The Human Rights Hand Book. London: the Macmillan Press Ltd., 1979 Hickey, Sam, Rights-Based Approaches to Development: Exploring the Potential and Pitfalls, Lynne Rienner, 2009
 Marshall Burke The Supreme Court And Human Rights. New York: Forum Publications, 1979.
 Mehrtay Begum, S., Human Rights In India - Issues And Perspectives. New Delhi: A. P. H.

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<https://www.un.org/en/about-us/universal-declaration-of-human-rights>

<https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights>

<https://www.ohchr.org/en/what-are-human-rights/international-bill-human-rights>

<https://www.unhcr.org/in/>

<https://www.amnesty.org/en/>

https://www.ohchr.org/en/ohchr_homepage

<https://nhrc.nic.in/>

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JOURNALS

Journal of Human Rights - <https://journal.humanrights.uconn.edu/>

Journal of Human Rights Practice - <https://academic.oup.com/jhrp>

The International Journal of Human Rights - <https://www.tandfonline.com/toc/fjhr20/current>

Indian Journal of Human Rights and Social Justice -

https://serialsjournals.com/index.php?route=product/product&product_id=301

PATTERN OF ASSESSMENT

Section A - Objective type questions

Section B - Short answers

Section C - Short essays (assertion, reasoning)

Section D - Medium length essays

Section E - Long essay

No Unit should be left out.

Continuous Assessment Test:

Total Marks :50

Duration:90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	Answer any 2 out of 4 2x2=4 (30 Words)
B	K2	8	Answer any 1 out of 2 1x8=8 (250 words)
C	K3	10	Answer any 1 out of 2 1x10=10(250words)
D	K4	12	Answer any 1 out of 2 1x12=12 (350 words)
E	K5	16	Answer any 1 out of 2 1x16=16 (1000words)
	Total	50	

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End Semester Examination:**Total Marks:100****Duration:3 Hours**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	12	Answer any 6 out of 8 questions 6x2=12 (30 words)
B	K2	24	Answer any 3 out of 5 3x8=24 (250 words)
C	K3	20	Answer any 2 out of 4 2x10=20 (350 words)
D	K4	24	Answer any 2 out of 4 2x12=24 (500 words)
E	K5	20	Answer any 1 out of 2 1x20=20 (1000words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/HR44												
	Course Title: Human Rights												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

INTRODUCTION TO PEACE & CONFLICT STUDIES

CODE: 23IS/PC/PS44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To develop a functional understanding of the key theories and concepts in the field of Peace and Conflict studies
- To examine the various dimensions of conflicts including their origins, escalation and resolutions
- To explore different strategies and approaches of peacebuilding and conflict resolution including negotiation, mediation, reconciliation and non-violent activism
- To examine real-world case studies of conflict and peace process
- To foster a commitment to conflict transformation and peace advocacy

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	define and explain essential terminologies in peace and conflict studies	K1
CO2	interpret complex ideas to understandable components and communicate them effectively	K2
CO3	demonstrate a deep understanding of the theoretical framework that serves as the intellectual foundation of Peace and Conflict studies	K3
CO4	analyse various perspectives, data related to Peace and Conflict	K4
CO5	apply theories to practical real-world scenarios	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Understanding Peace and Conflict 1.1 Overview of Peace and Conflict Studies 1.2 Historical Development 1.3 Interdisciplinary nature of Peace and Conflict studies 1.4 Research approaches and methods in peace and conflict studies 1.5 Significant figures in the realm of peace and conflict studies- Johan Galtung, Mahatma Gandhi, Martin Luther King Jr	K1- K4	13	CO1-4
2	Theoretical approaches to peace and conflict studies 2.1 Peace Theories – negative and positive peace 2.2 Democratic peace theories, culture of peace 2.3 Conflict theories - Realism, Liberalism, Constructivism 2.4 Gender and Peace and Conflict 2.5 Environment and Peace and Conflict	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
3	Conflict Analysis and Resolution 3.1 Levels of conflict – macro, miso and micro 3.2 Conflict mapping and assessment tools 3.3 Negotiation and mediation 3.4 Third party interventions in conflict resolution 3.5 Ethics and Challenges in Conflict Resolution	K1- K5	13	CO1-5
4	Peacebuilding and Reconciliation 4.1 Concept of Peacebuilding 4.2 Post-conflict reconstruction and development 4.3 Transitional Justice and Reconciliation 4.4 Role of International Organisations in Peacebuilding – UN 4.5 Building sustainable peace	K3- K6	13	CO3-5
5	Designing Peace Building Programme Praxis with workshop and training modules (not to be tested)	K3- K6	13	CO3-5

BOOK FOR STUDY

Mial, Hugh. Ramsbotham, Oliver and Woodhouse Tom (2011). Contemporary Conflict Resolution. USA. Blackwell Publishing Inc.

Webel, Charles and Galtung, Johan. (2008). Hand Book of Peace and Conflict Studies. USA and Canada. Peace and Conflict Studies: A Reader. United Kingdom, Routledge, 2012.

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Burton, John, W. (1993). Conflict Resolution as a Political Philosophy. Manchester University Press.

Deutsch, Morton (1973). Introduction to the Resolution of Conflict. New Haven. CY: Yale University.

Frank G. Hoffman, “Hybrid Threats: Reconceptualizing the Evolving Character of Modern Conflict”, *Strategic Forum*, N° 240, (April 2009),

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Wallensteen, Peter (2002), Understanding Conflict Resolution, War, Peace and the Global System. London.

White, N., D. (1993). Keeping the Peace: The United Nations and the Maintenance of International Peace and Security. Manchester University Press.

WEB SOURCES

www.prio.org
www.ucdp.uu.se
www.ipinst.org
www.usip.org www.un.org
www.ipss.addis.org

JOURNALS

Peace and Conflict Studies journal - <https://nsuworks.nova.edu/pcs/>

International Journal of Peace and Conflict Studies - <http://journals.rcmss.com/index.php/ijpcs>

Journal of Peace Research - <https://journals.sagepub.com/home/jpr>

Journal of Conflict Resolution - <https://journals.sagepub.com/home/jcr>

PATTERN OF ASSESSMENT

Section A - Objective type questions

Section B - Short answers

Section C - Short essays (assertion, reasoning)

Section D - Medium length essays

Section E - Long essay

No Unit should be left out.

Continuous Assessment Test:

Total Marks :50

Duration:90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	Answer any 2 out of 4 $2 \times 2 = 4$ (30 Words)
B	K2	8	Answer any 1 out of 2 $1 \times 8 = 8$ (250 words)
C	K3	10	Answer any 1 out of 2 $1 \times 10 = 10$ (250 words)
D	K4	12	Answer any 1 out of 2 $1 \times 12 = 12$ (350 words)
E	K5	16	Answer any 1 out of 2 $1 \times 16 = 16$ (1000 words)
	Total	50	

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End Semester Examination:

Total Marks:100

Duration:3 Hours

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	12	Answer any 6 out of 8 questions $6 \times 2 = 12$ (30 words)
B	K2	24	Answer any 3 out of 5 $3 \times 8 = 24$ (250 words)
C	K3	20	Answer any 2 out of 4 $2 \times 10 = 20$ (350 words)
D	K4	24	Answer any 2 out of 4 $2 \times 12 = 24$ (500 words)
E	K5	20	Answer any 1 out of 2 $1 \times 20 = 20$ (1000 words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/PS44												
	Course Title: Introduction to Peace and Conflict Studies												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

GOVERNMENT & POLITICS OF CHINA

CODE: 23IS/PC/GP44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To develop a comprehensive understanding of the political system of the People's Republic of China including its structures, institutions and decision making process
- To analyse the dynamic of Chinese domestic politics, including the role of the Communist Party, government and policies
- To examine China's foreign policy goals, strategies and interactions with other countries and multilateral organisations
- To evaluate China's economic policies including reforms, trade and development strategies
- To foster critical thinking by analysing contemporary issues and challenges in China

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	outline the historical influence on China's behaviour with the world	K1
CO2	recognize the importance of Communist Party in the decision making process of China- Domestic and Foreign policies	K2
CO3	illustrate the changing phases of foreign policy under different Chinese leaders	K3
CO4	identify and relate to China's rise both as economic and military power	K4
CO5	evaluate China's assertive foreign policy and its influence on the world	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Political History of the PRC 1.1 Middle kingdom and Western influence 1.2 Imperial China 1.3 Republic of China 1.4 Communist revolution 1.5 Establishment & Consolidation of PRC	K1- K4	13	CO1-4
2	Political System and Structure of the PRC 2.1 Chinese Communist Party 2.2 Chinese Government 2.3 National People's Congress 2.4 People's Liberation Army 2.5 Leadership	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
3	Chinese Politics Under Mao 3.1 Emergence of Revolutionary China 3.2 Mao and Socialism 3.3 Great Leap Forward 3.4 Cultural Revolution 3.5 Foreign Policy Under Mao	K1- K5	13	CO1-5
4	Chinese Politics Under Deng Xiaoping 4.1 Chinese Society & Foreign Relations 4.2 Independent Policy of Peace- Origins and Implications 4.3 Reform era and Open Door Policy 4.4 China and the Super Powers 4.5 Foreign Policy under Deng Xiaoping	K3- K5	13	CO3-5
5	Chinese Politics in the Post-Cold War era 5.1 China since Tiananmen 5.2 Jiang Zemin and Three Represents Theory 5.3 Hu Jintao and Harmonious World 5.4 Xi Jinping and China's Grand Strategy 5.5 China and the World	K3- K5	13	CO3-5

BOOK FOR STUDY

Suresh Priya, Foreign Policy of China: Contemporary Relevance & Continuity (2022), Palgrave Macmillan, New York

Lucien Bianco, Origins of the Chinese Revolution (Stanford: Stanford University Press, 1971) Henry Kissinger, On China (New York: Penguin Book, 2012)

David Lampton, Following the Leader: Ruling China, from Deng Xiaoping to Xi Jinping (Berkeley: University of California Press, 2014)

Jonathan D. Spence, The Search for Modern China, 3rd Ed. (W. W. Norton, 2012) Fairbank, JK, ed. The Chinese World Order: Traditional China's Foreign Relations (1968)

BOOKS FOR REFERENCE

Bhattacharjea, Mira Sinha, China, the world and India, (2001) Part I, Chapter 2, "Foreign Policy: Spelling out the Maoist Vision".

Deng, Yong and WANG, Fei-ling, China Rising: Power and Motivation in Chinese Foreign Policy (2005) Chapters 4 and 5

Deng, Yong and WANG, Fei-ling, China Rising: Power and Motivation in Chinese Foreign Policy (2005) Chapters 8 and 9

Deshpande, G P, "The Maoist World-view", in K.P.Mishra and Richard Beal eds., International Relations Theory: Western and Non-western Perspectives (1980) Deshpande, G.P. "Verbalities and Realities of Foreign Policy" in G.P. Deshpande and Alka Acharya eds., "Crossing a Bridge of Dreams: 50 Years of India China (2001)

Ding, Xinghao, "The US and China: Is a Stable Relationship Possible? in The Post-Cold War World, Shanghai Institute for International Studies (2000)

Ding, Xinghao, "The US and China: Is a Stable Relationship Possible? in The Post-Cold War World, Shanghai Institute for International Studies (2000) (1988)

Hu, Weixing et al., China's International Relations in the 21st Century: Dynamics of Paradigm Shifts (2000) Chapters 1, 6 and 7.

Hunt, Michael, The Genesis of Chinese Communist Foreign Policy (1996) pp. 3-28-I have Liu, Xiaohong, Chinese Ambassadors: The Rise of Diplomatic Professionalism since 1949 (2001)

Ma, Jisen, The Cultural Revolution in the Foreign Ministry of China (2004)

Shambaugh, David, Beautiful Imperialist: China Perceives America, 1972-1990 (1991 MacFarquhar ed., China Under Mao: Politics Takes Command (1966)
 Qian, Qichen, Ten Episodes in China's Diplomacy (2005)
 Zheng, Yongnian, Discovering Chinese Nationalism in China: Modernization, Identity and International Relations (1999)

WEB SOURCES

www.gov.cn
www.chinafile.com
www.cpianalysis.org
www.chinadigitaltimes.net
www.jamestown.org

JOURNALS

International Journals of Chinese Studies -
<https://icsum.org.my/international-journal-of-china-studies/>
 China Studies - <https://brill.com/display/serial/CHS?language=en>
 Chinese Studies Journal - <https://www.chinesestudiesjournal.org/>
 Cambridge Journal of China Studies -
<https://www.repository.cam.ac.uk/collections/69cf9aaa-e3dc-4914-bcf9-21175fe7528c>
 China Report - <https://journals.sagepub.com/home/chr>

PATTERN OF ASSESSMENT

Section A - Objective type questions
 Section B - Short answers
 Section C - Short essays (assertion, reasoning)
 Section D - Medium length essays
 Section E - Long essay
 No Unit should be left out.

Continuous Assessment Test:

Total Marks :50

Duration:90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	4	Answer any 2 out of 4 2x2=4 (30 Words)
B	K2	8	Answer any 1out of 2 1x8=8 (250 words)
C	K3	10	Answer any 1out of 2 1x10=10(250words)
D	K4	12	Answer any 1 out of 2 1x12=12 (350 words)
E	K5	16	Answer any 1 out of 2 1x16=16 (1000words)
	Total	50	

Other Components:

Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End Semester Examination:**Total Marks:100****Duration:3 Hours**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	12	Answer any 6 out of 8 questions 6x2=12 (30 words)
B	K2	24	Answer any 3 out of 5 3x8=24 (250 words)
C	K3	20	Answer any 2 out of 4 2x10=20 (350 words)
D	K4	24	Answer any 2 out of 4 2x12=24 (500 words)
E	K5	20	Answer any 1 out of 2 1x20=20 (1000words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/GP44												
	Course Title: Government and Politics of China												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

DISSERTATION

CODE: 23IS/PC/DS47

CREDITS: 7

L T P: 4 4 1

OBJECTIVES OF THE COURSE

- To assist in formulating and refining research proposal development
- To guide in conducting a comprehensive literature review to identify relevant sources, theories and existing research
- To develop skills and knowledge necessary to select and apply appropriate research methods and techniques
- To enhance academic writing and communication skills enabling them to present their research findings, arguments and contributions
- To foster critical thinking skills by encouraging students to critically analyse and evaluate existing research and methodologies

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	Compile available literature and identify existing gaps	K3, K4
CO2	Compare and contrast existing theories and concepts relevant to the study	K4
CO3	Hypothesise, test and review the collected data	K5
CO4	To apply their research skill to real world issues and problems	K5
CO5	To create a original and scholarly dissertation	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

RESEARCH WORK

- At the beginning of the fourth semester the student is expected to decide the research topic.
- Topics will be approved by the Department based on the availability of research material and viability of the topic.
- There will be a regular research proposal writing class for the student during the Dissertation hour.
- Writing Index Cards is a part of the research work. It is mandatory that the students write the bibliography details in the Index Cards.
- The Student at the end of the proposal writing class will submit the research proposal for approval.
- Based on the research topic the student will be allotted a supervisor.

- There will be a periodical assessment of the Research work by the supervisor.
- Deadlines for the submission of chapters will be notified to the student and adhering to the same is must for the student.
- Every student must Research Manual prepared by the department and uploaded to the college website. This will consist of style, font, footnote, bibliography writing, and all other details required towards the completion of the dissertation.
https://stellamariscollege.edu.in/assets/documents/Research%20Manual_International%20Studies.pdf
- After the completion of the Dissertation the student will have to appear for a viva voce (Thesis-75 marks & Viva Voce-25 marks)

Rubrics for Evaluation	Marks	Cognitive Level
Formulating the topic and proposal	10	K2
Literature Review and conceptual/theoretical framework	20	K3-K4
Analytical chapters	30	K5
Findings, conclusion and recommendations	15	K6
VIVA VOCE	25	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PC/DS47												
	Course Title: Dissertation												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH II (E) - INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023 – 2024)

INTERNATIONAL TERRORISM

CODE: 23IS/PE/IT15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To comprehend the various dimensions of terrorism
- To understand the role of state intervention in combating terrorism
- To study the response to terrorism on an international level

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	outline the concept of terrorism, its origin and evolution over time	K1
CO2	discuss the ideological, political and social factors that contribute to the rise of terrorist organisations	K2
CO3	identify the various tactics and strategies of prominent terrorist organisations	K3
CO4	analyse the state's response to terrorism	K4
CO5	evaluate the impact of international terrorism on global security, stability and peacekeeping efforts	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Terrorism - Concept and History 1.1 Concept of Terror and Terrorism 1.2 History of Terrorism 1.3 Root causes of Terrorism 1.4 Evolution of Modern Terrorism 1.5 Internationalisation of Terrorism	K1-K5	13	CO1-5
2	Types of Terrorism 2.1 Religious Terrorism 2.2 Ideological Terrorism 2.3 State-sponsored Terrorism 2.4 Political Terrorism and Revolutionary Terrorism 2.5 Ethno-Nationalist Terrorism	K1-K5	13	CO1-5

UNIT	CONTENT	CL	HRS	CO
3	Prominent Terror Groups 3.1 FARC, ETA, IRA 3.2 Al Qaeda, LeT, Hizb ul Mujahideen, LTTE 3.3 Jemaah Islamiyah 3.4 Hezbollah, HAMAS 3.5 ISIS	K1-K5	13	CO1-5
4	State Response to Terrorism 4.1 Impact of Terrorism on the State 4.2 Counter Terrorism Measures and Strategies 4.3 International Cooperation in Countering Terrorism - RATS, Global War on Terror 4.4 Global War on Terror 4.5 Border Security and Counter-Terrorism	K2-K6	13	CO2-5
5	India and Terrorism 5.1 Origins and Growth of Terrorism in India 5.2 Cross Border Terrorism-Kashmir, North East India 5.3 Insurgency and Naxalism 5.4 Role of Security Forces and Intelligence Agencies - RAW, IB, ATS 5.5 Terrorism as a Challenge to Internal Security	K2- K6	13	CO2-5

BOOKS FOR STUDY

Lutz, J., Lutz, B. (2013). Global Terrorism. (n.p.): Taylor & Francis.
 Martin, G., Prager, F. (2019). Terrorism: An International Perspective. United Kingdom: SAGE Publications.
 Rapoport, D. C. (2022). Waves of Global Terrorism: From 1879 to the Present. United States: Columbia University Press.

BOOKS FOR REFERENCE

Bruce Hoffman, Fernando Reinares, The Evolution of the Global Terrorist Threat: From 9/11 to Osama bin Laden's Death, coloumbia university press, U.S.2014
 David Whittake J, Terrorist and Terrorism in the contemporary world, UK, Routledge Publication, 2004.
 Enders Walter, The Political Economy of Terrorism, U K, Cambridge University Press, 2006.
 Gopa Kumar G, International Terrorism in the twenty-first century, Kanishka New Delhi, Publishers,2003
 Gupta, K. R, Anti Terrorism Laws, India, USA, the UK and Israel, Volume 1 and 2, New Delhi, Atlantic Publishers, 2002.
 Hoffman Bruce, Inside Terrorism, Columbia, Columbia University Press,1983.
 Jussi M. Hanhimäki, Bernhard Blumenau. An International History of Terrorism: Western and Non-Western Experiences, London, Routledge Publication, 2013.
 Kumar, Varma Adarsh, Prevention of Terrorism from TADA to POTA, New Delhi, Sterling Publication, 2003.
 Lutz, James. M, Global Terrorism, London, Routledge Publication, 2008.

Magnus Ranstorp, Magnus Normark. Unconventional Weapons and International Terrorism: Challenges and New Approaches, London, Routledge Publication, 2009.

Muni S.D, Responding to Terrorism in South Asia, New Delhi, Manohar Publishers, 2006.

Raphael F. Perl, International Terrorism: Threat, Policy, and Response, USA, Congressional Research Service, 2007

Reich Walter, Walter Laqueur, Origins of Terrorism: Psychologies, Ideologies, Theologies, State of Mind, Washington DC, Woodrow Wilson Center Press, 2000.

Satish Chandra Pandey. International Terrorism and the Contemporary World, New Delhi, Sarup & Sons, 2006.

Smith , Paul J, Terrorism and Violence in South East Asia, New York, M.E. Sharpe, 2005.

Subrmanyam, Raju Adluri Terrorism in South Asia, View from India, New Delhi, India Research Press, 2004.

Tricia Bacon. Why Terrorist Groups Form International Alliances, Philadelphia, University of Pennsylvania, 2018.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	8	4x2=8 (30 Words) Answer any 4 out of 7
B	K2	10	2x5=10 (150 words) 2 out of 4
C	K3	8	1x8=8 (350 words) 1 out of 2
D	K4	8	1x8=8 (350 words) 1 out of 2
E	K5	16	1x16=16 (1000words) Answer any 1 out of 2
	Total	50	

Other Components

Total Marks: 50

Seminars, quiz, written assignments, mini projects, presentations.

Two to three other components for each course for 50 marks.

End Semester Examination:

Total Marks: 100

Duration: 3 Hours

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	20	10x2=20 (30 words) Answer 10 out of 12 questions
B	K2	20	4x 5 =20 (150 words) Answer any 4 out of 6
C	K3	20	2x10=20 (350 words) Answer the following (either or choice)
D	K4	20	2x10=20 (350 words) Answer the following (either or choice)
E	K5	20	1x20=20(1000words) Answer any 1 out of 2
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PE/IT15												
	Course Title: International Terrorism												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: BRANCH II (E) - INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023 – 2024)

GLOBALISATION

CODE: 23IS/PE/GL15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To understand the underlying concepts and approaches to globalisation
- To comprehend the impact of globalisation on the state system
- To study the political aspects of globalisation including role of international institutions and regimes

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	outline the concept of globalization and its historical development	K1
CO2	summarize the economic, political, social and cultural dimensions of Globalization	K2
CO3	examine the drivers and consequences of globalization on different societies	K3
CO4	analyse the opportunities and challenges of globalization for different economies	K4
CO5	critically assess the advantages and disadvantages of globalization for India	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Globalisation 1.1 History of Globalisation 1.2 Concept and Definitions 1.3 Globalisation & interconnectedness 1.4 Globalisation and its impact on Developed and Developing regions 1.5 Anti-Globalisation movements	K1-K5	13	CO1-5
2	Theoretical Approaches to Globalisation 2.1 Liberalism 2.2 Marxism 2.3 Constructivism 2.4 World Systems Theory 2.5 Feminism	K1-K5	13	CO1-5

UNIT	CONTENT	CL	HRS	CO
3	Globalisation, Society and Culture 3.1 Globalisation and Modernity 3.2 Hybridization of Culture and Deterritorialisation 3.3 Homogenisation and Polarization 3.4 Globalization and Environment 3.5 Globalization and ICT	K1-K5	13	CO1-5
4	Globalisation and State 4.1 State, Sovereignty & Globalisation 4.2 Civil Society & Globalisation 4.3 Borders & Globalisation 4.4 Economic Globalisation 4.5 International Institutions & Regimes and their impact on state decision-making	K2-K6	13	CO2-5
5	Globalization and India 5.1 Impact of Globalisation on India - Culture and Tradition 5.2 Impact on the Economy - Agriculture and Industry 5.3 Impact on Indigenous Communities 5.4 India's New Economic Policy (1991) – Liberalisation, Privatisation and Globalisation 5.5 Opportunities for India in a Globalised World	K2- K6	13	CO2-5

BOOKS FOR STUDY

John Baylis, Steve Smith, Patricia Owens, Globalization of World Politics: An Introduction to International Relations, OUP UK, London, 2014.
Andrew Heywood, Global Politics, Bloomsbury Academic, 2011.

BOOKS FOR REFERENCE

Ankie, Hoogvelt. Globalisation and the Post Colonial World. New Delhi: Macmillan, 1998.
Biplab Dasgupta. Globalisation: India's Adjustment Experience. New Delhi: Sage Publications, 2005.
Gilpin, Robert. Global Political Economy: Understanding the international economic order. U.K Orient Blackswan, (2003).
Grieco, Joseph M. and G. John Ikenberry, State Power and World Markets: The International Political Economy. New York: W. W. Norton, 2003.
Goddard, C. Roe, Patrick Cronin, and Kishore C. Dash, International Political Economy: State-Market Relations in a Changing Global Order. USA: Lynne Rienner Publishers, 2003
Holton R J. Globalisation and the Nation State. UK: Macmillan Press, 1998.
Kar Samit. Globalisation. New Delhi: Rawat Publication, 2005.
Lechner, Frank, J and Boli, John. The Globalisation Reader. UK: Blackwell Publishing Oxford, 2008.
Nettl, J.P. and Roland Robertson, International Systems and the Modernization of Societies, New York .1968.
Roy Sumit. Globalisation, ICT and developing nations: Challenges in the information age. New Delhi: Sage Publications,.2005
Shaw Martin. Politics and Globalisation: Knowledge, ethics and agency. UK: Routledge Publications, 1999.
Suter, Keith. Global Order and Global Disorder:

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	8	4x2=8 (30 Words) Answer any 4 out of 7
B	K2	10	2x5=10 (150 words) 2 out of 4
C	K3	8	1x8=8 (350 words) 1 out of 2
D	K4	8	1x8=8 (350 words) 1 out of 2
E	K5	16	1x16=16 (1000words) Answer any 1 out of 2
	Total	50	

Other Components

Total Marks: 50

Seminars, quiz, written assignments, mini projects, presentations.

Two to three other components for each course for 50 marks.

End Semester Examination:

Total Marks: 100

Duration :3 Hours

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	20	10x2=20 (30 words) Answer 10 out of 12 questions
B	K2	20	4x 5 =20 (150 words) Answer any 4 out of 6
C	K3	20	2x10=20 (350 words) Answer the following (either or choice)
D	K4	20	2x10=20 (350 words) Answer the following (either or choice)
E	K5	20	1x20=20(1000words) Answer any 1 out of 2
	Total	100	

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23IS/PE/GL15												
	Course Title: Globalisation												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

MARITIME SHIPPING AND PORT MANAGEMENT

CODE: 23IS/PE/MS15

CREDITS: 5

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- Understand the key principles and functions of the Indian maritime industry.
- Analyze the regulatory framework and governance of Indian ports.
- Evaluate the economic significance and sustainability of port operations.
- Explore emerging trends and technologies shaping the shipping sector.
- Assess the challenges and opportunities in the evolving global port management landscape.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	to recognize the importance of maritime shipping industry, international trade and critical role of ports in global supply chain	K1
CO2	to discuss the efficiency, competitiveness and sustainability of international trade routes and port operations	K2
CO3	to interpret the legal and logistical aspects of trade transactions	K3
CO4	to appraise the effective designing and implementation of port management strategies including port infrastructure, operations and effective environment sustainability measures	K4
CO5	to assess the knowledge and skills to analyze and propose real-world challenges in maritime shipping, international trade and port management	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Maritime Shipping Industry: An Overview 1.1 Overview of the Indian Maritime Industry -Historical perspective 1.2 Port Infrastructure and Facilities -Types of ports in India, Port facilities and services 1.3 Port development and modernization 1.4 Regulatory Framework -Maritime regulatory authorities in India, policies and regulations 1.5 Compliance and safety standards	K1- K4	13	CO1-4
2	Shipping Operations and Economic significance of the maritime sector 2.1 Types of vessels used in Indian shipping 2.2 Shipping routes and trade patterns	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
	2.3 Cargo handling and stowage, Freight rates and pricing strategies 2.4 Maritime Economics 2.5 Export-import procedures, documentation, Customs regulations and trade facilitation measures			
3	Port Management, Operations and environmental considerations 3.1 Port Planning, Design and layout 3.2 Intermodal connectivity 3.3 Environmental sustainability and challenges in port planning and port operations 3.4 Environmental regulations and compliance 3.5 Green port initiatives and best practices	K1- K5	13	CO1-5
4	Port Administration and Governance 4.1 Port authorities and their roles 4.2 Public-private partnerships in port management 4.3 Port efficiency and performance measurement- Digitalization & automation in the maritime sector Internet of Things (IoT) applications in shipping 4.4 Port Security and Risk Management 4.5 Port-centric logistics -Role of ports in the supply chain / Block chain in supply chain and logistics	K3- K5	13	CO3-5
5	Maritime security and challenges and future prospects 5.1 Security protocols and countermeasures 5.2 Risk assessment and disaster management 5.3 Geopolitical factors affecting Indian maritime trade 5.4 Career prospects and opportunities in the maritime sector 5.5 Field visit to port/harbour/Shipping agencies/stevedores and freight forwarders	K3-K5	13	CO3-5

BOOK FOR STUDY

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Cullinane, K., & Song, D. W. (2002). *Port Economics*. Routledge.

Talley, W. K. (2006). *The Blackwell Companion to Maritime Economics*. Wiley-Blackwell.

Grammenos, C. T. (2017). *The Handbook of Maritime Economics and Business*. Informa Law from Routledge.

Notteboom, T. E., & Pallis, A. A. (Eds.). (2012). *Port Management and Operations*. Routledge.

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Brooks, M. R. (2014). *Introduction to Shipping*. Routledge.

Knapp, S., & Talley, W. K. (2014). *Maritime Economics 3e*. Routledge.

BOOKS FOR REFERENCE

Krugman, P., Obstfeld, M., & Melitz, M. (2017). International Trade: Theory and Policy. Pearson.

Parola, G., Parsons, B. J., & Roe, M. (Eds.). (2009). Maritime Economics and Logistics. Informa Law from Routledge.

Pianchupattana, B. (2019). International Trade and Port Logistics: The Strategy of the Port Authority of Thailand. Routledge.

Stopford, M. (2009). Maritime Economics. Routledge.

Song, D.-W., & Panayides, P. M. (2012). Maritime Logistics: A Complete Guide to Effective Shipping and Port Management. Kogan Page.

WEB SOURCES

<https://shipmin.gov.in/>

<https://porteconomicsmanagement.org/>

<https://www.imu.edu.in/>

<https://www.dgshipping.gov.in/>

<https://www.german-workcode.com/>

JOURNALS

Journal of Maritime Research - <https://www.jmr.unican.es/index.php/jmr>

WMU Journal of Maritime Affairs - <https://www.springer.com/journal/13437>

International Journal of Maritime History - <https://journals.sagepub.com/home/ijh>

Journal of Shipping and Trade - <https://jshippingandtrade.springeropen.com/>

Journal of Maritime Transport and Logistics - <https://dergipark.org.tr/en/pub/mtl>

Journal of International Trade and Economic Development - <https://www.tandfonline.com/toc/rjte20/current>

Maritime Policy and Management - <https://www.tandfonline.com/journals/tmpm20>

PATTERN OF ASSESSMENT

Section A - Objective type questions

Section B - Definitions and short answers

Section C - Short essays (assertion, reasoning)

Section D - Short essays

Section E - Long essay

No Unit should be left out.

Continuous Assessment: **Total Marks :50** **Duration: 90 Minutes**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	8	Answer any 4 out of 7 4x2=8 (30 Words)
B	K2	10	Answer any 2 out of 4 2x5=10 (150 words)
C	K3	8	Answer any 1 out of 2 1x8=8 (350 words)
D	K4	8	Answer any 1 out of 2 1x8=8 (350 words)
E	K5	16	1x16=16 (1000words) Answer any 1 out of 2
	Total	50	

Other Components:**Total Marks: 50**

Seminars, quiz, written assignments, mini projects, presentations.

Two to three other components for each course for 50 marks.

End Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	20	Answer 10 out of 12 questions 10x2=20 (30 words)
B	K2	20	Answer any 4 out of 6 4x 5 =20 (150 words)
C	K3	20	Answer the following (either or choice) 2x10=20 (350 words)
D	K4	20	Answer the following (either or choice) 2x10=20 (350 words)
E	K5	20	Answer any 1 out of 2 1x20=20 (1000words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PE/MS15												
	Course Title: Maritime Trade, Shipping and Port Management												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

POLITICAL GEOGRAPHY & INTERNATIONAL RELATIONS

CODE: 23IS/PE/PG15

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To develop a comprehensive understanding of the key concepts, theories and dynamics within the field of political geography and IR
- To provide students with the analytical tools and critical thinking skills necessary to analyse real-world geopolitical issues
- To evaluate and compare geopolitical theories and perspectives
- To analyse and examine the issues relating to Borderlands and borders
- To engage in informed debates on political geography and its relevance to IR

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	describe key concepts in political geography	K1
CO2	explain the classical and contemporary geopolitical theories	K2
CO3	trace the role of geography in shaping international politics including locations, resources and physical geography	K3
CO4	analyze the impact of globalization on political geography in reshaping the political landscape	K4
CO5	critically assess the significance of Political, Military and Electoral geography in the study of IR	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Political Geography: Definition and Concepts 1.1 Defining Political Geography 1.2 Borders and Boundaries 1.3 Territoriality and Sovereignty 1.4 Spatiality in Politics 1.5 Geoeconomics, Trade & Trade routes	K1- K4	13	CO1-4

UNIT	CONTENT	CL	Hrs	CO
2	Theories in Political Geography 2.1 Halford Mackinder-Heartland Theory 2.2 Nicholas Spykman- Rimland Theory 2.3 Alfred Thayer Mahan-Theory of Sea Power 2.4 Fredrich Ratzel- Geopolitical Theory 2.5 Neil Smith-Spatial Analysis	K1- K5	13	CO1-5
3	Border and Borderlands 3.1 Geopolitics of Borderland 3.2 Borderland Identities & Cultures 3.3 Economics and Trade in Borderland 3.4 Border Security & Migration 3.5 Indigenous People and Borderland Rights	K1- K5	13	CO1-5
4	Human Geography & Identity 4.1 Place, Space and Identity 4.2 Cultural Identity and Geography 4.3 Migration, Diaspora and Transnational Identities 4.4 Ethnicity, Race and Identity 4.5 Identity, Conflict and Peacebuilding	K3- K5	13	CO3-5
5	Military & Electoral Geography 5.1 Spatial Aspects of Warfare and Defence 5.2 Terrain Analysis, Strategic Locations & Choke Points 5.3 Border Dispute and Conflicts 5.4 Electoral Geography-Voter Behaviour and Geographic Patterns 5.5 Gerrymandering and Voting Patterns	K3- K5	13	CO3-5

BOOKS FOR STUDY

Adhikari, Sudepta. Political Geography. India, Rawat, 1997.
 Sukhwai, B. L, Modern Political Geography of India. India, Sterling, 1985
 The SAGE Handbook of Political Geography. United Kingdom, SAGE Publications, 2007.
 Dodds, K. (1999). Critical Geopolitics. University of Minnesota Press.
 Kumar, Sanjay, A Handbook of Political Geography. N.p., K.K. Publications, 2021.
 Dikshit, Ramesh Dutta. Political Geography 3E. India, McGraw-Hill Education (India) Pvt Limited, 1999.
 Kaplan, R. D. (2012). The Revenge of Geography: What the Map Tells Us About Coming Conflicts and the Battle Against Fate. Random House.

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Dikshit, Ramesh Dutta. The Political Geography: The Spatiality of Politics. India, McGraw-Hill Publishing Company, 1975.
 Taylor, P. J. (1993). Political Geography: World-Economy, Nation-State and Locality. Prentice Hall.
 Dodds, K. (2014). Geopolitics: A Very Short Introduction. Oxford University Press.
 Kassabova, K. (2017). Border: A Journey to the Edge of Europe. Granta Books.
 Ó Tuathail, G., Dalby, S., & Routledge, P. (2006). The Geopolitics Reader. Routledge.

Sassen, S. (2008). Territory, Authority, Rights: From Medieval to Global Assemblages. Princeton University Press.

Dodds, K. (1999). Critical Geopolitics. University of Minnesota Press.

Agnew, J. A. (2014). National Identity and Geopolitical Visions: Maps of Pride and Pain. Routledge.

Pilger, J. (2003). The New Rulers of the World. Verso.

Kaplan, R. D. (2012). The Revenge of Geography: What the Map Tells Us About Coming Conflicts and the Battle Against Fate. Random House.

Moisi, D. (2009). The Geopolitics of Emotion: How Cultures of Fear, Humiliation, and Hope are Reshaping the World. Anchor Books.

Dicken, P. (2015). Global Shift: Mapping the Changing Contours of the World Economy. Guilford Press.

WEB SOURCES

<https://www.example.com/political-geography-guide>
<https://www.example.com/geography-in-politics>
<https://www.example.com/un-geopolitical-challenge>

JOURNALS

Political Geography - <https://www.sciencedirect.com/journal/political-geography>
 Journal of Geography, Politics and Society - <https://www.ejournals.eu/JGPS/>
 Space and Polity - <https://www.tandfonline.com/journals/cspp20>
 Progress in human Geography - <https://journals.sagepub.com/home/phg>

PATTERN OF ASSESSMENT

Section A - Objective type questions
 Section B - Definitions and short answers
 Section C - Short essays (assertion, reasoning)
 Section D - Short essays
 Section E - Long essay
 No Unit should be left out.

Continuous Assessment: Total Marks :50 Duration: 90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	8	Answer any 4 out of 7 4x2=8 (30 Words)
B	K2	10	Answer any 2 out of 4 2x5=10 (150 words)
C	K3	8	Answer any 1 out of 2 1x8=8 (350 words)
D	K4	8	Answer any 1 out of 2 1x8=8 (350 words)
E	K5	16	1x16=16 (1000words) Answer any 1 out of 2
	Total	50	

Other Components**Total Marks: 50**

Seminars, quiz, written assignments, mini projects, presentations.

Two to three other components for each course for 50 marks

End Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	20	Answer 10 out of 12 questions 10x2=20 (30 words)
B	K2	20	Answer any 4 out of 6 4x 5 =20 (150 words)
C	K3	20	Answer the following (either or choice) 2x10=20 (350 words)
D	K4	20	Answer the following (either or choice) 2x10=20 (350 words)
E	K5	20	Answer any 1 out of 2 1x20=20 (1000words)
	Total	100	

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**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PE/PG15												
	Course Title: Political Geography and International Relations												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

LATIN AMERICA: POLITY, ECONOMY & SOCIETY

CODE: 23IS/PE/LA15

CREDITS: 5

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To develop a comprehensive understanding of political, economic and social contexts of Latin American countries
- To analyse the political systems and governance structures in Latin American countries
- To explore the economic development trajectories of Latin American countries including challenges and opportunities
- To assess the social and cultural aspects of Latin American societies
- To investigate contemporary challenges and regional dynamics in Latin America

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	identify the historical, political, economic and cultural dynamics that shape Latin American Society	K1
CO2	explain the economic challenges and opportunities in Latin America	K2
CO3	interpret key social, economic and cultural issues in Latin America	K3
CO4	analyze and compare the governance structures and political models in Latin America	K4
CO5	evaluate the impact of economic policies and reforms in Latin America	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	The Idea of Latin America 1.1 Historical Background of Latin America 1.2 Modern History: Colonization and Imperialism 1.3 Independence and State Formation 1.4 Latin America in the 21st Century: Problems And Potential	K1- K4	13	CO1-4
2	Revolutions And Regimes 2.1 Revolutions In Latin America -1750-1914 2.2 Marxism /Communist Revolutions And The Rise Of Leftism: Cuba 2.3 Nationalism and Revolution: Mexico 2.4 Autocracy and Military Dictatorship: Chile 2.5 Transitions to Democracy: Brazil And Venezuela	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
3	Economy Of Latin America 3.1 Natural Resources, human resource and development 3.2 Globalization Liberalization and Market reforms 3.3 Economic crisis-Argentina	K1- K5	13	CO1-5
4	Society In Latin America 4.1 Demography and social structure 4.2 Women and society- socio religious factors 4.3 Crime and corruption 4.4 Popular culture	K3- K5	13	CO3-5
5	Latin America and The World 5.1 Regional and transcontinental linkages: IBSA, BRICS 5.2 Latin America and USA 5.3 Latin America and China 5.4 Latin America and India	K3- K5	13	CO3-5

BOOK FOR STUDY

Holloway ,Thomas H..A Companion to Latin American History ,Wiley-Blackwell, 2010
Chasteen.John Charles Americanos: Latin America's Struggle for Independence Oxford University Press, 2008

Drake. Paul W. Between Tyranny and Anarchy: A History of Democracy in Latin America

BOOKS FOR REFERENCE

America, 1800-2006 Stanford University Press, 2009 Keen. Benjamin Latin American Civilization: History and Society, 1492 to the Present Westview Press, 2000 (7th edition) Ward.

John Latin America: Development and Conflict since 1945,Routledge, 1997 Black. Jan Knippers Latin America, Its Problems and Its Promise: A Multidisciplinary Introduction , Westview Press, 1998 (3rd edition)

Williamson, Edwin, The Penguin History Of Latin America,1992,London Intervention: The United States and the Mexican revolution 1913-1

WEB SOURCES

<https://www.cepal.org/en>

<https://www.usaid.gov/where-we-work/latin-american-and-caribbean>

<https://lasaweb.org/en/>

<https://www.unicef.org/lac/en>

<https://www.jica.go.jp/Resource/english/countries/america/index.html>

JOURNALS

Journal of Latin American Studies -

<https://www.cambridge.org/core/journals/journal-of-latin-american-studies>

Journal of Latin American Geography -

<https://utpress.utexas.edu/journals/journal-of-latin-american-geography/>

Latin American Politics and Society -

<https://www.cambridge.org/core/journals/latin-american-politics-and-society>

PATTERN OF ASSESSMENT

Section A - Objective type questions

Section B - Definitions and short answers

Section C - Short essays (assertion, reasoning)

Section D - Short essays

Section E - Long essay

No Unit should be left out.

Continuous Assessment:

Total Marks :50

Duration: 90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	8	Answer any 4 out of 7 4x2=8 (30 Words)
B	K2	10	Answer any 2 out of 4 2x5=10 (150 words)
C	K3	8	Answer any 1 out of 2 1x8=8 (350 words)
D	K4	8	Answer any 1 out of 2 1x8=8 (350 words)
E	K5	16	1x16=16 (1000words) Answer any 1 out of 2
	Total	50	

Other Components

Total Marks: 50

Seminars, quiz, written assignments, mini projects, presentations.

Two to three other components for each course for 50 marks

End Semester Examination:

Total Marks: 100

Duration :3 Hours

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	20	Answer 10 out of 12 questions 10x2=20 (30 words)
B	K2	20	Answer any 4 out of 6 4x 5 =20 (150 words)
C	K3	20	Answer the following (either or choice) 2x10=20 (350 words)
D	K4	20	Answer the following (either or choice) 2x10=20 (350 words)
E	K5	20	Answer any 1 out of 2 1x20=20 (1000words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PE/LA15												
	Course Title: Latin American: Polity, Economy and Society												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

CONTEMPORARY ISSUES IN THE MIDDLE EAST

CODE: 23IS/PE/ME15

CREDITS: 5

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To understand the Middle East's historical, political, economic, and cultural significance
- To analyse governance models in the Middle East, assessing their impact on stability, governance, and human rights.
- To examine the roles of extra-regional actors like the United States, Russia, India, and China in shaping Middle East dynamics.
- To evaluate Middle East conflicts and peace processes, connecting past events to current challenges.
- to analyse the challenges to stability and change in the Middle East, considering democratization, social movements, religion, and economic development.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	demonstrate a comprehensive understanding of the historical, political, economic, and cultural complexities of the Middle East region	K1
CO2	analyse the various forms of governance in the Middle East, and assess their implications for stability, governance, and human rights.	K2-K3
CO3	evaluate the roles and interests of extra-regional actors and their impact on regional dynamics.	K3-K5
CO4	assess conflicts and peace processes in the Middle East, relating historical events and contemporary challenges.	K4-K5
CO5	evaluate the prospects and challenges of stability and change in the Middle East interplay between democratisation, social movements, religion, and economic development in the region.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	State & Society of Middle East 1.1 Emergence of Modern Middle East - geo-political and geo-strategic significance 1.2 The Authoritarian State vs Democracy 1.3 The Society, Culture and Religion in the Middle East 1.4 The Economy in the Middle East – Oil Politics and OPEC and GCC 1.5 Emergence of Arab Nationalism	K1- K4	13	CO1-4

UNIT	CONTENT	CL	Hrs	CO
2	State and Polity in the Middle East 2.1 Egypt -Nationalisation and Politics of Modernization 2.2 Iran and Theocracy 2.3 Saudi Arabia and Wahhabism 2.4 Israel and Modernisation 2.5 Syria and Islamic extremism	K1- K5	13	CO1-5
3	Extra Regional Actors in the Middle East 3.1 Interests in the Middle East 3.2 US engagement in the Middle East 3.3 Russian involvement in the Middle East 3.4 India and the Middle East 3.5 Chinese engagement in Middle East	K1- K5	13	CO1-5
4	Conflict and Peace Processes in the Middle East 4.1 Conflicts of the Middle East -Arab-Israeli Wars 4.2 Iran - Iraq War 4.3 Gulf War I & II 4.4 US and the Middle East Peace Process 4.5 UN and other countries in the Middle East Peace Process	K3- K5	13	CO3-5
5	Stability & Change in the Middle East 5.1 Democratisation in the Middle East 5.2 Intifada 5.3 Arab Spring 5.4 Religion in politics 5.5 Challenges to Economic Growth and development	K3- K5	13	CO3-5

BOOK FOR STUDY

Pappé,Ilan The Modern Middle East: A Social and Cultural History Gelvin,James L ,The Modern Middle East :A History, 4th Edition Oxford University Press,2016
Cleveland, L William and Bunton,Martin,A History of the Modern Middle East ,Westview Press,Philadelphia USA ,2009

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Ali M Ansari, Confronting Iran: The Failure Of American Foreign Policy And The Next Great Crisis In The Middle East, New York , Persen Book Group, 2006
Freeman O Robert), Soviet Policy towards the Middle Eat since 1970, USA, Praeger,, 1975 Goldberg H David, Paul Marantz, The Decline of the Soviet Union and the Transformation of the Middle East, US, West View Press, 1994
Hamid Ansari, Travelling through conflict: Essay on the Politics of West Asia, New Delhi, Pearson Longman, 2008
Ivon Daalder, Nicole Gresotto, Philip Gordon (ed), Crescent of Crisis: US-European Strategy for the Greater Middle East, Washington DC, Brookings Institution Press, 2006.
Lesch W David, The Middle East and the United States: A Historical & Political Reassessment, USA, West View Press, 1999
Wells Jr., F Samuel, Mark A Bruzonsky, Security in the Middle East: Regional Change and Great Power Strategies USA, West View Press, 1987.

Gelvin, James The Arab Uprisings: What Everyone Needs to Know Lynch, Marc The Arab Uprising: The Unfinished Revolutions of the New Middle East , USA, Public affairs Perseus Book Group ,2013
Hudson, Michael C ,Arab Politics: The Search for Legitimacy Yale university Press, 1979

WEB SOURCES

<https://world101.cfr.org/roto/middle-east/politics>
<https://www.brookings.edu/articles/the-struggle-for-middle-east-democracy/>
<https://www.mei.edu/education/middle-east-journal>
https://carnegieendowment.org/files/new_middle_east_final1.pdf
<https://library.oapen.org/bitstream/handle/20.500.12657/35008/341386.pdf?sequence=1&isAllowed=y>
<https://freedomhouse.org/article/new-report-freedom-middle-east-improved-slightly-2022>
<https://journals.sagepub.com/home/cme>
<https://www.tandfonline.com/journals/fmes20>

JOURNALS

The Middle East Journal - <https://www.mei.edu/education/middle-east-journal>
 International Journal of Middle Eastern Studies - <https://www.cambridge.org/core/journals/international-journal-of-middle-east-studies>
 Middle Eastern Studies - <https://www.tandfonline.com/toc/fmes20/current>
 Contemporary Review of the Middle East - <https://journals.sagepub.com/home/cme>

PATTERN OF ASSESSMENT

Section A - Objective type questions
 Section B - Definitions and short answers
 Section C - Short essays (assertion, reasoning)
 Section D - Short essays
 Section E - Long essay
 No Unit should be left out.

Continuous Assessment:

Total Marks :50

Duration: 90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	8	Answer any 4 out of 7 4x2=8 (30 Words)
B	K2	10	Answer any 2 out of 4 2x5=10 (150 words)
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D	K4	8	Answer any 1 out of 2 1x8=8 (350 words)
E	K5	16	1x16=16 (1000words) Answer any 1 out of 2
	Total	50	

Other Components

Total Marks: 50

Seminars, quiz, written assignments, mini projects, presentations.
 Two to three other components for each course for 50 marks

End Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	20	Answer 10 out of 12 questions 10x2=20 (30 words)
B	K2	20	Answer any 4 out of 6 4x 5 =20 (150 words)
C	K3	20	Answer the following (either or choice) 2x10=20 (350 words)
D	K4	20	Answer the following (either or choice) 2x10=20 (350 words)
E	K5	20	Answer any 1 out of 2 1x20=20 (1000words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PE/ME15												
	Course Title: Contemporary Issues of the Middle East												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

INTRODUCTION TO POLITICAL THOUGHT

CODE: 23IS/PE/PT15

CREDITS: 5

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- Understand the key features of ancient Greek political thought and their contributions
- Explore the intersections of church and state, and the ideas of mediaeval thinkers
- Analyse the political philosophies of influential thinkers and their impact on modern political thought
- Examine the political ideas of contemporary thinkers and philosophers
- Study the political philosophies of Indian thinkers

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	demonstrate comprehensive knowledge of key political ideas and thinkers from various historical periods	K1
CO2	explain and interpret complex political theories and their relevance to contemporary political issues,	K2-K3
CO3	apply political theories and concepts to analyse real-world political situations, demonstrating the ability to draw connections between theory and practice.	K3-K5
CO4	critically evaluate and compare different political ideologies, theories, and their implications for governance and societal structures.	K4-K5
CO5	construct well-reasoned arguments and articulate original insights on political thought	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Greek Political Thought 1.1 Features of Ancient Greek Political Thought 1.2 Socrates 1.3 Plato 1.4 Aristotle 1.5 Thucydides	K1- K5	13	CO1-4
2	Medieval Political Thought 2.1 Church and State 2.2 St. Thomas Aquinas	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
	2.3 Machiavelli 2.4 Montesquieu 2.5 David Hume			
3	Modern Political 3.1 G.W.F. Hegel 3.2 Jean Jacques Rousseau 3.3 John Locke 3.4 Thomas Hobbes 3.5 Immanuel Kant	K1- K5	13	CO1-5
4	Contemporary Political Thought 4.1 Adam Smith 4.2 John Stuart Mill 4.3 Hegel 4.4 Karl Marx 4.5 Hans Morgenthau	K1- K5	13	CO3-5
5	Indian Political Thinkers 5.1 Manu and Kautilya 5.2 Rabindranath Tagore 5.3 Dadabai Naoroji 5.4 Mahatma Gandhi 5.5 Jawaharlal Nehru	K1- K5	13	CO3-5

BOOK FOR STUDY

Mukherjee, A History of Political Thought: Plato to Marx, Prentice Hall India Learning Private Limited; 2 edition (2011)

V. R. Mehta Manohar, Foundations of Indian Political Thought: An Interpretation - From Manu to the Present Day Publications, India; 2nd Revised edition, 1996

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Michael Lessnoff, Political Philosophers of the Twentieth Century, Wiley-Blackwell (1998)

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Niccolò Machiavelli, The Prince, Fingerprint! Publishing; Latest edition (2015)

O.P. Gauba, An Introduction to Political Theory, 1st edition (2018)

Peter Singer, Hegel (Very Short Introductions), OUP Oxford; 2 edition (22 March 2018)

Peter Singer, Marx: A Very Short Introduction (Very Short Introductions) OUP Oxford; 2nd edition (2018)

Plato, The Republic (Penguin Classics) 2007 Penguin; New edition (2007)

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<https://www.soas.ac.uk/about/research-centres/centre-comparative-political-thought>

<https://www.durham.ac.uk/research/institutes-and-centres/political-thought/>

<https://politics.exeter.ac.uk/research/centres/cpt/>

JOURNALS

Political Theory <https://journals.sagepub.com/home/PTX>

Journal on Political Philosophy - <https://onlinelibrary.wiley.com/journal/14679760>

Journal of International Political Theory - <https://journals.sagepub.com/home/ipt>

History of Political Thought - <https://www.ingentaconnect.com/content/imp/hpt>

PATTERN OF ASSESSMENT

Section A - Objective type questions

Section B - Definitions and short answers

Section C - Short essays (assertion, reasoning)

Section D - Short essays

Section E - Long essay

No Unit should be left out.

Continuous Assessment:

Total Marks :50

Duration: 90 Minutes

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	8	Answer any 4 out of 7 4x2=8 (30 Words)
B	K2	10	Answer any 2 out of 4 2x5=10 (150 words)
C	K3	8	Answer any 1 out of 2 1x8=8 (350 words)
D	K4	8	Answer any 1 out of 2 1x8=8 (350 words)
E	K5	16	1x16=16 (1000words) Answer any 1 out of 2
	Total	50	

Other Components

Total Marks: 50

Seminars, quiz, written assignments, mini projects, presentations.

Two to three other components for each course for 50 marks

End Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	20	Answer 10 out of 12 questions 10x2=20 (30 words)
B	K2	20	Answer any 4 out of 6 4x 5 =20 (150 words)
C	K3	20	Answer the following (either or choice) 2x10=20 (350 words)
D	K4	20	Answer the following (either or choice) 2x10=20 (350 words)
E	K5	20	Answer any 1 out of 2 1x20=20 (1000words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PE/PT15												
	Course Title: Introduction to Political Thought												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

EMERGENCE OF THE INDO-PACIFIC: PROSPECTS & CHALLENGES

CODE: 23IS/PE/IN15

CREDITS: 5

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To develop a comprehensive understanding of the concept of the Indo-Pacific including its geographical significance and evolving definitions
- To analyse the political, economic and security dynamics within the Indo-Pacific regions
- To explore the economic prospects and opportunities with the Indo-Pacific region
- To assess the security challenges and issues in the Indo-Pacific region
- To study the prospects of Quad and other multilateral grouping in the Indo-Pacific

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	identify the countries and concepts of the Indo-Pacific	K1
CO2	explain the strategic importance of the Indo-Pacific region	K2
CO3	apply their knowledge of the Indo-Pacific region to analyse the involvement of major powers and their interest in the region	K3
CO4	analyse the the economic and trade relationship within the Indo-Pacific region	K4
CO5	evaluate the security challenges and dynamics within the Indo-Pacific region	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Understanding Indo-Pacific 1.1 Indo-Pacific Region as a Construct 1.2 Rationale Behind the Emergence of Indo-Pacific 1.3 Political and Geographic profile of the Indo-Pacific 1.4 Indo Pacific and the International System 1.5 Conflict and Cooperation in the Indo-Pacific	K1- K4	13	CO1-4
2	Theoretical approaches in the Indo-Pacific Region 2.1 Realism & Balancing strategy 2.2 Liberalism and New Institutional Setting 2.3 Constructivism and the new Indo-Pacific construct 2.4 Maritime Regional Theories-oceans and seas 2.5 Minilateralism	K1- K5	13	CO1-5

UNIT	CONTENT	CL	Hrs	CO
3	Maritime Security Issues and Regional order in the Indo-Pacific 3.1 Indo-Pacific Maritime Security-Traditional & Non-traditional 3.2 Maritime Disputes-South and East China Sea 3.3 Malacca Strait and Sea Lanes of Communication 3.4 Indian Ocean - Piracy & Terrorism 3.5 Maritime Governance and the Indo-Pacific	K1- K5	13	CO1-5
4	Transnational Issues in the Indo-Pacific 4.1 Weapons & Nuclear Proliferation 4.2 Economics and Trade in the Indo-Pacific - Energy 4.3 Migration, Pandemics and Drug Trafficking 4.4 Human Trafficking 4.5 Environmental Security	K3- K5	13	CO3-5
5	Regional Security Issues 5.1 US, and the Indo-Pacific 5.2 India and the Indo-Pacific 5.3 QUAD - Australia and Japan and the Indo-Pacific 5.4 China and the Indo-Pacific 5.5 European Powers and the Indo-Pacific	K3- K5	13	CO3-5

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Alagappa Muthiah Asian Security Order, Stanford, California, Stanford University Press, 1998.

Cheung, Y.-W., Wong, K.-Y., & Yuen, C.-W. (Eds.). (2009). *The Rise of China and the Asian Response*. Routledge.

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Yahuda Michael, The International Politics of the Asia Pacific, UK, Routledge, Curzon, 2006

Bogais, J. (2020). *The Future of the Indo-Pacific: Issues, Institutions, and Infrastructure*. Springer.

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Abdollahian Mark, Carole Alsharabati, Brian Efird, Jacek Kugler, Douglas Lemke, A. F.K. Organski, Allan C. Stam III, Ronald L. Tammen, Power Transition Strategies for the 21st Century, UK, Chatham House Publishers, 2000.

Buzan Barry & Ole Waever, Regions and Powers: The Structure of International Security, UK, Cambridge University Press, 2003

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Connors K. Michael, Remy Davison & Jorn Dosch, The New Global Politics of the AsiaPacific, UK, Routledge ,2011

Gilpin Robert, Global Political Economy, Princeton, New Jersey, Princeton University Press, 2001.

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Joshua Ho & C.Z. Raymond, The Best of Times, the Worst of Times: Maritime Security in the Asia-Pacific, World Scientific Publishers, Singapore, 2005

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Paul T.V., James J Writz and Michel Fortmann, Balance of Power: Theory and Practice in the 21st Century, Stanford, California, Stanford University Press, 2004

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<https://www.defense.gov/Spotlights/focus-on-indo-pacific/>
<https://www.usaid.gov/indo-pacific>
<https://www.cfr.org/indo-pacific>
https://www.mofa.go.jp/policy/page25e_000278.html

JOURNALS

Journal of Indo-Pacific Affairs - <https://www.airuniversity.af.edu/JIPA/>
 International Journal of Indo-Pacific Studies - <https://ejournal.unp.ac.id/index.php/ijips>
 Journal of Indo-Pacific Archaeology - <https://journals.lib.washington.edu/index.php/JIPA/index> Indo Pacific Circle - <https://www.ipcircle.org/journal>

PATTERN OF ASSESSMENT

Section A - Objective type questions
 Section B - Definitions and short answers
 Section C - Short essays (assertion, reasoning)
 Section D - Short essays
 Section E - Long essay
 No Unit should be left out.

Continuous Assessment:**Total Marks :50****Duration: 90 Minutes**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	8	Answer any 4 out of 7 $4 \times 2 = 8$ (30 Words)
B	K2	10	Answer any 2 out of 4 $2 \times 5 = 10$ (150 words)
C	K3	8	Answer any 1 out of 2 $1 \times 8 = 8$ (350 words)
D	K4	8	Answer any 1 out of 2 $1 \times 8 = 8$ (350 words)
E	K5	16	$1 \times 16 = 16$ (1000words) Answer any 1 out of 2
	Total	50	

Other Components**Total Marks: 50**

Seminars, quiz, written assignments, mini projects, presentations.

Two to three other components for each course for 50 marks

End Semester Examination:**Total Marks: 100****Duration :3 Hours**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	20	Answer 10 out of 12 questions $10 \times 2 = 20$ (30 words)
B	K2	20	Answer any 4 out of 6 $4 \times 5 = 20$ (150 words)
C	K3	20	Answer the following (either or choice) $2 \times 10 = 20$ (350 words)
D	K4	20	Answer the following (either or choice) $2 \times 10 = 20$ (350 words)
E	K5	20	Answer any 1 out of 2 $1 \times 20 = 20$ (1000words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PE/IN15												
	Course Title: Emergence of the Indo-Pacific: Prospects and Challenges												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

GOVERNMENT AND POLITICS OF AFRICA

CODE: 23IS/PE/AW15

CREDITS: 5

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To develop a comprehensive understanding of the diverse political systems, governance structure and historical contexts that characterise African countries
- To analyse the political dynamics in Africa including factors such as ethnicity, religion, colonial legacies, economic challenges
- To explore key political issues and challenges facing African nations
- To study contemporary political issues in Africa such as conflicts, human rights, economic development
- To discuss ethical considerations and policy implications in African politics-good governance, social justice and role of international community in addressing African challenges

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	identify various political systems, governance structures and historical contexts that characterise African countries	K1
CO2	describe the influence of factors such as ethnicity, religion, colonial legacies and economic challenges on governance, political stability and development	K2
CO3	compare and contrast the political dynamics within African nations	K3
CO4	evaluate the socio-political and economic development of Post-colonial Africa	K4
CO5	evaluate key political issues and challenges facing African nations	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Colonialism and Africa 1.1 Impact of Enslavement and colonialism on Africa 1.2 African Political Ideologies: Anti-colonial & Nationalist Liberation Struggle 1.3 Evolution of African States & Government Structures 1.4 Cold War and African Socialism 1.5 Apartheid	K1- K4	13	CO1-4

UNIT	CONTENT	CL	Hrs	CO
2	Post-Colonial Africa: Economic, Political & Social change 2.1 Ideology, Post-Colonial State and Development- 2.2 Nationalism & Transfer of Power 2.3 Social Class and Search for Class Politics-Botswana 2.4 One Party system and Military rule in Africa- 2.5 Foreign Powers & External Intervention in Africa-Somalia	K1- K5	13	CO1-5
3	African State in the 1990s 3.1 Neo-colonialism, Political economy & Structural Adjustment -Ghana 3.2 Ethnicity & Sectarian issues- Rwanda 3.3 Governance & State Collapse- Ethiopia 3.4 Democracy & Re-Legitimization of African State-Zimbabwe 3.5 Coercion & Military Intervention in African Politics-Uganda	K1- K5	13	CO1-5
4	Economics, Politics, Society in Africa 4.1 Northern Africa- Tunisia and Libya 4.2 Western Africa-Nigeria and Sahel region 4.3 Eastern Africa- Kenya and Tanzania 4.4 Sub-Saharan Africa- Angola and South Sudan 4.5 Central and Middle Africa-Democratic Republic of Congo, Cameroon	K3- K5	13	CO3-5
5	Africa and the World 5.1 Regional and Transnational Linkages-African National Union, IBSA 5.2 Africa and US 5.3 Africa and China 5.4 Africa and India 5.5 Africa and Europe	K3- K5	13	CO3-5

BOOK FOR STUDY

Alex Thomson, (2016), An Introduction to African Politics, Routledge

Mudimbe, V.Y. "Symbols and the Interpretation of the African Past", (1994) Indiana University Press

Pierre Jemina, Africa/African, (2018), University of Chicago Press

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Gordon, A. A., & Gordon, D. L. (2018). *Understanding Contemporary Africa*. Lynne Rienner Publishers.

Harrison, G. (2014). *African Politics and Government: A Handbook*. Oxford University Press.

Hyden, G., & Bratton, M. (2015). *Governance and Politics in Africa*. Lynne Rienner Publishers.

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JOURNAL

Journal of Modern African Studies -
African Studies - <https://www.tandfonline.com/toc/cast20/current>
Journal of Contemporary African Studies
African Studies Review

PATTERN OF ASSESSMENT

Section A - Objective type questions
Section B - Definitions and short answers
Section C - Short essays (assertion, reasoning)
Section D - Short essays
Section E - Long essay
No Unit should be left out.

Continuous Assessment:		Total Marks :50	Duration: 90 Minutes
Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	8	Answer any 4 out of 7 4x2=8 (30 Words)
B	K2	10	Answer any 2 out of 4 2x5=10 (150 words)
C	K3	8	Answer any 1 out of 2 1x8=8 (350 words)
D	K4	8	Answer any 1 out of 2 1x8=8 (350 words)
E	K5	16	1x16=16 (1000words) Answer any 1 out of 2
	Total	50	

Other Components: Total Marks :50

Seminars, quiz, written assignments, mini projects, presentations.
Two to three other components for each course for 50 marks

End Semester Examination:**Total Marks: 100****Duration :3 Hours**

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	20	Answer 10 out of 12 questions 10x2=20 (30 words)
B	K2	20	Answer any 4 out of 6 4x 5 =20 (150 words)
C	K3	20	Answer the following (either or choice) 2x10=20 (350 words)
D	K4	20	Answer the following (either or choice) 2x10=20 (350 words)
E	K5	20	Answer any 1 out of 2 1x20=20 (1000words)
	Total	100	

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23IS/PE/AW15												
	Course Title: Africa in World Affairs												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

**Postgraduate Elective Course Offered by Department International Studies of to students of
M.A. / M.Sc./ M. Com Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

GLOBAL ENVIRONMENTAL POLICIES AND ISSUES

CODE: 23IS/PE/GE23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- To familiarize the students with the basic concepts related to environmental issues.
- To sensitize the students to global environmental concerns.
- To create more awareness among the students on the various international institutions and instruments dealing with environmental protection and conservation.
- To provide an overview of the environmental issues and legislations in India.
- To enable the students to assess the impact of environmental issues.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	to define key concepts related to environmental issues	K1
CO2	to explain the various international instruments	K2
CO3	to demonstrate the impact of environmental issues	K3
CO4	to analyse the contemporary environmental issues in India	K4
CO5	to evaluate the environmental legislations in India	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Basic Components of the Environment 1.1 Key Environmental Concepts 1.2 Physical ,biological and social dimensions of the environment 1.3 Environmental Degradation-Causes & Consequences 1.4 Environmental pollution – Air, Water and Land	K1-K4	8	CO1-CO5

UNIT	CONTENT	CL	Hrs	CO
2	International Instruments and Environmental Protection 2.1 UNFCCC and Kyoto Protocol –Global Warming and Climate change 2.2 Convention on Biological Diversity - Protection of Bio-Diversity. 2. 3 UNCED the Earth Summit- Sustainable Development 2.4 Montreal Protocol and Ozone Depletion	K1-K5	8	CO1-CO5
3	Global Environmental Issues and Concerns 3.1 Resource Conflicts 3.2 Environmental Disasters –Natural and Man Made 3.3 Environmental refugees and migration	K1-K5	8	CO1-CO5
4	The Environment and Public Policy – India 4.1 Environmental Issues and concerns in India 4.2 Growth and Relevance of Environmental Movements 4.3 Environmental Legislations	K1-K5	8	CO1-CO5
5	Contemporary Environmental issues in india 5.1 Public health and Environment 5.2 Public Interest Litigation & Environmental Activism 5.3 Development vs environmental protection	K1- K5	7	CO1-CO5

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Asthana D L and Asthana Meera, (1987), *Our Common Future; World Commission on Environment and Development*, Oxford University Press, New Delhi.
 Asthana D L And Asthana Meera, *Environment Problems and Solutions*, Oxford University Press, UK
 Asthana D K, *Environment: Problems and Solutions*, S. Chand, New Delhi(1998)

BOOKS FOR REFERENCE

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Porter G, J W Brown, PS Chasek ed *Global Environmental Politics*, West view Press, Colorado USA, (2000)

Paul C. Stern, Oran R. Young, Daniel Druckman, ed, (1992), *Global Environmental Change: Understanding the Human Dimensions*, National Academic Press

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PATTERN OF ASSESSMENT

Continuous Assessment Test Question Paper Pattern

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	10	Answer any 5 out of 7 in 30 Words 5x2 =10
B	K2	15	Answer any 3 out of 5 in 100 words 3x5= 15
C	K3	10	Answer any 1 out of 2 in 350 words 1x10=10
D	K4,K5	15	Answer any 1 out of 2 in 1000 words 1x15=15
	Total	50	

Other Components

Seminars, quizzes, written assignments, mini projects, presentations.

No End Semester

Students will write a term paper for 50 marks

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

**Postgraduate Elective Course Offered by Department International Studies of to students of
M.A. / M.Sc./ M. Com Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

POLITICS SOCIETY AND CINEMA

CODE: 23IS/PE/SC23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- To introduce the students to the evolution of cinema as a popular visual medium.
- To utilize the medium of cinema to explain and discuss key historical, political and social issues.
- To enable the students to relate to complex social, political and IR issues through the use of a visual medium.
- To enable the students to deconstruct complex social and political themes portrayed in cinema.
- To enable the students to analyse and critique the portrayal of political and social issues in cinema.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify key developments in the evolution of film technology and filmmaking	K1
CO2	associate politics, social issues, international conflicts and historical events to their portrayal in cinema	K2
CO3	apply key political and sociological concepts to comprehend the complex issues portrayed in cinema	K3
CO4	deconstruct the visual elements that aid in creating an impactful narrative of important events	K4
CO5	critique the portrayal of social and political issues in cinema	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Teaching through cinema 1.1 Evolution of Cinema and Film Technology 1.2 Cinema as a popular visual medium 1.3 Cinema as a medium of social change 1.4 Basics of film appreciation	K1-K4	8	1-5

UNIT	CONTENT	CL	Hrs	CO
2	World Cinema 2.1 Brief history of world cinema 2.2 Cinema in a globalised world: a cross-section of visual cultures 2.3 World politics and cinema: Schindler's List, Gandhi, Dr Strangelove, Oppenheimer, Darkest Hour	K1-K5	8	1-5
3	Contemporary Global Issues and Trends 3.1 Human Rights and Cinema: Awareness and Sensitisation 3.2 International terrorism and organised crime through the visual medium: American Made, The Godfather, Fahrenheit 9/11 3.3 War, Conflict and Cinema: Dunkirk, Saving Private Ryan, Blood Diamond, Hotel Rwanda 3.4 Environmental issues and cinema: Before the Flood, The Human Element, Sea piracy 3.5 Pandemic in Cinema: Contagion	K1-K5	8	1-5
4	Politics and Cinema in India 4.1 History of Indian Cinema 4.2 Nationalism and freedom struggle: Mangal Pandey the Rising, Veerapandia Kattabomman, Kala Pani 4.3 Governance and Democracy: Ayudha Ezhuthu, Newton, Lal Salam 4.4 Communalism, conflict and violence in cinema: Bombay, Firaq	K1-K5	8	1-5
5	Social Issues and Cinema in India 5.1 Caste, superstition and social backwardness: Pariyerum Perumal, Article 15, Trance 5.2 Gender and Cinema: Mahanagar, Karuthamma, How Old Are You, Kalki 5.3 Cinema and Sports: Chak de India, Dangal, Kana, Mary Kom	K1- K5	7	1-5

BOOKS FOR STUDY

Mark A. Sachleben, World Politics on Screen: Understanding International Relations through Popular Culture, University Press of Kentucky, 2014
Kupść, Jarek. History Of Cinema For Beginners. India, Orient BlackSwan, 2003.
Vamsee Juluri, Bollywood Nation: India through Its Cinema, Penguin UK, 2013

BOOKS FOR REFERENCE

Alan Larson Williams, Film and Nationalism, Rutgers University Press, 2002 Anirudh Deshpande, Class, Power & Consciousness in Indian Cinema & Television, Primus Books, 2009
Ashvin Immanuel Devasundaram, Indian Cinema Beyond Bollywood: The New Independent Cinema Revolution, Routledge, 2018.

Brenda Werth, Florian Nikolas Becker, *Imagining Human Rights in Twenty-First Century Theater: Global Perspectives*, Palgrave Macmillan, 2013
 Cyril Buffet, *Cinema in the Cold War: Political Projections*, Routledge, 2017
 David J. Schaefer, Kavita Karan, *Bollywood and Globalization: The Global Power of Popular Hindi Cinema*, Routledge, 2013
 Ian Stewart, Susan Lisa Carruthers, *War, Culture, and the Media: Representations of the Military in 20th Century Britain*, Fairleigh Dickinson Univ Press, 1996
 James Chapman, *War and Film*, Reaktion Books, 2008
 Jeff Birkenstein, Anna Froula, Karen Randell, *Reframing 9/11: Film, Popular Culture and the "War on Terror"*, A&C Black, 2010

WEBSITE

<https://www.cinemapolitica.org/>
<https://cinemasocietyclub/>
<https://mib.gov.in/films-wing>

JOURNALS

CINEJ Cinema Journal - <https://cinej.pitt.edu/ojs/cinej>
 Journal of Cinema and Media - <https://muse.jhu.edu/journal/31>
 Studies In South Asia Film and Media - <https://www.intellectbooks.com/studies-in-south-asian-film-media>

PATTERN OF ASSESSMENT

Continuous Assessment Test Question Paper Pattern

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	10	Answer any 5 out of 7 in 30 Words 5x2 =10
B	K2	15	Answer any 3 out of 5 in 100 words 3x5= 15
C	K3	10	Answer any 1 out of 2 in 350 words 1x10=10
D	K4,K5	15	Answer any 1 out of 2 in 1000 words 1x15=15
	Total	50	

Other Components – Seminars, quizzes, written assignments, mini projects, presentations.

No End Semester

Students will write a term paper for 50 marks

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

**Postgraduate Elective Course Offered by Department International Studies of to students of
M.A. / M.Sc./ M. Com Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

INDIAN POLITY AND POLITICS FOR COMPETITIVE EXAMS

CODE: 23IS/PE/PP23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- To familiarise civil service aspirants with the basic concepts of Indian polity.
- To provide an insight into the seminal concepts of Indian politics.
- To create awareness about political parties in India and their agendas.
- To acquire an insight into the various issues in Indian politics and governance
- To provide a robust foundation in Indian Polity and Politics required for Civil service examinations

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify key concepts related to indian polity	K1
CO2	understand the origins of indian nationalism, from its constitutional origins to mass movements, and its impact on india's struggle for independence.	K2
CO3	develop a clear grasp of foundational political concepts in the indian context, such as federalism, democracy, secularism, and socialism.	K3
CO4	relate the various political parties to their ideological foundations	K4
CO5	evaluate and critique the issues in indian politics based on the robust foundation in indian politics and nationalism, providing them with the essential knowledge and analytical skills necessary to excel in civil service examinations	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Indian Nationalism 1.1 Constitutionalism to mass Satyagraha 1.2 Non-cooperation, Civil Disobedience 1.3 Militant and Revolutionary Movements	K1-K4	7	1-5

UNIT	CONTENT	CL	Hrs	CO
2	Indian Constitution 2.1 Making of the Indian Constitution: Legacies of the British Rule 2.2 Salient Features of the Indian Constitution: The Preamble, Fundamental Rights & Duties 2.3 Directive Principles of State Policy 2.4 Parliamentary System and Amendment Procedures 2.5 Judicial Review and Basic Structure Doctrine	K1-K5	10	1-5
3	Seminal Concepts in Indian Polity 3.1 Federalism 3.2 Democracy 3.3 Secularism and Socialism	K1-K5	7	1-5
4	Parties and Politics 4.1 Party System: National parties (Congress and BJP) 4.2 Rise and growth of regional political parties (Dravidian parties) 4.3 Ideological and social bases of parties (Communist Party of India) 4.4 Coalition Politics 4.5 Pressure groups and trends in electoral behaviour	K1-K5	8	1-5
5	Issues In Indian Politics 5.1 Caste and Politics in India 5.2 Religion and Politics in India 5.3 Criminalisation of Politics in India	K1- K5	7	1-5

BOOKS FOR STUDY

M Laxmikanth, Indian Polity, McGraw Hill Education India ,New Delhi, 5th Edition (2016).
M P Jain, Justice Jasti Chelameswar, Indian Constitutional Law, Publisher: LexiNexis;
Eighth edition (2018)

BOOKS FOR REFERENCE

Magbook Indian Polity & Governance 2019 Arihant Pulications; Sixth edition (2018)
Bipan Chandra, History of Modern India Orient BlackSwan; First edition (2009)
Bipan Chandra, India's Struggle for Independence: 1857-1947 Penguin Random House India;
Reprint edition (2016)
Niraja Gopal Jayal and Pratap Bhanu Mehra, The Oxford Companion to Politics in India:
Student Edition, Oxford, (2011)
V. R. Mehta, Foundations of Indian Political Thought: An Interpretation - From Manu to the
Present Day, Manohar Publications, India; 2nd Revised edition (1996)
Durga Das Basu, Introduction to the Constitution of India, Lexis Nexis; Twenty Second
edition (2015)
P.M. Bakshi, Constitution of India, Universal Law Publishing - an imprint of LexisNexis;
Fifteenth - Pocket edition (2018)
Pylee M.V, India's Constitution, S Chand & Company; 16th 2016 edition (2016)
Parties and Party Politics in India: Themes in Politics, Oxford University Press; Edition
edition (2004)
Rajni Kothri, Caste in Indian Politics, Orient BlackSwan; Second edition (2010)
Himanshu Roy, Indian Political System, Pearson Education; Fourth edition (2018)

Religion, Power and Violence: Expression of Politics in Contemporary Times, Sage India; 1 edition (2005)

B.L.Fadia, Kuldeep Fadia, Indian Government and Politics Sahitya Bhawan; Thirteenth Revised Edition : 2017

Peu Ghosh, Indian Government and Politics, PHI Learning; 2nd Revised edition edition (2017)

Sudha Pai, Handbook of Politics in Indian States: Regions, Parties, and Economic Reforms (Oxford India Handbooks), Oxford University Press; 2013

WEBSITE

<https://www.india.gov.in/>

https://www.cds.in/studies_in_indian_politics

<https://www.ijps.net.in/>

<https://www.indianpac.com/>

JOURNALS

Studies in India Politics - <https://www.intellectbooks.com/studies-in-south-asian-film-media>

Indian Journal of Politics and International Relations - <https://sirp.mgu.ac.in/publications/ijpair/>

Indian Journal of Political Science - <https://journals.scholarsportal.info/>

India Review - <https://www.tandfonline.com/journals/find20>

PATTERN OF ASSESSMENT

Continuous Assessment Test Question Paper Pattern

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	10	Answer any 5 out of 7 in 30 words $5 \times 2 = 10$
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C	K3	10	Answer any 1 out of 2 in 350 words $1 \times 10 = 10$
D	K4,K5	15	Answer any 1 out of 2 in 1000 words $1 \times 15 = 15$
	Total	50	

Other Components – Seminars, quizzes, written assignments, mini projects and presentations

End Semester Examination:

Total Marks:100

Duration:3 Hours

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	20	Answer any 10 out of 12 questions $10 \times 2 = 20$ (30 words)
B	K2	20	Answer any 4 out of 6 $4 \times 5 = 20$ (150 words)
C	K3	30	Answer any 3 out of 5 $3 \times 10 = 30$ (350 words)
D	K4 and K5	30	Answer any 2 out of 4 $2 \times 15 = 30$ (1000 words)
	Total	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

ETHNICITY, CULTURE AND INTERNATIONAL RELATIONS

CODE: 23IS/PI/EC24

CREDITS: 4

OBJECTIVES OF THE COURSE

- To understand the concept of ethnicity and the role of ethnic identity in nation formation
- To understand the theories associated with ethnicity and culture.
- To analyse conflicts through the lens of ethnicity.
- To examine the complex relationship between ethnicity and state.
- To investigate the impact of ethnicity on international relations.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define key concepts related to culture and ethnicity.	K1
CO2	discuss the role of ethnicity in nation-building	K2
CO3	apply different theories to analyse political issues	K3
CO4	analyse the role of ethnicity in conflicts	K4
CO5	evaluate impact of ethnicity and culture in international relations	K5

UNIT	CONTENT	CL	CO
1	Introduction to Ethnicity 1.1 Ethnicity and Ethnic Identity 1.2 Ethnic Groups and Ethnic Nationalities 1.3 Ethnicity and Class 1.4 Ethnicity and Gender 1.5 Ethnic Political Parties: The Politics of Identity	1-5	K1-K5
2	Theories of Ethnic Mobilization 2.1 Primordial Theory 2.2 Internal Colonialism Theory 2.3 Modernization and Development Theory 2.4 Competition Theory 2.5 Resource Mobilization Theory	1-5	K1-K5
3	Ethnic Mobilization and Conflict 3.1 External and Internal Sources of Ethnic Conflict 3.2 Separatism - Sri Lanka, Socialist Federal Republic of Yugoslavia, Kurds 3.3 Irredentism (Bosnia- Herzegovina) 3.4 Fundamentalism, Sectarianism 3.5 Genocide, State Policy of Genocide- Rwanda and Darfur	1-5	K1-K5

UNIT	CONTENT	CL	CO
4	State and Ethnicity 4.1 Ethnic revivalism 4.2 Ethnicity and Nation Building 4.3 Pluralism, regionalism and Ethnic Conflict 4.4 Democracy and Devolution: Rights and welfare of ethnic minorities 4.5 Diaspora Nationalism – Indian Diaspora in SE Asia.	1-5	K1-K5
5	Ethnicity and Culture in International Relations 5.1 Ethno Nationalism as an issue in International Politics 5.2 Globalization, Homogenization and Ethnic resurgence 5.3 Role of the international agencies in Ethnic conflicts 5.4 Culture as soft power 5.5 Cultural diplomacy	1-5	K1-K5

BOOKS FOR REFERENCE

- Birch, Antony. *Nationalism And National Integration*, London, Unwin Hyman, 1989
- Brass, Paul R. *Ethnicity And Nationalism: Theory and Comparison*, Sage Publications, New Delhi, 1991
- Enloe, Cynthia. *Ethnic Conflict And Political Development*, Boston, Little Brown Company, 1973
- Almond, Gabriel. *Understanding Political Development*
- Ganguly Rajat, *Ethnic Conflict And Secessionism In South and South East Asia : Causes, Dynamics and Solutions*, Sage Publications, New Delhi, 2003
- Huntington Samuel, *Clash Of Civilizations And The Remaking Of World Order*, Harper Collins, Boston, Massachusetts 1994
- Phadnis, Urmila. *Ethnicity And Nation Building In South Asia*, Sage Publications, New Delhi 1989
- Rothschild Joseph, *Ethno-Politics: A Conceptual Framework*, New York Columbia University Press, 1981
- Smith, Antony D. *The Ethnic Revival*, Cambridge University, 1981
- Smith, Antony D. *Theories Of Nationalism*, Harper and Row, New York 1971
- Snyder, Lewis *Global Mini-Nationalism: Autonomy Or Independence*, Westport, Greenwood Press 1982
- Stac, John F. *The Primordial Challenge: Ethnicity In The Contemporary World*
- Stack, John F *Ethnic Identities In A Transnational World*, Connecticut, Greenwood Press 1981
- Tambiah, Stanley J. *Leveling Crowds : Ethnonationalist Conflicts And Collective Violence In South Asia*, Vistaar Publications, New Delhi. 1996
- Thompson, Denis L. and Dov Ronen *Ethnicity, Politics And Development*, Boulder, Colorado, Lynne Rienner Publishers 1986
- Thompson, Richard R *Theories Of Ethnicity: A Critical Approach*, Greenwood Press 1989
- Williams, Collin H *National Separatism*, Vancouver, University of British Columbia Press 1982

PATTERN OF ASSESSMENT

End Semester Examination:

Total Marks:100

Duration:3 Hours

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	20	Answer 10 out of 12 questions 10x2=20 (30 words)
B	K2	20	Answer any 4 out of 6 in 150words 4x5=20
C	K3	30	Answer any 3 out of 5 in 350 words 3x10=30
D	K4 and K5	30	Answer any 2 out of 4 in 1000 words 2x15 =30
	Total	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: INTERNATIONAL STUDIES

SYLLABUS

(Effective from the academic year 2023-2024)

THIRD WORLD DEVELOPMENT CHALLENGES

CODE: 23IS/PI/TW24

CREDITS: 4

OBJECTIVES OF THE COURSE

- To understand features that define the Third World countries.
- To understand nationalism and decolonisation process in the Third World countries.
- To comprehend the different types of conflicts that persist in the Third World countries.
- To evaluate the political stability and governance in the Third World countries.
- To estimate the economic and human development challenges in the Third World countries.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the concept of Third World	K1
CO2	explain the challenges to development in the Third World	K2
CO3	demonstrate the obstacles to proper governance in Third World countries	K3
CO4	outline the major developments in relation to Third World countries	K4
CO5	estimate the environmental, economic, social and political factors that impact development in Third World countries	K5

UNIT	CONTENT	CL	CO
1	Emergence of The Third World 1.1 Definitions and Meaning of “Third World” 1.2. Historical Context and the Evolution of the Third World 1.3 Nationalist Ideologies and Independence Movements 1.4 Decolonisation and the Third World 1.5 Building the Post-Colonial Nation-State	1-5	K1-K5
2	Conflicts in the Third World 2.1 Inter and Intra-State Conflict 2.2 Proxy Wars- Kashmir 2.3 Insurgency and secessionist movements 2.4 Terrorism 2.5 Resource conflicts	1-5	K1-K5
3	Political Stability and Governance 3.1 Democratization vs. Authoritarianism 3.2 Corruption and Criminalisation of Politics	1-5	K1-K5

UNIT	CONTENT	CL	CO
	3.3 The State and Marginalisation - Darfur, Rwanda, Cambodia 3.4 Political and ethnic violence 3.5 Good governance and Institution building- A Third-World Experience		
4	Third World Economic Challenge 4.1 North- South 4.2 NIEO, South-South Cooperation 4.3 Globalization and Inequality, Rural-Urban Divide 4.4 Politics and Economics of Foreign Aid 4.5 Role of International Monetary Institutions	1-5	K1-K5
5	Development Issues and Challenges 5.1 Human Development and Human Rights 5.2 Women and development 5.3 Developmental challenges: Poverty, Illiteracy, unemployment and health 5.4 Demographic Issues- population growth, migrant and refugee population 5.5 Environmental Degradation and Sustainable Development	1-5	K1-K5

BOOKS FOR REFERENCE

George W. Shepherd Jr, Ved P. Nanda *Human Rights and Third World Development*, Greenwood Press (1985),
Haleh Afshar, *Women and Politics in the Third World*, Rutledge, 1996
Howard Handelman *The Challenge of Third World Development*, Pearson, 2008
Kempe Ronald Hope Sr, *Development in the Third World: From Policy Failure to Policy Reform*, M. E. Sharpe, 1996
Mohammed Ayoob, *The Third World Security Predicament: State Making, Regional conflict and the International System*, Boulder: L. Rienner Publishers, 1995
Manochehr Dorraj, *The Changing Political Economy of the Third World*, Lynne Rienner, 1995
Pradip K Ghosh, *New International Economic Order: A Third World Perspective*, Greenwood Press, 1984
Robert Pinkney *Democracy in the Third World*, Lynne Rienner, 2004

JOURNALS:

Anantha K. Duraiappah, *Poverty and Environmental Degradation: A Review and Analysis of the Nexus*, *World Development*, Vol. 26, No. 12, 1998
C.Allen, Warfare, endemic violence & State Collapse in Africa, *Review of African Political Economy* 1999
Cameron G Thies, State Building, Interstate and Intrastate Rivalry: A study of Post-Colonial Developing Country Extractive Efforts, 1975-2000, *International Studies Quarterly* (2004)
Gina Koczbersk, Women in development: A critical analysis, *Third World Quarterly*, Volume 19, Issue 3, 1998

Michael Manley, Third World Under Challenge: The Politics Of Affirmation, Third World Quarterly, Volume 2, Issue 1, January 1980

Thomas G Weiss, Governance, Good Governance and Global Governance: Conceptual and Actual Challenges, Third World quarterly, Vol.21, No.5, 2000

Thomas Pogge, World Poverty and Human Rights, Ethics of International Affairs 19, no. 1 (2005).

PATTERN OF ASSESSMENT

End Semester Examination:

Total Marks:100

Duration:3 Hours

Sections	Cognitive Level	Marks Allocation	Pattern
A	K1	20	Answer 10 out of 12 questions 10x2=20 (30 words)
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C	K3	30	Answer any 3 out of 5 in 350 words 3x10=30
D	K4 and K5	30	Answer any 2 out of 4 in 1000 words 2x15 =30
	Total	100	



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

M.A. Degree
PUBLIC RELATIONS
(CHOICE BASED CREDIT SYSTEM)

OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF PUBLIC RELATIONS

M.A. DEGREE: PUBLIC RELATIONS

PROGRAMME DESCRIPTION

Master of Arts in Public Relations is a postgraduate programme with a multi-disciplinary approach that offers various courses that open horizons for employment and research. The PG Department was established on August 7, 2006, under the headship of Dr. Sundari Krishnamurthy. Public Relations ensure a placid relation with an organization and its key stakeholders. Public Relations is a subtle yet powerful course of study which concentrates upon indispensable subjects such as Mass Communication, Marketing, Advertising, Event Management, Public outreach and Political Communication & Media Management. The Programme offers a wide range of learning experience to be equipped for the market needs. Public Relations is a management function that fosters relationships between an organization and its publics through effective communication. Keeping this in mind, the programme offers its communication papers with special focus on the verbal and written forms (Interpersonal and Group Communication, Mass Communication, Writing for Media). The programme equips the students on brand creation, building and communication through digital communication and social media communication keeping in pace with the changing trends in the field (Digital PR, Design tools for PR). With an effort to cater to societal needs and to inculcate a sense of responsibility towards society/ environment in students, the programme offers papers like Community Relations with a special focus on Corporate Social Responsibility. The students are taken on field visits for an extensive Participatory field research on rural communities through its unique Social Awareness Programme. The students conceive and execute a city-wide Public Relations Campaign to build awareness, deliberate discussions and reach out to communities for a solution on any prevalent issues on Health, Education or Environment. The Programme is in complete resonance with the current trends and social milieu. It covers various spectrums which are necessary to equip the students with ample amounts of knowledge and skills. Over the years, this discipline has manifested itself into a paramount need for every business. With the advent of globalization and the rapid growth in the economy, PR has become crucial for every organization. The scope of PR is ever increasing and ever widening. The post graduate program currently has students from myriad backgrounds. It envisages to cover the entire breadth and width of the essentials through various workshops, seminars, guest lectures and expert sessions. The students get hands-on experience tools of modern and traditional communication through courses including Storytelling for PR / Artificial Intelligence for PR and Entertainment PR. By the end of the two years, it produces independent, confident and skilled individuals who are well equipped to be employed or self-employed in various fields of PR, Marketing, Corporate Communications or Advertising.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF PUBLIC RELATIONS

VISION OF THE DEPARTMENT

To be recognized as a distinctive Department producing an informed community of young Public Relations professionals with social responsibility and accountability.

MISSION OF THE DEPARTMENT

To empower young women with the competencies and character required to function as ethically grounded, talented and proactive Public Relations professionals in and for public, private, government and voluntary organisations.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

On successful completion of the M.A. Public Relations Programme, the students will be able to:

PSO 1	Demonstrate and Practice Ethical Public Relations Graduates acquire the knowledge, skills and attitude to understand various concepts, appreciate and respect the profession of Public Relations based on the foundation of ethical communication and contribute effectively to any field of business
PSO 2	Analyse and tailor best suited Public Relations strategies Graduates will be able to put their learning into perspective and display efficient skills of research, application and conception of innovative PR strategies for their organization/ consultancy
PSO 3	Display Leadership and Empowerment Graduates will display efficient leadership qualities and decision-making skills in terms of relationship management, crisis/issues management and media relations
PSO 4	Respect Diversity and Responsibility towards Society Graduates will be able to exercise moral reasoning when faced with ethical dilemmas, and show a commitment to making a difference within their sphere of influence in a socially responsible manner
PSO 5	Proficiency in Creation and Implementation of Sustainable PR practices Graduates will acquire capacities in research and communication skills for creation of innovative sustainable practices and programs that contribute towards promotion of nation building

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
DISTRIBUTION OF CREDITS AND HOURS
M.A. Public Relations 2023-2024

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	5	4	5	4	5	4	5	16	20
	4	5	4	5	4	5	4	5	16	20
	4	5	4	5	4	6	4	5	16	21
	4	6			4	6			8	12
Dissertation							7	8	7	8
PE-dept.	5	6	5	6			5	6	15	18
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PA	2	2							2	2
PN					2				2	0
Library		1		2		3		1	0	7
TOTAL	23	30	24	30	23	30	24	30	94	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.A. DEGREE: PUBLIC RELATIONS

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
SEMESTER-I									
23PR/PC/FP14	Fundamentals of Public Relations	4	4	2	0	3	50	50	100
23PR/PC/CR14	Community Relations	4	4	1	0	3	50	50	100
23PR/PC/IG14	Inter-personal and Group Communication	4	4	1	0	3	50	50	100
23PR/PC/MG14	Marketing Management in Public Relations	4	4	1	0	3	50	50	100
	PA/PL								
	Department Elective I								
SEMESTER-II									
23PR/PC/CO24	Corporate Public Relations	4	4	1	0	3	50	50	100
23PR/PC/SR24	Stakeholder Relations	4	4	1	0	3	50	50	100
23PR/PC/AS24	Public Relations Agency Services	4	4	1	0	3	50	50	100
23PR/PK/SS22	Soft Skills	2	2	0	0	0	50	-	100
CD / ET	Value Education								
	Department Elective II								
	Common Elective I								
SEMESTER-III									
23PR/PC/DP34	Digital Public Relations	4	4	1	0	3	50	50	100
23PR/PC/CM34	Public Relations Campaign Management	4	1	0	5	3	50	50	100
23PR/PC/MC34	Mass Communication in Public Relations	4	4	1	0	3	50	50	100
23PR/PC/RM34	Research Methodology for Public Relations	4	4	2	0	3	50	50	100
23PR/PN/SI32	Summer Internship	2	0	0	0	0	50	-	100
CD / ET	Value Education								
	Common Elective II								
SEMESTER-IV									
23PR/PC/PP44	Public Outreach and Political Communication	4	4	1	0	3	50	50	100
23PR/PC/WM44	Writing for Media	4	4	1	0	3	50	50	100
23PR/PC/SM44	Social Media Management	4	4	1	0	3	50	50	100
23PR/PC/DS47	Dissertation	7	0	0	8	-	50	50	100
	Department Elective III								
Postgraduate Elective Courses Offered to Parent Department									
23PR/PE/EM15	Event Management	5	4	0	2	3	50	50	100
23PR/PE/AP15	Advertising in Public Relations	5	4	0	2	3	50	50	100
23PR/PE/MM15	Media Management	5	4	0	2	3	50	50	100
23PR/PE/CT15	Communication Tools for Public Relations	5	4	0	2	3	50	50	100
23PR/PE/DT15	Design Tools for Public Relations	5	4	0	2	3	50	50	100
23PR/PE/AI15	Artificial Intelligence for Public Relations	5	4	0	2	3	50	50	100
23PR/PE/ET15	Entertainment Public Relations	5	4	0	2	3	50	50	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.A. DEGREE: PUBLIC RELATIONS

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
23PR/PE/ST15	Storytelling for Public Relations	5	4	0	2	3	50	50	100
Postgraduate Elective Courses Offered to Other Departments									
23PR/PE/IP23	Introduction to Public Relations	3	2	0	1	3	50	50	100
23PR/PE/DM23	Digital Marketing	3	2	0	1	3	50	50	100
23PR/PE/PS23	Public Relations Skills	3	2	0	1	3	50	50	100
The Department will offer one Social Awareness Course									
Social Awareness Courses									
23PR/PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100
23PR/PA/CR12	Child Rights	2	2	0	0	-	50	-	100
23PR/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100
23PR/PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100
23PR/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100
23PR/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100
23PR/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100
23PR/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100
23PR/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100
Independent Elective Courses									
23PR/PI/DC24	Digital Communications	4	0	0	0	3	-	100	100
23PR/PI/GP24	Global Public Relations	4	0	0	0	3	-	100	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

FUNDAMENTALS OF PUBLIC RELATIONS

CODE:23PR/PC/FP14

CREDITS: 4

L T P: 4 2 0

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To give students the knowledge of the basic concepts of Public Relations
- To enable an understanding of the functions of a PR Department in an organization and also give an overview of different career paths available in the field of Public Relations
- To equip the students with a concrete understanding of how PR helps in maintaining stakeholder relations and campaign planning

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	define Public Relations and identify internal and external publics for individual organizations and recall the theories of PR and its ethical use in different capacities	K1
CO2	differentiate Public Relations from Spin Publicity, Advertising and Propaganda and discuss how PR evolved through the years globally	K2
CO3	display an awareness about various opportunities and avenues where PR is being consistently used as an important facet of management and communication and apply the different skill sets as needed	K3
CO4	analyse how PR is appreciated as an important management function by various industries and carefully appraise the different career choices that the field of PR offers	K4
CO5	conceive and draw an action plan for a Campaign – commercial or social and evaluate its effectiveness and successful outreach to the audience	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Definitions and Theories 1.1.1 Meaning, Importance, Scope and Trends 1.1.2 Publics – Internal and External 1.2 Models of Public Relations 1.2.1 Press Agency/ Publicity Model 1.2.2 Public Information Model 1.2.3 Two-way Asymmetric Model 1.2.4 Two-way Symmetric Model 1.3 Need for Public Relations today 1.4 Qualities of PR a Professional 1.5 Ethics in Public Relations	K1 -K2	16	1- 2
2	2.1 History of PR – World 2.2 PR in USA and UK 2.3 PR in India – Freedom struggle and post-colonial revolution 2.4 PR in India – Post Industrial Revolution 2.5 Introduction to In-house PR and PR Consultancies	K1-K3	15	1-3
3	3.1 Advertising, Publicity, Propaganda and Public Relations – Similarities and Differences 3.2 Introduction to Relationship Management 3.3 Reputation Management 3.4 Crisis Management 3.5 Media Relations	K2- K3	15	2, 3
4	4.1 Conceptualization and Planning 4.2 Research and Setting Objectives 4.3 Target Audience and Publics 4.4 Resources and Budgeting 4.5 Strategies, tactics and tools 4.6 Communication and Media 4.7 Feedback and Evaluation	K3- K6	16	3- 5
5	5.1 In-house PR Department and PR Agencies 5.2 Professional bodies of Public Relations 5.3 Recent Trends in PR Career 5.3.1. Product/ Service PR 5.3.2 Celebrity PR 5.3.3 Entertainment PR 5.3.4 PR for Non-Profits 5.3.5 Political PR	K1- K5	16	1-5

BOOKS FOR STUDY

Rita Bhimari. *PR 2020: The Trending Practice of Public Relations*. Bee Books Pvt. Ltd., 2018

Sachdeva, Iqbal. *Public Relations – Principles and Practices*. Oxford University Press, India, 2015

BOOKS FOR REFERENCE

- Anne Gregory. *Planning and Managing Public Relations Campaign – A Strategic Approach*. Kogan Page, UK, 2015
- Bernays, Edward. L. *Public Relations*. Snowball Publishing, USA, 2012
- Jaishri Jethwani, Shankar. N.N. *Public Relations Management*. Sterling Publishers, 2015
- Jung Ki, Eyun; Nam Kim, Jeong; Ledingham. A. *Public Relations as a Relationship Management*. Routledge, UK, 2015
- Lloyd, John; Laura Toogood. *Journalism and Public Relations – News Media and PR in the Digital Age*. I.B. Tauris, London, 2015
- Morris, Trevor; Goldsworthy, Simon. *PR Today – The Authoritative Guide to Public Relations*. Macmillan Education, USA, 2016
- Parsons, Patricia. P. *Ethics in Public Relations – A Guide to Best Practice*. Kogan Page, London, 2016
- Reddi, Narasimha. C.V. *Effective Public Relations and Media Strategy*. Prentice Hall, India, 2014
- Rogers, Danny. *Campaigns that shook the world – Evolution of Public Relations*. Kogan Page Ltd., UK, 2015
- Stacks, Don. W; Michaelson, David. *Practitioner's Guide to Public Relations Research, Measurement and Evaluation*. Business Expert Press, New York, 2010
- Swann, Patricia. *Cases in Public Relations Management*. Routledge, London, 2010

JOURNALS

- Public Relations Review: A Global Journal for Research and Comment. Elsevier. ISSN 0363-8111
- Journal of Public Relations Research. Routledge (Taylor and Francis Online) ISSN 1062-726x (p); 1532-754x (e)
- Public Relations Inquiry. SAGE Journals. ISSN 2046-147x (p); 2046-1488 (e)
- Journal of Public Relations Education. Association for Education in Journalism and Mass Communication, USA. ISSN 2573-1742
- Asia Pacific Public Relations Journal. Public Relations Institute of Australia. ACN 85066451732
- Public Relations Journal. Public Relations Society of America.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50 words
	K2		
B	K3	20	4 x 5 = 20 Answer the following in not less than 350 words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750 words with internal choice
	K6		

Other Components**Total Marks: 50**

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	10 x 1=10 Multiple choice Questions
	K2	10	5 x 2 = 10 Answer all questions in not less than 50words
B	K3	40	4 x 10 = 40 Answer the following with internal choice in not less than 350words
	K4		
C	K5	40	2 x 20 = 40 Answer the following with internal choice in not less than 750words
	K6		

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/FP14												
	Course Title: FUNDAMENTALS OF PUBLIC RELATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	3	3	1	3	-	3	3	3	2	3
CO 2	2	3	2	3	3	1	1	-	3	3	2	3	3
CO 3	3	3	3	3	3	3	1	1	3	3	3	3	3
CO 4	3	3	2	3	2	2	2	2	3	3	3	3	3
CO 5	3	3	3	2	3	2	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

COMMUNITY RELATIONS

CODE:23PR/PC/CR14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To understand the need of the community to practice Community Relations
- To learn the role of Public Relations in devising and executing CSR programs
- To know the role of PR in NGOs and NPOs in creating visibility

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define community relations and recognize the need for a systematic practice in the organizations in India, specifically with respect to caring for various marginalized communities	K1
CO2	distinguish between commercial and social purposes of a business and express the pressing need for creative and valuable CSR programs for the benefit of both the community and the business	K2
CO3	apply the various Public Relations tools to present a strategy for building and promoting CSR programs	K3
CO4	examine and critique the various voluntary and sustainability practices of organizations at local and national and global levels	K4, K5
CO5	develop effective community relations programme by integrating various communication tools and tactics	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Community, community relations, community publics as important stakeholders 1.2 The concept of trusts and trusteeship 1.3 Concept of diversity and inclusivity for community relations 1.4 Needs, purpose, objectives, benefits and impact of community relations programs for a business 1.5 Importance and effectiveness of grassroots communication in building community relations	K1-K4	15	1-2
2	2.1 CSR: Definition, Purpose and Theories 2.2 Business ethics and corporate citizenship 2.3 Sustainable Development Goals and their impact on the practices of businesses	K1- K3	15	1- 3

UNIT	CONTENT	CL	Hrs	CO
	2.4 Social, Political and environmental governance by corporate organisations 2.5 Corporates and NGO interface in CSR Projects			
3	3.1 Types of Sustainability Practices for a business 3.2 Communicating Sustainability: Concept, Need and Importance 3.3 PR Strategies for effective internal and external Communication of CSR practices 3.4 Schemes and programs for the community by various organizations: case Studies Communication and tie ups with Government agencies for the implementation of CSR programs	K2- K5	10	2- 4
4	4.1 Concept of Voluntarism and voluntary workers in a community 4.2 National Voluntary Organizations and community relations – case studies 4.3 International Voluntary Organizations and community relations – case studies 4.4 Need for businesses to tie up with voluntary organizations for CSR programs Concept of Employee Voluntary Programs	K1 K4, K5	15	1-4
5	5.1 Knowledge, skill and attitude needed to work in a community 5.2 Popular PR tools in community relations 5.2.1 Opinion polling 5.2.2 Working with opinion leaders 5.2.3 Community events and gatherings 5.2.4 Advertising and events, sponsorships and other fund-raising activities 5.2.5 Media and Social Media relations	K1-K6	10	1- 5

BOOKS FOR STUDY

Alison Theaker. *The Public Relations Handbook*. 5th Ed. Routledge, 2016.

Litow, Stanley S. *The challenge for Business and Society: From Risk to Reward*. Wiley, 2018.

BOOKS FOR REFERENCE

Abira Choudhury. *Gandhi on Trusteeship: An Ethical Approach*. LAP LAMBERT Academic Publishing, 2016

Anita Abraham. *Formation and Management of NGOs*. 4th Ed. Universal Law Publishing- An imprint of LexisNexis, 2015.

Broom, Glen.M; Sha, Bey-Ling. *Cutlip & Center's Effective Public Relations*. 11th Ed. Pearson, 2013.

Du Plessis, Jean .J ; Umakanth Varottil; Veldman Jeroen. *Globalization of Corporate Social Responsibility and its impact on Corporate Governance*. Springer, 2018.

Hunter, Ronald .D; Barker, Thomas; De Guzman, Melchor C. *Police community Relations*. 9th Ed. Pearson, 2017

Nayan Mitra; Schmidpeter, Rene. *Corporate Social Responsibilities in India*. Springer International Publishing AG, 2016

Reddi, Narasimha C.V. *Effective Public Relations & Media Strategy*. 2nd Ed. Prentice-Hall of India Pvt. Ltd, 2014.

Remund, David. L. *The art of responsible communication*. Business Expert Press, 2014.

Seitel, Fraser. P. *The Practice of Public Relations*. 13th Ed. Pearson, 2016.

Wilcox, Dennis. L.; Cameron, Glen. T.; Reber. Bryan. H. *Public Relations: Strategies and Tactics*. 11th Ed. Pearson, 2015.

Wikipedia Contributors. *Focus on: Community Building*. Focus on, 2018

C.V. Narasimha Reddi, *Effective Public Relations and Media Strategy*, January 2019 Edition

Nayan Mitra, Rene Schmidpeter (Editors), *Corporate Social Responsibility in India*, 2022 First South Asian Edition

JOURNAL

International Journal of Non-Governmental Organizations (NGOs) and Essays (IJNGOE).
 Print ISSN: ISSN 2514-9237 and Online ISSN: ISSN 2514-9245
 Public Relations Review, Elsevier, United Kingdom
 Public Relations Journal -Public Relations Society of America Social Responsibility
 Journal – Emerald Insight ISSN 1747-1117 International journal of Corporate Social Responsibility

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50 words
	K2		
B	K3	20	4 x 5 = 20 Answer the following in not less than 350 words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750 words with internal choice
	K6		

Other Components

Total Marks: 50

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	10 x 1=10 Multiple choice Questions
	K2	10	5 x 2 = 10 Answer all questions in not less than 50words
B	K3	40	4 x 10 = 40 Answer the following in not less than 350words with internal choice
	K4		
C	K5	40	2 x 20 = 40 Answer the following in not less than 750words with internal choice
	K6		

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/CR14												
	Course Title: COMMUNITY RELATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	3	-	3	3	3	2	2	3	2
CO 2	3	3	3	2	2	1	3	2	3	2	2	3	3
CO 3	2	3	2	2	3	1	3	3	3	3	2	3	3
CO 4	3	3	3	3	3	3	3	2	3	3	3	3	3
CO 5	3	3	3	3	3	2	-	-	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

INTERPERSONAL AND GROUP COMMUNICATION

CODE:23PR/PC/IG14

CREDITS:4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To acquire skills in using communication tools
- To enable an understanding of the functions of communication
- To understand the importance of effective communication at interpersonal and group communication levels
- To comprehend the usefulness of communication theories and models in understanding the process

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define communication, its elements and the various levels at which effective communication takes place in various situations and recall the skills required to communicate ethically	K1
CO2	discuss the importance of communication and explain the barriers to effective communication and sensitively respond to a range of social and economic issues	K2
CO3	demonstrate an understanding of the importance of intrapersonal communication and the impact it creates within self and the perceptions others develop	K3
CO4	critique and analyse key points to negotiate, solve problems, influence behavior, make decisions and communicate strategically and sustainably at the internal and external levels	K4, K5
CO5	develop skills required to work efficiently in groups of various capacities and create communication plans to provide business and social solutions	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Definition and Origin of Communication 1.2 Elements and Process of Communication 1.3 Types, Levels and Functions of Communication 1.4 Barriers to Effective Communication	K1-K2	13	1-2

UNIT	CONTENT	CL	HRS	CO
2	2.1 Intrapersonal Communication – Definition, types, advantages and forms 2.2 Concepts of intrapersonal communication – Self-concept, Self-reflection, Internal monologue, Self-Esteem, Self-Acceptance. Concept of Self – Johari Window Theory 2.3 Coping with Fear, Shyness and Anger 2.4 Four Factors that Influence Intra-Personal Communication – Perspective, Self-esteem, Self-assertion and Self-confidence	K2-K5	13	2-4
3	3.1 Definition of Interpersonal Communication, Interpersonal Skills – Verbal Communication, Non-Verbal Communication, Listening, Negotiation, Assertiveness, Decision-Making and Problem-Solving Skills 3.2 Models of Interpersonal Communication: Lasswell Formula, Shannon and Weaver's, Osgood and Schramm's, David Berlo's SCMR Model 3.3 Communicating to Influence Behavior – Meaning, Effective and Ineffective Strategies, Development of Plan for Influencing Change 3.4 Forms of Interpersonal Communication – Conceptualizing presentations, Drafting e-mails and etiquettes, Writing reports, Writing minutes	K1-K5	13	1-4
4	4.1 Group – Definition and Types of Groups, Group Communication and its Importance 4.2 Group Lifecycle, Group Leadership, Group Dynamics 4.3 Working with Groups – Advantages and Disadvantages, Group Member Roles 4.4 Forms of Group Communication – Group Discussions, Symposiums, Seminars, Panel Discussion, Debates, Interviews, Conference, Meetings and Exhibition	K1-K6	13	1- 5
5	5.1 Group Communication theory and its functions 5.2 Theoretical perspectives for small group communication – Systems theory, Social exchange theory, Symbolic convergence theory, Structuration theory, Functional theory 5.3 Models of group communication I – Tubbs systems model, Poole's model of small group communication 5.4 Models of group communication II – Katz and Lazarsfeld's Two Step Flow Model of Communication, Fisher's Decision emergence theory 5.5 Virtual team communication – Definitions and Purpose. Virtual team meetings and management – Objectives, phases and challenges. 5.6 Virtual meeting etiquettes	K4-K6	13	4-5

BOOKS FOR STUDY

Hargie, Owen. *The Handbook of Communication Skills*. Routledge, UK, 2018
Katherine.L.Adams; Gloria J Galanes. *Communicating in Groups: Applications and Skills*. Mc-Graw Hill Education, 2017

BOOKS FOR REFERENCE

Aniisu K Verghese. *Internal Communication: Insights, Practices and Models*. Sage Publications. New Delhi, 2012
Asha Kaul. *Effective Business Communication*. PHI Learning. New Delhi, 2015
Beebe, Steven. A. Masterson, John.T. *Communicating in Small Groups: Principles and Practices (11th Edition)*. Pearson. London, 2014
Bernays, Edward L. *Public Relations*. Snowball Publishing, 2016
Donna.R.Vocate. *Intrapersonal Communication*. Routledge, 2017
Kumar, Sanjay. Pushp, Lata. *Communication Skills*. Oxford University Press. New Delhi, 2015
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McKay, Matthew. Davis, Martha. Fanning, Patrick. *Communication Skills*. B.Jain Publishers. New Delhi, 2010
O.P Singh. *Art of Effective Communication in Group Discussion and Interview*. S Chand & Company, 2014
Sharma, Ashish. *Introduction to Mass Communication*. Evincepub Publishing. Chhattisgarh, 2018

JOURNALS

Communication Theory. Wiley-Blackwell. ISSN: 1050-3293 (p); 1468-2885 (e)
Communicator. Indian Institute of Mass Communication. ISSN: 0588-8093
International Journal of Communication. Bahri Publications. ISSN: 0975-640X
Journal of Advanced Research in Journalism and Mass Communication. ADR Publications. ISSN: 2395-3810
Journal of Creative Communication. SAGE Publishing. ISSN: 0973-2586 (p); 0973-2594 (e)

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50 words
	K2		
B	K3	20	4 x 5 = 20 Answer the following in not less than 350 words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750 words with internal choice
	K6		

Other Components**Total Marks: 50**

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	10 x 1=10 Multiple choice Questions
	K2	10	5 x 2 = 10 Answer all questions in not less than 50words
B	K3	40	4 x 10 = 40 Answer the following in not less than 350words with internal choice
	K4		
C	K5	40	2 x 20 = 40 Answer the following in not less than 750words with internal choice
	K6		

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/IG14												
	Course Title: INTERPERSONAL AND GROUP COMMUNICATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	1	1	3	-	3	2	3	2	2
CO 2	3	3	2	3	3	2	3	3	3	2	3	3	3
CO 3	3	3	2	2	3	1	1	3	2	2	3	3	1
CO 4	3	3	3	2	3	3	3	2	3	2	3	3	3
CO 5	3	3	3	3	3	3	3	2	2	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

MARKETING MANAGEMENT IN PUBLIC RELATIONS

CODE:23PR/PC/MG14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To enable an understanding of the objectives of Marketing and its relevance in Public Relations
- To enable the students to create their own marketing strategies – using the different tools and objectives
- To give an understanding of the different strategies used for marketing and brand promotion on digital platforms
- To enable an understanding of how research and analytics prove to be useful in drawing marketing strategies

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	recognize and define the core components of Marketing Management and its role in ethically promoting a brand and acquire the skills to draw an effective strategy	K1
CO2	describe branding and its processes and differentiate between commercial and social marketing concepts	K2
CO3	apply the marketing mix to the promotions of products and services and appreciate the use of research for effective marketing	K3
CO4	analyse different marketing strategies adopted for profit and not-for profit organizations in the local, national and global level	K4
CO5	evaluate and develop different marketing strategies and promotional tactics for digital and social media platforms for sustainable communication of any brand	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Definitions and Concepts 1.1.1 Principles and Elements of Marketing 1.1.2 Scope of Marketing – concepts of need, want and demand 1.1.3 Types of Marketing 1.2 Market Segmentation, Targeting and Positioning 1.3 Types of Markets: Market Place, Space and Meta-Markets	K1	15	1

UNIT	CONTENT	CL	HRS	CO
	1.4 Marketing Ethics and Responsibilities 1.5 Need for Market Research and Analysis 1.6 Integrated Marketing Communications			
2	2.1 Brand – Meaning and definition 2.2 Brand Equity and Promotion 2.3 Branding Decisions -Positioning, Repositioning, Rejuvenation and Relaunch 2.4 Types of Branding and Brand Building Strategies 2.5 Trends in Marketing Strategies 2.5 Personal Branding – Emergence, Scope, Importance & Relevance to Corporate Branding	K1- K4	13	1 –4
3	3.1 Marketing for Non-Profit Organizations 3.2 Concepts of Social Marketing and Cause-Related Marketing – Origin and purpose 3.3 Differences between Social and Commercial Marketing 3.4 Integrating Social cause with Marketing - Social Marketing Mix 3.5 Types Social Marketing Campaigns – Application of PR strategies	K1-K3 K5, K6	11	1-3 5
4	4.1 Introduction to Digital Marketing 4.2 Introduction to Big Data and Analytics for market research 4.3 Website Planning and Creation 4.4 Search Engine Optimization 4.5 Content and Affiliate Marketing Business 4.6 Mobile Marketing	K1-K6	13	1-5
5	5.1 Social Media Marketing Strategies: Identifying the Influencers and Game Changers 5.2 Online Brand and Reputation Management 5.3 Marketing strategies for E-Commerce Portals 5.4 Effective Branding on Social Media Platforms: Facebook, Twitter, Instagram, LinkedIn, Pinterest, Snap Chat 5.5 Creating Video Stories – Vlog, YouTube for promotion and feedback 5.6 Effective Blog Writing: Planning, Creating and Marketing	K2-K6	13	2-5

BOOKS FOR STUDY

Kotler, Philip; Kartajaya, Hermawan; Setiawan, Iwan. *Marketing 4.0: Moving from Traditional to Digital*. Wiley India Pvt. Ltd., 2017

Lancaster, Geoff; Massingham, Lester. *Essentials of Marketing Management*. Routledge Publications, UK, 2018

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Chernav, Alexander. *Strategic Marketing Management*. Cerebellum Press, 2018
Dodson, Ian. *The Art of Digital Marketing*. John Wiley & Sons, New Jersey, 2016
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Kotler, Philip; Keller, Kevin Lane; Koshy Abraham; Jha, Mithileshwar. *Marketing Management – A South Asian Perspective* (13th Edition). Pearson Prentice Hall, India, 2009
Mortimer, Ruth; Brooks, Greg; Smith Craig; Hiam, Alexander. *Marketing for Dummies*. John Wiley & Sons, India, 2013
Nagpal, Amit, Hindustani, Prakash. *Personal Branding, Storytelling and beyond*. Story Mirror Infotech, India, 2017
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Reddi, Narasimma. C.V. *Effective Public Relations and Media Strategy*. Prentice Hall, India, 2013
Singh, Shiv; Stephanie Diamond. *Social Marketing for Dummies*. John Wiley & Sons, India, 2013
Susan Chritton. *Personal Branding for Dummies*. John Wiley & Sons, India, 2013

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International Journal for Research in Marketing. Elsevier. ISSN 0167-8116
Journal of Brand Strategy. Henry Stewart Publications. ISSN 2045-855x (p); ISSN 2045-8568 (e)
Indian Journal of Marketing (Scopus). Associated Management Consultants Private Limited. ISSN 0973-8703
Public Relations Review: A Global Journal for Research and Comment. Elsevier. ISSN 0363-8111
Journal of Public Relations Research. Routledge (Taylor and Francis Online) ISSN 1062-726x (p); 1532-754x (e)
Public Relations Inquiry. SAGE Journals. ISSN 2046-147x (p); 2046-1488 (e)

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50 words
	K2		
B	K3	20	4 x 5 = 20 Answer the following in not less than 350 words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750 words with internal choice
	K6		

Other Components

Total Marks: 50

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	10 x 1=10 Multiple choice Questions
	K2	10	5 x 2 = 10 Answer all questions in not less than 50words
B	K3	40	4 x 10 = 40 Answer the following in not less than 350words with internal choice
	K4		
C	K5	40	2 x 20 = 40 Answer the following in not less than 750words with internal choice
	K6		

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/MG14												
	Course Title: MARKETING MANAGEMENT IN PUBLIC RELATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	1	-	-	3	3	2	2	2
CO 2	2	3	2	3	3	-	-	-	2	3	3	3	3
CO 3	2	3	2	2	2	1	-	-	3	3	2	2	3
CO 4	3	2	3	3	2	3	2	1	3	3	3	3	3
CO 5	3	2	3	3	3	3	3	-	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

CORPORATE PUBLIC RELATIONS

CODE:23PR/PC/CO24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To enable an understanding of the importance of PR as a management function for image building of an organization
- To discern the individual and departmental contributions of PR in business organizations
- To enable an understanding of how corporate communication works in an organization
- To encourage and nurture written and oral communication that Corporate PR demands
- To encourage development of plan and tactics to manage crisis and implementation of effective change communication strategies

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define Corporate PR and recall the impact that Public Relations makes in a corporate organization and its role in image building and managing various stakeholders	K1
CO2	distinguish brand identity and brand image and appreciate their contributions to the overall market position of the organization and its governance	K2
CO3	apply various communication strategies to identify and address resistance to change	K3
CO4	critically Analyse the crisis and issues management programs and their impact on the publics through case studies	K4
CO5	evaluate Image building activities of an organization and craft effective communication strategies for managing the reputation of a brand	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Major Social, Economic, Technological and Trends and their impact on Businesses 1.2 Impact of Technology and Awareness on people's Perception towards Corporate Brands 1.3 Corporates as Social Brands, Technical Brands and Employer Brands – an overview 1.4 Introduction to Corporate Identity, Image and Reputation 1.5 Concept of Corporate Branding	K1, K2	13	1, 2
2	2.1 Corporate Communication: Definition, Need, Scope and Trends 2.2 Types and Drivers of Corporate Communication 2.3 Corporate Communication in a Transforming Media Environment – Challenges and Opportunities 2.4 Corporate Meetings, Speeches, Visits, Conferences, Training Programs, In-house Journals and corporate films 2.5 Communication Planning and Strategies – an overview	K1- K3	13	1-3
3	3.1 Corporate Governance: The Concept of ESG and the future trends 3.2 Corporate Policies and Regulations on Quality 3.3 R&D and Product Specifications 3.4 Intellectual Property Right; data protection and privacy laws 3.5 Internal Complaints Committees and Redressal	K2- K4	10	2-4
4	4.1 Issues Management: Definition, scope and need 4.2 – Managing Various issues – 4.3 - Introduction to crisis Management 4.3.1 – Defining Crisis and types of Crises 4.3.2 – Role of Public Relations in Crisis Management 4.4 – Communicating Crisis 4.4.1 – Situational Crisis Communication theory 4.4.2 – Media Relations Strategies during crisis 4.4.3 – Stakeholder Communication during crisis 4.5 – Disaster Management 4.5.1 – Meaning, Causes and Types 4.5.2 – Planning and Managing Disasters	K1- K6	16	1- 5
5	5.1 Change Communication: Introduction, trends and types of changes 5.2 Theories of Change Management and Communication	K1- K6	13	1-5

UNIT	CONTENT	CL	HRS	CO
	5.2.1 – Kurt Lewin’s Change Management Model 5.2.2 – John Kotter’s 8 Step Change Model 5.2.3 – Diffusion of Innovation Theory 5.3 The role of Leadership in Change 5.4 Change Communication plan and measurement 5.5 Overcoming Resistance to Change			

BOOKS FOR STUDY

Cornelissen, Joep. *Corporate Communication – A guide to Theory and Practice*. SAGE Publication, London, 2017

Sachdeva, Iqbal. *Public Relations – Principles and Practices*. Oxford University Press, India, 2015

BOOKS FOR REFERENCE

Bernays, Edward. L. *Public Relations*. Snowball Publishing, USA, 2012

Carroll, Archie. B; Buchholtz, Ann. K. *Business and Society- Ethics, Sustainability and Stakeholder management*. Cengage Learning, USA, 2015

Fernando, A.C. *Business Ethics and Corporate Governance*. Pearson Education India, 2010

Jane Johnston. *Media Relations- Issues and Strategies*. Allen &Unwin, Australia, 2013

Jung Ki, Eyun; Nam Kim, Jeong; Ledingham. A. *Public Relations as a Relationship Management*. Routledge, UK, 2015

Lloyd, John; Laura Toogood. *Journalism and Public Relations – News Media and PR in the Digital Age*. I.B. Tauris, London, 2015

Parsons, Patricia. P. *Ethics in Public Relations – A Guide to Best Practice*. Kogan Page, London, 2016

Reddi, Narasimma. C.V. *Effective Public Relations and Media Strategy*. Prentice Hall, India, 2014

Thompson, Stuart. *Public Affairs – A Global Perspective*. Urbane Publications, UK, 2016

JOURNALS

Corporate Communications: An International Journal. Emerald Insight Online. ISSN 1356-3289

Public Relations Review: A Global Journal for Research and Comment. Elsevier. ISSN 0363-8111

Journal of Public Relations Research. Routledge (Taylor and Francis Online) ISSN 1062-726x (p); 1532-754x (e)

Public Relations Inquiry. SAGE Journals. ISSN 2046-147x (p); 2046-1488 (e)

Journal of Public Relations Education. Association for Education in Journalism and Mass Communication, USA. ISSN 2573-1742

Asia Pacific Public Relations Journal. Public Relations Institute of Australia. ACN 85066451732

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50words
	K2		
B	K3	20	4 x 5 =20 Answer the following in not less than 350words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750words with internal choice
	K6		

Other Components**Total Marks: 50**

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	10 x 1=10 Multiple choice Questions
	K2	10	5 x 2 = 10 Answer all questions in not less than 50words
B	K3	40	4 x 10 = 40 Answer the following with internal choice in not less than 350words
	K4		
C	K5 K6	40	2 x 20 = 40 Answer the following with internal choice in not less than 750words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/CO24												
	Course Title: CORPORATE PUBLIC RELATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	3	3	1	-	3	3	2	2	1
CO 2	3	3	3	3	3	2	1	-	3	2	2	1	1
CO 3	3	3	3	3	3	3	3	-	-	2	3	2	2
CO 4	3	3	3	3	3	3	3	1	2	2	2	2	3
CO 5	3	3	3	3	3	2	2	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

STAKEHOLDER RELATIONS

CODE:23PR/PC/SR24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To enable an understanding of the different stakeholders and their importance in an organization.
- To discern the role of PR in managing the stakeholders
- To enhance the skills of using various communication platforms for efficient stakeholder engagement
- To enable an understanding of how effective communication helps in resolving conflicts among the stakeholders
- To enable an understanding of stakeholder mapping and focused communication

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define stakeholders and understand the importance of ethical stakeholder communication	K1
CO2	distinguish between the primary and secondary stakeholders and put them in different categories of priority	K2
CO3	apply tools and techniques to come up with various engagement strategies for internal and external stakeholders	K3
CO4	analyse the expectations, needs and concerns of the stakeholder groups	K4
CO5	evaluate the key performance indicators of relationship building and develop communication programs that would have long term implications in an organization	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Definition, importance and principles of stakeholder relations 1.2 Nature of stakes 1.3 Types of stakeholders – primary and secondary 1.4 Business Ethics and stakeholder relations 1.5 Conflicts and challenges in stakeholder relations 1.6 Global and Cross- Cultural Stakeholders Relations	K1, K2	13	1, 2
2	2.1 Concept of Stakeholder Mapping 2.2 Models of Stakeholder identification - Stakeholder Salience Model - power matrix model 2.3 Role of PR in Stakeholder Engagement 2.4 Stakeholder Communication and sustainable relationship management 2.5 Tools of effective communication and reputation building	K2, K3	13	2,3
3	3.1 – Employee and Investor Relations: Definitions, Importance, laws and Challenges 3.2 - Employer and Investor Branding 3.3 – Employee Communication and Engagement - Types, Strategies, trends and technologies 3.4 – Internal Marketing: concept, need and objectives 3.5 – Investor Communication: Tools and Techniques; Investor Retention Programs	K2- K4	16	2-4
4	4.1 – Customer Relations: Definitions, Importance and objectives 4.2 – CRM for Modern Business: Evolution, Components and Types 4.3 – Customer Data Management 4.4 – Customer Communication and Engagement 4.5 – Customer Loyalty and Retention	K1- K6	13	1- 5
5	5.1 - Business's Involvement with Government and Societal Issues 5.1.1 Working with Legislators and Legislative Bodies 5.1.2 Working with Government Departments, Directorates, Corporations, Bureaus and Agencies 5.1.3 Working with Interest Groups – handling protests and Demonstration 5.1.4 Working with Civil Societies 5.2 - Lobbying and Advocacy 5.2.1 Definition, Similarities and Differences 5.2.2 Nature and Types of Lobbying 5.2.3 Professional and Specialist Lobbyists 5.2.4 Nature and Types of Advocacies 5.2.5 Case studies	K1- K6	10	1-5

BOOKS FOR STUDY

Wasieleski, David. M; Weber, James. *Stakeholder Management*. Emerald Publishing Limited, UK, 2017

Bartonico, Michelle. *Stakeholder Engagement Essentials*. Vibrant Publishers USA, 2023

BOOKS FOR REFERENCE

Byars, Stephen M, and Stanberry, Kurt. *Business Ethics*. United States, OpenStax, 2018.

Carroll, Archie. B; Buchholtz, Ann. K. *Business and Society- Ethics, Sustainability and Stakeholder management*. Cengage Learning, USA, 2015

Cornelissen, Joep. *Corporate Communication – A guide to Theory and Practice*. SAGE Publication, London, 2017

Fernando, A.C. *Business Ethics and Corporate Governance*. Pearson Education India, 2010

Fleisher, Craig; Harris Phil. *The SAGE Handbook of International Corporate and Public Affairs*. SAGE, United Kingdom Publications, 2016.

Jung Ki, Eyun; Nam Kim, Jeong; Ledingham. A. *Public Relations as a Relationship Management*. Routledge, UK, 2015

Neeley, Grant; Stewart, Kendra; Lee, Mordecai. *The Practice of Government Public Relations*. United Kingdom, Taylor & Francis, 2021.

Parsons, Patricia. P. *Ethics in Public Relations – A Guide to Best Practice*. Kogan Page, London, 2016

Reddi, Narasimha. C.V. *Effective Public Relations and Media Strategy*. Prentice Hall, India, 2014

Thompson, Stuart. *Public Affairs – A Global Perspective*. Urbane Publications, UK, 2016

Thornton, Gail; Vivian Regina Mansi; Carramenha, Bruno; Cappellano, Thatiana. *Strategic Employee Communication: Building Culture of Engagement*. Stinger Publication, USA, 2018

JOURNALS

Public Relations Review: A Global Journal for Research and Comment. Elsevier. ISSN 0363-8111

Journal of Public Relations Research. Routledge (Taylor and Francis Online) ISSN 1062-726x (p); 1532-754x (e)

Public Relations Inquiry. SAGE Journals. ISSN 2046-147x (p); 2046-1488 (e)

Journal of Public Relations Education. Association for Education in Journalism and Mass Communication, USA. ISSN 2573-1742

Asia Pacific Public Relations Journal. Public Relations Institute of Australia. ACN 85066451732

Public Relations Journal. Public Relations Society of America.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50words
	K2		
B	K3	20	4 x 5 =20 Answer the following in not less than 350words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750words with internal choice
	K6		

Other Components

Total Marks: 50

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	10 x 1=10 Multiple choice Questions
	K2	10	5 x 2 = 10 Answer all questions in not less than 50words
B	K3	40	4 x 10 = 40 Answer the following with internal choice in not less than 350words
	K4		
C	K5 K6	40	2 x 20 = 40 Answer the following with internal choice in not less than 750words

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PR/PC/SR24												
	Course Title: STAKEHOLDER RELATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	2	1	-	-	-	-	3	2	1	3	2
CO 2	3	1	1	1	-	-	-	-	3	3	2	2	1
CO 3	3	3	3	2	3	3	1	1	3	3	3	1	3
CO 4	3	2	3	1	3	1	-	-	3	2	1	1	2
CO 5	3	3	3	1	3	3	-	-	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

PUBLIC RELATIONS AGENCY SERVICES

CODE:23PR/PC/AS24

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To enable an understanding of the structure, functions, and roles of public relations agencies within the broader communications industry
- To enable an understanding of the diverse media landscape including traditional and digital media and their relevance to PR strategies
- To enable an understanding of the techniques and strategies involved in building and maintaining positive relationships with media outlets and journalists
- To enable an understanding of the methods of evaluating effectiveness of PR campaigns
- To enable an understanding of methods in developing communication material for clients and organising various events

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	recall the types of PR agencies and the scope of in-house and external PR agencies	K1
CO2	explain the roles of PR professionals in client relations and business development	K2
CO3	discover various tools and techniques used in client servicing and media relations	K3
CO4	analyse and evaluate the impact of emerging media trends and PR Strategies	K4, K5
CO5	develop Communication protocols and materials tailored to the needs of various clients using various PR tools and techniques	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 PR Agency - Definition, Need and Scope 1.2 In-house Department and External PR Agency - Differences in the Roles and Requirement 1.3 PR agencies in India and the world 1.4 Structure and hierarchy of PR Agency 1.5 Types of PR agencies	K1	13	1

UNIT	CONTENT	CL	HRS	CO
2	2.1 Agency Environment - Expectations 2.2 Roles of PR Professionals - Internal and External Duties 2.3 Types of clients, networking and best practices 2.4 Client Relations - Research, Meetings, Setting Expectations - Deliverables, Approval Process 2.5 New Business Development - Planning and preparation	K2-K3	13	2, 3
3	3.1 PR Brief - Onboarding a new client 3.2 PR Strategies - Conception, planning and implementation 3.3 B2B and B2C campaigns 3.4 Measurement and Evaluation of PR Efforts - Structure and Metrics 3.5 Types of PR reports and presentation techniques	K3	16	3
4	4.1 Understanding the media landscape - Media monitoring, column-mapping, situation analysis 4.1.1 Types of News Media - Newspapers, Newswires, Magazines, Radio, TV, Podcasts, Online News Service 4.1.2 Media List Creation - Segmentation and personalisation 4.2 Media Tracking - Industry, company and competitors 4.3 Building relationship with journalists 4.4 Developing creative brand stories 4.5 Pitching to the media - types and etiquettes	K3-K5	13	3, 4
5	5.1 Organising News conference and corporate events 5.2 Developing communication material for clients 5.3 News release, Video News Release, Online Newsroom 5.4 Publishing Authored Article, White Papers and research materials 5.5 Training and best practices for employees	K5, K6	10	4, 5

BOOKS FOR STUDY

Cappizo, Luke. W and Regina M. Luttrell. *PR Agency Handbook*. Sage Publications, 2018
 Iliyana Stravera. *Inbound PR: The PR agency's Manual to Transforming your Business with Inbound*. John Wiley & Sons Inc., New Jersey, USA, 2018

BOOKS FOR REFERENCE:

Bernays, Edward. L. *Public Relations*. Snowball Publishing, USA, 2012
 Howard, Carole. M; Wilma. K. Mathews. *On deadline – Managing Media Relations*. Wavelength Press Inc., Illinois, 2013
 Jaishri Jethwani, Shankar. N.N. *Public Relations Management*. Sterling Publishers,

2015 Jane Johnston. *Media Relations- Issues and Strategies*. Allen &Unwin, Australia, 2013
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 Morris, Trevor; Goldsworthy, Simon. *PR Today – The Authoritative Guide to Public Relations*. Macmillan Education, USA, 2016
 Parsons, Patricia. P. *Ethics in Public Relations – A Guide to Best Practice*. Kogan Page, London, 2016
 Reddi, Narasimma. C.V. *Effective Public Relations and Media Strategy*. Prentice Hall, India, 2014
 Sachdeva, Iqbal. *Public Relations – Principles and Practices*. Oxford University Press, India, 2015
 Stacey Smith. *The Public Relations Firm*. Business Expert Press, New York, 2015

JOURNALS

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 Journal of Public Relations Education. Association for Education in Journalism and Mass Communication, USA. ISSN 2573-1742
 Asia Pacific Public Relations Journal. Public Relations Institute of Australia. ACN 85066451732

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

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	K6		

Other Components

Total Marks: 50

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

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	K6		

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/AS24												
	Course Title: PUBLIC RELATIONS AGENCY SERVICES												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	1	3	3	-	-	2	3	2	2	1
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CO 3	3	3	3	3	3	3	2	-	2	3	2	2	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

SOFT SKILLS

CODE: 23PR/PK/SS22

CREDITS: 2

L T P: 2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- To empower students and create opportunities for self-development
- To instill confidence in students to face challenges
- To manage emotions and resolve conflicts
- To organize activities and manage time
- To set goals and plan ahead

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- Communicate with confidence and poise
- Accept themselves and improve on their weaknesses
- Strengthen their relationships through confronting and solving problems
- Work more effectively and complete activities on time
- Plan their future with clarity and focus

Unit 1

Behavioural Traits

(6 Hours)

- 1.1 Self- Awareness
- 1.2 Communication Skills –Verbal and Non-Verbal
- 1.3 Leadership Qualities
- 1.4 Etiquette and Good Manners
- 1.5 Experiential Learning –based on activities

Unit 2

Team Work

(5 Hours)

- 2.1. Interpersonal Skills
- 2.2. People Management
- 2.3. Creative Thinking
- 2.4. Critical Thinking
- 2.5. Experiential Learning – based on activities

Unit

3

Time Management

(5 Hours)

- 3.1. Importance of time management
- 3.2. Planning and Prioritizing
- 3.3. Organizing skills
- 3.4. Action Plan
- 3.5. Experiential Learning – based on activities

Unit 4

Conflict Resolution

(5 Hours)

- 4.1. Reasons for conflict
- 4.2. Consequences of conflict
- 4.3. Managing emotions
- 4.4. Methods of resolving conflicts
- 4.5. Experiential Learning – based on activities

Unit 5

Career Mapping

(5 Hours)

- 5.1. Goal-setting and Decision-making
- 5.2. Career Planning
- 5.3. Resume Writing
- 5.4. Handling Interviews
- 5.5. Experiential Learning – based on activities

BOOKS FOR REFERENCE

Khera, Shiv. *You Can Win*. Macmillan India, 2002.

Mishra, Rajiv. K. *Personality Development: Transform Yourself*. Rupa, 2004.

Newstorm, John. W. and Scannell. Edward. E. *Games Trainers Play: Experiential Learning*. Tata McGraw Hill, 1980.

PATTERN OF EVALUATION

Internal Assessment:

Total Marks: 50

Quiz / Group Presentation /Assignment

No End Semester Examination.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

DIGITAL PUBLIC RELATIONS

CODE:23PR/PC/DP34

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To Define Digital Public Relations and discuss its importance and relevance
- To enable an understanding of how both traditional and digital PR are being strategically used by organizations
- To facilitate knowledge of Content PR, Influencer PR and SEO Marketing
- To enable the creation of effective and innovative content and pitch
- To enable an understanding of ethical digital communication and PR process

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define key concepts of digital public relations and recall the evolution of public relations and its integration into the digital media	K1
CO2	understand the audience's consumption of digital media and how it would benefit the process of digital pr	K2
CO3	apply the elements of digital pr to effectively plan for content and influencer communication	K3
CO4	analyse the role and importance of seo for brands and identify effective strategies for organic leadership	K4
CO5	evaluate long-term reputational impact of digital pr decisions and create innovative content ideas for a brand	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 – Introduction to Digital Media – Definition, Scope and Advantages 1.2 - Digital Transformation Trends – Information Age, Disruptive Innovation, Digital Revolution and trends in digital communication in organizations 1.3 – Digital Media Consumption – 1.3.1 Information, News, Education and Entertainment 1.3.2 Somoclolytic Era 1.3.3 Interaction and Engagement 1.3.4 Shaping Perceptions and Opinions 1.4 - Advantages of Digital Media – User Generated Content, Social Sharing, Personalization, Multi-Screen Presence, 1.5 – Challenges – Digital Divide, Digital Detox and Privacy and Safety of users	K1, K2	16	1, 2
2	2.1 – Digital Public Relations – Definition, Concept, Evolution and Importance 2.2 – Traditional Vs. Digital Public Relations 2.3 – Inbound PR – Concept and Elements 2.4 – Trends in Digital Public Relations 2.4.1 – Multi – Media Communication – website, email, mobile, gaming, social media and convergent media 2.4.2- Lead Generation 2.4.3 – Engagement and Conversations 2.4.4 - Audience Centric Approach 2.4.5 – Content -Driven Strategies 2.5 – Image and Reputation Building through Ethical Digital Public Relations	K1- K3	13	1-3
3	3.1 – Introduction to Content PR – Concept and Definition 3.2 – Understanding the Audience – Audience Analysis, Pain Points, Content Preferences, Social Listening, Localization and Segmentation 3.3 – Content Curation and Mapping for different channels of digital media 3.4 – Content Marketing Strategies – Content Creation, Distribution, Calendar and Interaction 3.5 – Brand Consistency and Content – Content Re-purposing and Content Amplification	K1- K6	13	1-5

UNIT	CONTENT	CL	HRS	CO
4	4.1 – Influencer Public Relations – Introduction 4.2 – Working with Influencers – Objectives, Roles and Pitch 4.3 – Types of Influencers 4.4 – Elements of Influencer PR – Influencer Credibility, Relationship Goals, Audience reach and Engagement, Legal Considerations, Content Right and Usage 4.5 – Influencer Affiliations – Sponsored Content, Brand Ambassadors, Collaborations (Monetary and non-Monetary), Exclusive Collaborations, CSR Partnerships and Affiliate Marketing	K1- K6	13	1- 5
5	5.1 – Search Engine Optimization – Definition, Meaning, Importance and Role of SEO in Digital PR 5.2 – Types of SEO 5.2.1 - On-page, Off-page, Technical and Local 5.2.2 – Mobile and App-Store Optimization 5.2.3 – Voice Search Optimization 5.3 – Strategies of SEO - Internal Linking, Backlink Building, Content promotion, competitor analysis, security and User Experience 5.4 – Earned Media and SEO 5.5 - Analysing Data and SEO Metrics	K1- K4	10	1-4

BOOKS FOR STUDY

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Lloyd, John ; Toogood, Laura. Journalism and PR: News Media and Public Relations in the Digital Age. I.B.Tauris, 2014.
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Rita Bhimani. PR 2020 – The Trending Practice of Public Relations. Bee Books, New Delhi, 2018
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Stella Bayles. *Public Relations' Digital Resolution* (e book), 2015.

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 Whatmough, Danny. *Digital PR*. Emerald Publishing Limited, 2018.

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A review of the impact on New Media on Public Relations: Melanie James Call for papers on the special Issues, New digital Publics. (n.d): Elsevier
 communication and New media: O'Dwyer
 online PR,Digital Public Affairs and Online Corporate Communication, (n.d): Stuart Bruce
 What is Digital PR: Rhian Morgans
 Public Relations Review: A Global Journal for Research and Comment. Elsevier. ISSN 0363- 8111
 Journal of Public Relations Research. Routledge (Taylor and Francis Online) ISSN 1062-726x (p); 1532-754x (e)
 Public Relations Inquiry. SAGE Journals. ISSN 2046-147x (p); 2046-1488 (e)
 Journal of Public Relations Education. Association for Education in Journalism and Mass Communication, USA. ISSN 2573-1742
 Asia Pacific Public Relations Journal. Public Relations Institute of Australia. ACN 85066451732
 Public Relations Journal. Public Relations Society of America.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50words
	K2		
B	K3	20	4 x 5 =20 Answer the following in not less than 350words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750words with internal choice
	K6		

Other Components

Total Marks: 50

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	10 x 1=10 Multiple choice Questions
	K2	10	5 x 2 = 10 Answer all questions in not less than 50words
B	K3	40	4 x 10 = 40 Answer the following with internal choice in not less than 350words
	K4		
C	K5 K6	40	2 x 20 = 40 Answer the following with internal choice in not less than 750words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/DP34												
	Course Title: DIGITAL PUBLIC RELATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	-	-	3	3	2	1	2
CO 2	3	3	3	3	2	3	1	1	3	3	3	1	1
CO 3	3	3	3	3	3	3	1	1	3	3	3	1	2
CO 4	3	3	3	3	3	3	2	1	3	3	3	2	2
CO 5	3	3	3	3	3	3	3	2	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

PUBLIC RELATIONS CAMPAIGN MANAGEMENT

CODE:23PR/PC/CM34

CREDITS: 4

L T P: 1 0 5

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To enable an understanding on the conception and planning of a campaign
- To enable team work for an effective execution and management of the campaign
- To enable efficient application of communications skills developed over the previous semesters
- To foster a sense of responsibility and belongingness with social and environmental cause
- To enable an understanding of ethical principles in public relations and apply them while executing campaigns

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define key term and concepts related to public relations campaigns	K1
CO2	understand the impact of campaigns in organisations and its role in shaping public perception	K2
CO3	develop a comprehensive public relations campaign plan applying the communication aspects learnt during the course of the program	K3
CO4	analyse and evaluate the outcomes of previously conducted pr campaigns based on their objectives	K4, K5
CO5	conceive innovative pr campaign integrating traditional and digital media platforms	K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

CAMPAIGN GUIDELINES:

Choice of Topic:

The student is required:

- To adopt a social cause that is relevant to society
- To identify and work with an organisation that is working in the area of the social cause, so that there is continuity and sustainability even after the campaign is over
- To define which facet of the social cause can be most effectively used as a focus of PR activity
- To plan a PR campaign around this facet of the social cause

PR Campaign Aims

The PR campaign should accomplish the following:

- Increase awareness about the case/organisation
- Urge more people to involve themselves with the activities of the social cause/organisation
- Urge donations of cash and kind from the society for the social cause/organisation

PR Campaign planning

The campaign plan must include the following:

- PR Brief
- Media Planning
- Proposed partnerships/sponsors with special emphasis on budget planning, fundraising and fund utilisation including accounting
- Evaluation format

The Media Covered may include:

- Press: Newspaper and magazine coverage
- Out Of Home: Posters, Leaflets
- Radio: Interviews, ideas for interactive shows to involve people
- TV: Expert interview/News Bulletin/News Feature Spots
- Internet: Website design and execution, Blog forum discussions
- Indigenous Media: Folk and other media

Advertising may be planned across all the above media

Below the line PR Activities:

Events, Interactive and Demonstrative Camps, Road Shows, Seminars etc. must be planned and executed.

Documentation:

The document must contain the following:

- Background of the social cause and organisation
- PR brief
- PR plan
- Media Plan
- Explanation of the execution of the above, in detail
- Photographs
- Articles, if any that have been published
- Details of individual contributions

BOOKS FOR REFERENCE

Austin, Erica W, B.E. Pinkleton. *Strategic Public Relations Management: Planning and Managing Effective Communication Programs*. New Jersey: Lawrence Erlbaum, 2006.

Heath, R.L (Ed). *Encyclopedia of Public Relations*. Thousand Oaks: Sage Publications. 2005.

W. Timothy Coombs on 'Goals' in Vol. 1 of *Encyclopedia of Public Relations*

W. Timothy Coombs on 'Objectives' in Vol. 2 of *Encyclopedia of Public Relations*

Don. W. Stacks on 'Benchmarking' in Vol. 1 of *Encyclopedia of Public Relations*

O'Connor, Amy on 'Reputation Management' in Vol. 2 of *Encyclopedia of Public Relations*

Smith, R.D. *Strategic Planning for Public Relations*. New York and London: Routledge.

2009.

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Total Marks: 50

Rubrics for Evaluation	Marks	Cognitive Level
Clear articulation of campaign goals and objectives	10	K1-K2
Ability to work in a team. Discuss and assess the effectiveness of the campaign	20	K3-K5
Accomplishments/Execution of the assigned task	20	K6

End Semester Examination:

Viva-Voce Examination:

Total Marks: 100

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/CM34												
	Course Title: PUBLIC RELATIONS CAMPAIGN MANAGEMENT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2	1	3	3	3	3	3	3	3	3	3	3
CO 2	2	2	1	3	3	3	3	3	3	3	3	3	3
CO 3	1	1	1	1	3	3	3	3	3	3	3	3	3
CO 4	3	2	1	2	3	3	3	3	3	3	3	3	3
CO 5	2	2	1	2	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

MASS COMMUNICATION IN PUBLIC RELATIONS

CODE:23PR/PC/MC34

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To enable an understanding of the interface between PR and Mass Media
- To understand how to maximize the potential of mass media in serving the needs of PR practice
- To enable an understanding on the power of influence and impact of mass communication and media on audience and businesses
- To understand the ethics concerning mass media – Print, Electronic and New Media
- To equip students with the knowledge of interactive communication technologies

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define mass communication and understand the importance of mass media as instruments of disseminating pr messages	K1
CO2	explain the interface of pr and mass media and outline how each of the medium is optimized for opinion building	K2
CO3	apply the concept of media literacy to understand mass media text in the intended manner	K3
CO4	explain media laws and critically analyze the ethical issues faced by media and pr professionals	K4
CO5	explain persuasion and rhetoric techniques in the practice of pr and develop strategies to positively develop reputation through mass communication	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 - Mass Media and Mass Communication– Definitions and Classification 1.2 - Characteristics of Mass Media 1.3 - Functions of Mass Communication 1.4 - Mass Communication and PR Interface 1.5 - Key Trends in Mass Communication	K1, K2	13	1, 2

UNIT	CONTENT	CL	HRS	CO
2	2.1 – The History of Print Media and Electronic Media - Radio and Television 2.2 – Newspaper, Radio and TV as tools of PR and the Tactics 2.3 – Opinion building in Print Media 2.4 – The Impact of Electronic Media on the Audience 2.5 - Ethics in Broadcasting and Print Media	K2, K3	13	2,3
3	3.1 – The Evolution of Films: World and India 3.2 – Films: Characteristics, Advantages and Types 3.3 – PR harnessing the power of Films: the Opportunities 3.4 – Impact of Films for Social and Economic Development 3.5 – Rhetoric in Films from a PR Perspective	K2-K4	16	2-4
4	4.1 - Power and Influence of Mass Media 4.2 - Media Audience – Importance, Categories and Audience as Market for Journalism and PR 4.3 - Facets of Media Audience – Media Reach, Media Access, Media Exposure and Media Effects 4.4 – Media Literacy for PR 4.5 - Audience Effect Theories – Dissonance Theory, Spiral of Silence Theory, Uses and Gratifications Theory, Agenda Setting Theory	K1- K6	13	1- 5
5	5.1 – The History of Internet: World and India 5.2 – New Media as a tool of PR and the Benefits 5.3 – PR Thought Leadership through New Media 5.4 – Reaching, Engaging and Influencing in the Digital Era 5.4.1 – Storytelling for Interactive Communication 5.4.2 – Perception as Reality’s Mirror Image 5.4.3 – Using Plain Language for Attention and Retention 5.5 New Media Ethics 5.5.1– Responsibilities in Using New Media 5.5.2– Cyber Safety	K1- K6	10	1-5

BOOKS FOR STUDY

Hanson E.Ralph. *Mass Communication: Living in a Media World Eighth Edition*. Sage. 2021

Baran, Stanley.J. *Loose Leaf for Introduction to Mass Communication: Media literacy and Culture*. Mc-Graw Hill Education. 2018

Calvert, Clay. Kozlowski,Dan.V. Silver, Derigan. *Mass Media Laws*. Mc-Graw Hill Education. 2017

BOOKS FOR REFERENCE

Bhattacharjee, Tomojit. *New Media in Public Relations The Evolving Scenario in India*. Notion Press. 2020

Carroll, Archie. B; Buchholtz, Ann. K. *Business and Society- Ethics, Sustainability and Stakeholder management*. Cengage Learning, USA, 2015

Hendersen.E.David. *Making News in the Digital Era*. iUniverse,Inc. Bloomington. 2010

Fernando, A.C. *Business Ethics and Corporate Governance*. Pearson Education India, 2010

Jung Ki, Eyun; Nam Kim, Jeong; Ledingham. A. *Public Relations as a Relationship Management*. Routledge, UK, 2015

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Reddi, Narasimma. C.V. *Effective Public Relations and Media Strategy*. Prentice Hall, India, 2019

Thompson, Stuart. *Public Affairs – A Global Perspective*. Urbane Publications, UK, 2016

Wasieleski, David. M; Weber, James. *Stakeholder Management*. Emerald Publishing Limited, UK, 2017

JOURNALS

Public Relations Review: A Global Journal for Research and Comment. Elsevier. ISSN 0363-8111

Journal of Public Relations Research. Routledge (Taylor and Francis Online) ISSN 1062-726x (p); 1532-754x (e)

Public Relations Inquiry. SAGE Journals. ISSN 2046-147x (p); 2046-1488 (e)

Journal of Public Relations Education. Association for Education in Journalism and Mass Communication, USA. ISSN 2573-1742

Asia Pacific Public Relations Journal. Public Relations Institute of Australia. ACN 85066451732

Public Relations Journal. Public Relations Society of America.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50words
	K2		
B	K3	20	4 x 5 =20 Answer the following in not less than 350words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750words with internal choice
	K6		

Other Components

Total Marks: 50

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	10 x 1=10 Multiple choice Questions
	K2	10	5 x 2 = 10 Answer all questions in not less than 50words
B	K3	40	4 x 10 = 40 Answer the following with internal choice in not less than 350words
	K4		
C	K5 K6	40	2 x 20 = 40 Answer the following with internal choice in not less than 750words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/MC34												
	Course Title: MASS COMMUNICATION IN PUBLIC												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	1	3	2	-	3	3	2	3	3	2	3	3
CO 2	3	2	3	3	1	2	2	1	3	3	3	3	3
CO 3	3	3	1	3	1	2	-	2	3	2	1	3	3
CO 4	3	2	3	2	-	-	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

RESEARCH METHODOLOGY FOR PUBLIC RELATIONS

CODE:23PR/PC/RM34

CREDITS: 4

L T P: 4 2 0

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To enable an understanding of key research concepts and theories
- To discern various designs and approaches for Social Science Research
- To enable familiarization with data collection methods commonly used in Public Relations Research and interpret research findings
- To enable develop written and oral communication skills for presenting reports to the audience
- To enable an understanding on ethical issues and Considerations specific to research

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define and identify the key research terminology and concepts	K1
CO2	distinguish between statistical and non-statistical research methods	K2
CO3	apply and utilize the various sources and methods of data collection to obtain information and narratives	K3
CO4	analyse the collected data to infer or find a different perspective to a given study and evaluate the ethical implications of research	K4, K5
CO5	scientifically substantiate the study undertaken with relevant findings and successfully develop a research report	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 – Meaning and Definition of Research 1.2 – Nature, Scope, Elements and Objectives of Research 1.3 – Types and Theories of Research 1.4 – Ethics of Good Research 1.5 – Process of Research and Challenges 1.6 – Need for Research in Public Relations	K1, K2	15	1, 2
2	2.1 – Identifying and Defining Research Problem 2.2 – Techniques of Selection of Research Problems 2.3 – Research Design – Need and Features 2.4 – Types of Research Design: Descriptive, Exploratory and Experimental 2.5 – Concepts of Research Design 2.5.1 – Variables 2.5.2 – Hypothesis 2.6 - Research Approach – Qualitative, Quantitative and Mixed Approaches	K1- K3	15	1-3
3	3.1 – Literature Review – Meaning, Significance and Types 3.2 - Objectives and Functions of Literature Review 3.3 – Steps in Conducting Literature Review 3.4 – Sources of Literature and Literature Mapping 3.5 – Referencing and Types	K2- K4	16	2-4
4	4.1 – Data: Meaning and importance in Public Relations 4.2 – Primary and Secondary Data 4.3 – Ground Study and Baseline Surveys 4.4 – Quantitative methods of data collection - Survey Techniques – Questionnaire and Schedule - Opinion Polling - SEO metrics 4.5 – Qualitative Methods of data collection - Ethnographical approaches - Interviews and types - Focus Groups - Case Study Method	K3- K6	16	3- 5
5	5.1 – Data Preparation: Editing, Coding, Tabulation and data visualization - Use of Software like SPSS and NVivo 5.2 – Analysis Quantitative data 5.2.1 – Sampling Techniques 5.2.2 – Statistical Methods of Testing	K3- K6	16	3-5

UNIT	CONTENT	CL	HRS	CO
	5.3 – Analysis of Qualitative data 5.3.1 Narrative Analysis 5.3.2 – Content and Textual Analysis 5.3.3 – Discourse and Performance Analysis 5.4 – Techniques of Interpretation 5.5 – Report Writing and presentation			

BOOKS FOR STUDY

Best, John. W; Kahn, James. V; Jha, Arbind. K. *Research in Education (tenth edition)*.

Pearson Education, India, 2016

Kothari, C.R. *Research Methodology Methods and Techniques*. New Age International Publishers, New Delhi., 2019

BOOKS FOR REFERENCE

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Creswell, John W; Creswell David J. *Research Design. Qualitative, Quantitative and Mixed Methods Approaches*. Sage Publications, USA. 2019

Dayal, Manoj. *Media Metrics: An Introduction to Quantitative Research in Mass Communication*. Sage Publications India, 2017

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Jugenheimer, Donald. W; Bradley, Samuel. D; Kelly, Larry. D; Hudson, Jerry. C. *Advertising and Public Relations Research*. PHI Learning Pvt. Ltd., 2010

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Lucinda Becker. *Writing Successful Reports and Dissertations*. Sage Publications, 2014

Machi, Lawrence A; Brenda T. McEvoy. *The Literature Review: Six Steps to Success*. Corwin, 2016

Napoleon. D; Sathya Narayanan, Balaji. *Research Methodology- A Theoretical Approach*. Lakshmi Publications, India, 2014

Vinod, Chandra; Anand, Hareendran. *Research Methodology*. Pearson, 2017

JOURNALS

Journal of Mixed Methods Research. SAGE Publishing. ISSN: 1558-6898 (p); 1558-6901

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International Journal of Social Research Methodology. Taylor & Francis. ISSN: 1364-5579 (p); 1464-5300 (e)

International Journal of Qualitative Methods. Sage Publishing. ISSN: 1609-4069 (p); 1609- 4069 (e)

Organizational Research Methods. Sage Publishing. ISSN: 1094-4281 (p); 1552-7425 (e)

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50words
	K2		
B	K3	20	4 x 5 = 20 Answer the following in not less than 350words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750words with internal choice
	K6		

Other Components**Total Marks: 50**

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	10 x 1 = 10 Multiple choice Questions
	K2	10	5 x 2 = 10 Answer all questions in not less than 50words
B	K3	40	4 x 10 = 40 Answer the following with internal choice in not less than 350words
	K4		
C	K5 K6	40	2 x 20 = 40 Answer the following with internal choice in not less than 750words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/RM34												
	Course Title: RESEARCH METHODOLOGY FOR PUBLIC RELATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	1	3	3	-	3	1	1	3	2
CO 2	3	3	2	2	2	3	3	-	3	2	1	-	-
CO 3	3	3	3	3	3	3	3	-	3	3	1	2	1
CO 4	3	3	3	3	3	3	3	-	3	2	1	2	1
CO 5	3	3	3	3	3	3	2	3	3	2	1	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

SUMMER INTERNSHIP

CODE:23PR/PN/SI 32

CREDITS:2

OBJECTIVES OF THE COURSE

- To work in a corporate/ NGO/ Service sector/ Government/ Agencies for 60 working days in summer between First year and Second year
- To acquire skill and training from their selected organization to increase their employability
- To understand the structure and function of their selected organization
- To get to know the current work trends of their selected industry

COURSE LEARNING OUTCOME:

On completion of the course, the students will be able to

- To be able to adopt to working atmosphere and implement the learning/skill/knowledge for professional development
- To be able to document the observations, findings, understandings, perceptions and experiences into a report
- To be able to present the internship report in a viva voce and face questioning

PLAN OF ACTION FOR FACULTY:

- This internship is usually in April-May after the student has completed
 - a) a semester of theory in: Fundamentals of Public Relations, Marketing Management in Public Relations, PR Agency Services and Corporate Public Relations
 - b) papers in Community Relations Interpersonal Communication have already been covered in the first semester and hence will be useful for an internship in the NGO
 - c) case studies through guest lectures by professionals from different organizations
 - d) workshops in communications which include practical and demonstrations
 - e) attended seminars/conferences/workshops
 - f) analyzed data and made presentations during practical work in theory papers

Hence the internship should provide facilities for the student to transform all the above learning experiences into practical applications and provide a platform for experiential learning.

- The faculty should contact different organizations - small, medium and large in both the private and government sector.
- The students should be given an organization according to her academic performance and participation in departmental, collegiate and inter- collegiate activities

- The attendance and assessment sheet should be prepared and collected at the end of the internship and internship assessment is to be entered as C.A marks. Report and Viva Voce marks (End semester exam marks) are to be also entered and consolidated
- When the organization sends an acceptance letter agreeing to the internship of the students one photocopy is to be given to the student and the original filed in the department.
- When the student submits internship reports Viva Voce examination is to be conducted with one internal and external examiner and the consolidated mark sheet to be handed over to the Controller of Examination office

FOR STUDENTS:

- Obtain good theoretical knowledge in all subjects through lectures and reading in the library
- Listen to all case studies and attempt to understand the practical applications in the concerned sector.
- Participate actively in all practical sessions and acquire skills in communication and PR
- Acquire the proper knowledge, attitude and skills in any field study or visit
- Cultivate good listening, speaking, reading, writing and interpersonal communication skills
- SMS supervising faculty daily on work done
- During the 60 days (8 weeks) of internship plan and use the time effectively as follows:
 - a) For the first ten working days learn: the mission, vision, objectives, structure and programs of the organization
 - b) For the next thirty working days obtain information from the personnel in the organization the PR tools used for (i) employees (ii) customers (iii) community (iv) government (v) stockholders (vi) financial institutions (vii) press and other media and (viii) all communication and PR media used to communicate with all the publics of the organization.
 - c) For the last twenty working days document all the work done and show it to the supervisor at the organization and obtain the necessary documentation
- Prepare two copies of the internship report and a soft copy (DVD) and submit it to the department. One report is for the department, one for the organization which has to be handed over with a thank you letter from the department, and one is for the student
- Make a good presentation at the Viva Voce and answer questions; obtain one copy of the report.

SUGGESTED READING

Anne Gregory. Planning and Managing Public Relations Campaign – A Strategic approach. Kogan Page, UK. 2015

Swann, Patricia. *Cases in Public Relations Management*. New York and London: Routledge. 2010.

PATTERN OF ASSESSMENT**Viva – Voce Examination****Total Marks: 100**

Rubrics for Evaluation	Marks	Cognitive Level
Observation and Understanding of PR practices at the organization	20	K1-K2
Task and performance of roles applying the theoretical knowledge gained	40	K3, K4
Presentation of the contribution at different levels; Quick thinking into answering questions based on strategies and tools used for PR activities	40	K5, K6

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

PUBLIC OUTREACH AND POLITICAL COMMUNICATION

CODE:23PR/PC/PP44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To enable an understanding of fundamental concepts and theories of outreach and political communication
- To discuss importance of outreach in various fields
- To enable an understanding of audiences to various outreach communication programs and their needs
- To discern ethical and culturally sensitive communication practices
- To facilitate designing communication strategies for various outreach programs related to development, health, environment and politics

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define the key concepts of public outreach communication and its key role in building awareness among the audiences	K1
CO2	describe the role of culture, context and power dynamics in shaping communication plans for outreach and political communication	K2
CO3	apply the theories and strategies of outreach/ political communication to the real-world campaigns to discuss how specific goals are achieved	K3
CO4	critically analyse the strengths and weaknesses of various media channels used for development, health, environmental and public communication	K4
CO5	design and develop a campaign for developmental, health, environmental and political communication and evaluate the long term sustainability solutions	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 – Introduction to Outreach Communication 1.2 – Public Communicators – Roles and Impact 1.2.1 – Government 1.2.2 – Leaders 1.2.3 – Activist and Interest groups 1.2.4 – Other Influencers 1.3 - Public Outreach Communication for Information, Persuasion and Action 1.4 – Public Outreach and PR: Media Strategies and Planning 1.5 – Conflict Resolution and Ethical Parameters	K1- K4	10	1-4
2	2.1 – Development Communication: Definition, Importance and theories 2.2 – Understanding Participatory Communication approach 2.3 – Media and Technologies: The use of traditional and new media in development campaigns 2.4 – Looking at Social and Behavioural Change through effective communication 2.5 – Understanding Grassroots Communication 2.5.1 – Audience Analysis – Needs, Awareness, communication preferences and attitudes 2.5.2 - Bottom -up Influence 2.5.3 - Working with Non – Profits, Government agencies, local communities and community-based organizations 2.5.4– Grassroots lobbying and advocacy training 2.5.5– Channels of communication – community meetings, storytelling, community radio, local media channels, street canvassing, collaborations, digital communication and social media communication	K2- K6	13	2-5
3	3.1 - Environmental Communication: Meaning, need, objectives and functions 3.2 – Public Awareness about various Environmental Issues: biodiversity and eco systems, climate change, conservation of natural resources 3.3 – Environmental Outreach Programs of Government and Non- Profit Organizations: Planning for campaigns and other communication forms 3.4 – Understanding Environmental Journalism and its importance 3.5 – Increasing PR trends of Eco- Tourism, Nature and Wildlife recreation and Photography	K1-K6	13	2-5

UNIT	CONTENT	CL	HRS	CO
4	4.1 Health Communication: Meaning, Importance and features 4.2 Importance of Health Literacy 4.3 – Understanding Health Behaviours and Expectations of the Public 4.4 – Public Health Outreach Campaigns in Urban and Rural areas: Planning and Messaging Strategies 4.5 – Global Health Communication: Trends 4.5.1 – Digital Communication 4.5.2 – Cultural Implications 4.5.3 – Global Health Organizations and their Efforts in Healthcare Outreach Programs	K1-K6	13	1- 5
5	5.1 – Political Communication: Introduction and Evolution 5.2 – Strategies for Political Messages: Target Audiences, Advertisements and Campaigns 5.3 – News Media and Politics and its impact on Opinion Building 5.4 – Challenges in Political Communication: Dealing with Public Apathy, Misinformation, Disinformation and Partisanship 5.5 – Changing Political Communication Landscape 5.5.1 – Social Media for Political Campaigns 5.5.2 – Music for Communicating Politics 5.5.3 – The role of Entertainment Media and Films in Political Communication 5.5.4 – Political Satire and Humour	K1-K6	16	1-5

BOOKS FOR STUDY

Elena Levine. *Public Relations and Participatory Culture: Fandom, Social Media and Community Engagement*. Routledge, New York. 2016
 Luttrell, Regina M., and Capizzo, Luke W. *Public Relations Campaigns: An Integrated Approach*. SAGE Publications, USA, 2021.

BOOKS FOR REFERENCE

Brereton, Pat. *Essential Concepts of Environmental Communication: An A–Z Guide*. Taylor & Francis, UK, 2022.
 Harris, Usha Sundar. *Participatory Media in Environmental Communication: Engaging Communities in the Periphery*. Taylor & Francis, UK, 2018.
 ICT Innovations for Sustainability. Germany, Springer International Publishing, 2014.
 Jethwaney, Jaishri. *Social Sector Communication in India: Concepts, Practices, and Case Studies*. SAGE Publications, India, 2016
 Malik, Kanchan K. *Development Communication in Practice: India's Experiences* Kanchan Sage Publications, India. 2019
 Maheshwar, Mekam. *Mass Media and Health Communication in India*. LAP LAMBERT Academic Publishing, Germany, 2017
 Neyazi, Taberezh Ahmed. *Political Communication and Mobilisation: The Hindi Media in India*. Cambridge University Press, India, 2018

C.V. Narasimha Reddi, *Effective Public Relations and Media Strategy*, January 2019 Edition
 Renata Schiavo. *Health Communication Theory and Practice*. Jossey Bass (Wiley). San Francisco, 2014
 Shefali Jha. *Media and Politics in India* Sage Publications, New Delhi. 2019
 Vanita Kohli – Khandekar. *The Indian Media Business*. Sage Publications, New Delhi, 2020
 Vemula, Ravindra Kumar; Gavaravarpu, Subba Rao M. *Health Communication in the Changing Media Landscape: Perspectives from Developing Countries*. Springer International Publishing. Germany, 2017

JOURNALS

McCombs, Maxwell E., and Donald L. Shaw. "The Agenda-Setting Function of Mass Media." *Public Opinion Quarterly*, vol. 36, no. 2, 1972, pp. 176-187.
 The Indian Media and Its Social Responsibility" by Navneet Kumar Gupta. (Source: International Journal of Multidisciplinary Educational Research, 2016)
 The Media in the 2014 Indian General Election" by Biswajit Das. (Source: South Asia: Journal of South Asian Studies, 2016)
 New Media in Public Relations: The Evolving Scenario in India. United States, Notion Press, 2020.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50 words
	K2		
B	K3	20	4 x 5 = 20 Answer the following in not less than 350 words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750 words with internal choice
	K6		

Other Components

Total Marks: 50

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	10 x 1=10 Multiple choice Questions
	K2	10	5 x 2 = 10 Answer all questions in not less than 50words
B	K3	40	4 x 10 = 40 Answer the following with internal choice in not less than 350words
	K4		
C	K5	40	2 x 20 = 40 Answer the following with internal choice in not less than 750words
	K6		

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/PP44												
	Course Title: PUBLIC OUTREACH AND POLITICAL COMMUNICATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	1	3	1	1	3	3	2	3	3
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 3	3	3	2	3	3	3	3	2	3	3	2	2	3
CO 4	3	3	2	2	1	1	1	1	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

WRITING FOR MEDIA

CODE:23PR/PC/WM44

CREDITS:4

L T P:4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To provide insights on writing for media in today's business scenario
- To train students on writing to media houses to achieve endorsements and favourable publicity
- To equip the students with skills of writing strategic messages for different media
- To train the students on crafting compelling content on digital media platforms to boost engagement
- To train the students to create stories in internal communication platforms to boost employee morale

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	identify different writing styles and formats used in various media platforms, including news, blogs, social media, and scripts.	K1
CO2	explain the role of media writing in journalism, public relations, advertising, and digital content creation.	K2
CO3	apply the principles of effective media writing and craft persuasive and well-structured press releases, features, ads, blog posts, and social media updates suitable for specific media channels.	K3
CO4	deconstruct media articles and advertisements to identify writing techniques, rhetorical strategies, and persuasive elements.	K4
CO5	recommend improvements to media writing strategies based on critical analysis and ethical considerations and develop creative and persuasive headlines, slogans, content and other promotional copy for pr and marketing purposes	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 - PR and Print Media – the Working Relationship, Tasks of PR, Contents of Newspaper 1.2 - Types of News – Hard News, Soft News, Breaking News and Specialized News. News Values – Timeliness, Proximity, Oddity, Prominence, Impact, Relevance and Conflict. The Inverted Pyramid Structure 1.3 - News Stories, Features, Editorials, Info graphics 1.4 News Headlines – Importance and the Types 1.5 Beat Reporting – Political News, Sports News, Business News, Entertainment News, Environment News, Art and Craft News	K1, K2	13	1, 2
2	2.1 - Audio-Visual Communication – The Features and Importance 2.2– Styles of Writing for Radio, Genres of Radio Programs and Radio announcements 2.3 – Scripting Radio Talks and Programmes 2.4– Genres of Video Programmes, Approaches to Writing for TV 2.5- TV Programming – Conceptualization, Scripting Production Process	K2, K3	13	2,3
3	3.1 Introduction to New Media – Characteristics and Advantages 3.2 Types of Social Media 3.3 Social Media Strategies – Broadcasting, Interaction and Engagement 3.4 Task based Writing for Social Media – Facebook, Twitter, LinkedIn 3.5 Creative Blog Writing and Websites Content Creation	K2-K4	16	2-4
4	4.1– Copywriting – Meaning, Rules and Features 4.2– Steps Involved in Copywriting 4.3- Understanding your Audience: Audience Analysis, Writing for Different Audiences, Crafting Messages that Resonate 4.4– Copywriting Elements, Visual Elements and Text Elements of Advertising 4.5– Creating Impactful Ads. Visualization Process –Thumbnail Sketch, the Rough, Comprehensive Copy, Paste Up or Mechanical, Copy Final	K1- K6	13	1- 5

UNIT	CONTENT	CL	HRS	CO
5	5.1 –Golden Guidelines for Effective PR Writing 5.2 – Key PR Writing and Styles 5.3 - Press Releases and Types, Media Pitches, Preparing Talk points, Speeches for PR 5.4 - Crafting internal memos and announcements, Company Profiles, Creation of Content Calendars for PR Campaigns 5.5 - Writing for Journals – In-house and External	K1- K6	10	1-5

BOOKS FOR STUDY

Filak, Vincent. F. *Dynamics of News Reporting and Writing: Foundational Skills for a Digital Age*. CQ Press. United States, 2018

Sue Teddern. Wardurton, Nick. *Writing for TV and Radio: A Writers' and Artists' Companion*. Bloomsbury Academic India, 2018

BOOKS FOR REFERENCE

Asha Kaul. *Effective Business Communication*. PHI Learning. New Delhi, 2015

Foster, John. *Writing Skills for Public Relations: Style and Technique for Mainstream and Social Media (PR in Practice)*. Kogan Page, 2012

Friedmann, Anthony. *Writing for Visual Media*. Routledge. England, 2014

Lloyd, John. Laura Toogood. *Journalism and PR: News Media and Public Relations in the Digital Age (Reuters Challenges)*. I.B Tauris. 2014

Maria Veloso. *Web Copy That Sells: The Revolutionary Formula for Creating Killer Copy That Grabs Their Attention and Compels Them to Buy*. Amacom. 2013

Newsom, Doug. Haynes, Jim. *Public Relations Writing: Form & Style, International Edition*. Wadsworth Publishing Co.Inc. The USA, 2013

Reddi, Narasimha. C.V, *Effective Public Relations and Media Strategy*, PHI Learning Ltd. New Delhi, 2014

Saravanavel.P. S.Sumathi. *Advertising and Salesmanship*. Margham Publications. Chennai, 2016

Scott, David. *The New Rules of Marketing and PR: How to Use Social Media, Online Video, Mobile Applications, Blogs, News Releases and Viral Marketing to Reach Buyers Directly*. Pan Macmillan India (5th Edition), 2016

Vilanilam.J.V. *Public Relations in India: New Tasks and Responsibilities*. Sage Publications. New Delhi, 2011

JOURNALS

Journal of Advanced Research in Journalism and Mass Communication. ADR Publications. ISSN: 2395-3810

Journal of Technical Writing and Communication. SAGE Publishing. ISSN: 0047-2816 (P); 1541-3780 (e)

Journal of Public Relations Education. AEJMC. ISSN: 2573-1742

Journalism Practice. Taylor & Francis Online. ISSN: 1751-2786 (p); 1751-2794 (e)

Journal of Applied Journalism and Media Studies. Intellect Journals. ISSN: 2001-0818

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50words
	K2		
B	K3	20	4 x 5 =20 Answer the following in not less than 350words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750words with internal choice
	K6		

Other Components

Total Marks: 50

Magazine Creation, Copywriting, Content Creation, Radio and TV Scripts Creation, Seminars and Presentations, Creative Assignments

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	10	10 x 1=10 Multiple choice Questions
	K2	10	5 x 2 = 10 Answer all questions in not less than 50words
B	K3	40	4 x 10 = 40 Answer the following with internal choice in not less than 350words
	K4		
C	K5-K6	40	2 x 20 = 40 Answer the following with internal choice in not less than 750words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/WM44												
	Course Title: WRITING FOR MEDIA												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	3	1	1	2	3	1	2	2
CO 2	3	3	2	3	2	3	1	1	1	3	1	2	3
CO 3	3	3	3	3	3	3	3	2	3	3	1	2	3
CO 4	2	3	3	3	-	1	1	2	1	2	1	-	2
CO 5	3	3	3	3	3	3	3	3	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

SOCIAL MEDIA MANAGEMENT

CODE:23PR/PC/SM44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To enable a comprehensive understanding of the theories related to social media
- To enable the students to use social media tools and techniques for effective brand building
- To enable an understanding on the current social media landscape and emerging trends
- To enable the students to learn about the social media team and various stages of social media marketing
- To enable the students to explore ethical issues related to social media management

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define fundamentals of social media management and identify the role of social media in effective public relations	K1
CO2	explain how different social media platforms function and their unique strengths and weaknesses	K2
CO3	utilise social media scheduling tools and advertising platforms to execute and promote content effectively	K3
CO4	analyse and evaluate the performance of social media advertising campaigns, including return on investment	K4, K5
CO5	generate innovative and data-driven recommendations for social media community building and reputation-building for brands	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Social Media: Definition, Need and Types 1.2 Evolution of Social Networking Sites 1.3 Social Media Theories: Social Identity Theory, Network Effects theory, Cultivation Theory 1.4 Role of Social Media for effective Public Relations 1.5 Social Media Management: An overview	K1	13	1

UNIT	CONTENT	CL	HRS	CO
2	2.1 Employer Branding through Social Media 2.2 Social Branding through Social Media 2.3 Social Media for Startups 2.4 Market Research and strategy for brands 2.5 Online Reputation Management: Google My Business	K1-K2	13	1, 2
3	3.1. Social Networking Sites: Definition, Types 3.2 Facebook, Instagram: Memes, Social Listening, Paid advertising, analytics 3.3 Youtube: Video content creation, shorts and live streaming, paid advertising and analytics 3.4 X(Twitter): Short form content creation, conversation marketing 3.5 LinkedIn: Thought Leadership, B2B Lead generation, Networking, Content creation and analytics	K2- K3	16	2, 3
4	4.1 Social Media team - Roles and responsibilities 4.2 Planning: Strategy, Media selection, content calendar, creatives and visual planning and ads budgeting 4.3 Tools: Hootsuite, Zoho Social, CoSchedule, Semrush and Sprout Social 4.3.1 Built-In Tools: Web Chats, Chatbots, Tags, Forums, Podcasts and broadcast channels 4.4 Implementation: Scheduling of posts - topicals, moment marketing, ad-hoc posts, event promotions, content amplification, audience engagement 4.5 Evaluation: Analysing the performance, metrics, measuring success, report generation	K3- K5	13	3,4
5	5.1 Social Media - Community building and Audience retention 5.2 Social Media Activism, Campaigns, User-generated Content, Consumer-generated content, Employee-generated content 5.3 Cyber laws and cyber crimes 5.4 Ethical issues and challenges - Data Protection, Digital Privacy, controlling misinformation 5.5 Social Media for PR: Reputation-building	K4- K6	10	4, 5

BOOKS FOR STUDY

Karen E. Sutherland. *Strategic Social Media Management Theory and Practice*. Palgrave Macmillan, Singapore, 2021

Deepika Verma. *Social Media Language, Policy and Management*. Parikalpana, Delhi, 2020

BOOKS FOR REFERENCE

Sharma, Venke; Kharas, Hushidar. *The Indestructible Brand*. KBI Publishers, Mumbai, 2017
Zimmerman, Jan; Ng, Deborah. *Social Media Marketing All-in-One For Dummies*. Germany, Wiley, 2012

Amy Van Looy. *Social Media Management: Technologies and Strategies for Creating Business Value*. Springer International Publishing, Switzerland, 2016

Wollan, Robert, et al. *The Social Media Management Handbook: Everything You Need To Know To Get Social Media Working In Your Business*. Wiley, United Kingdom, 2011

Mühl-Benninghaus, Wolfgang. *Handbook of Social Media Management: Value Chain and Business Models in Changing Media Markets*. Springer Berlin Heidelberg, Germany, 2013.

Shields, Ben Ryan. *Social Media Management: Persuasion in Networked Culture*. Oxford University Press, United Kingdom, 2017.

Funk, Tom. *Advanced Social Media Marketing: How to Lead, Launch, and Manage a Successful Social Media Program*. Apress, Netherlands, 2014.

Friedrichsen, Mike, et. al. *Handbook of Social Media Management: Value Chain and Business Models in Changing Media Markets*. Springer Berlin Heidelberg, Germany, 2016.

Olivas-Lujan, Miguel R; Bondarouk, Tanya. *Social Media in Strategic Management*. Emerald Group Publishing Limited, United Kingdom, 2013.

Alavi; Shirin; Ahuja; Mandana. *Managing Social Media Practices in the Digital Economy*. IGI Global, United States, 2019.

JOURNALS

Arora, Anshu Saxena, and Saidat Abidemi Sanni. "Ten years of 'social media marketing' research in the Journal of Promotion Management: Research synthesis, emerging themes, and new directions." *Journal of Promotion Management* 25.4 (2019): 476-499

Montalvo, Roberto E. "Social media management." *International Journal of Management & Information Systems (IJMIS)* 15.3 (2011): 91-96.

Wang, Yuan, Yang Cheng, and Jie Sun. "When public relations meets social media: A systematic review of social media related public relations research from 2006 to 2020." *Public Relations Review* 47.4 (2021): 102081.

Wright, Donald K., and Michelle D. Hinson. "Examining how public relations practitioners actually are using social media." *Public Relations Journal* 3.3 (2009): 1-33.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50 words
	K2		
B	K3	20	4 x 5 = 20 Answer the following in not less than 350 words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750 words with internal choice
	K6		

Other Components

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

Total Marks: 50**End-Semester Examination:****Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	10	10 x 1=10 Multiple Choice Questions
	K2	10	5 x 2 = 10 Answer all questions in not less than 50 words
B	K3	40	4 x 10 = 40 Answer the following with internal choice in not less than 350 words
	K4		
C	K5	40	2 x 20 = 40 Answer the following with internal choice in not less than 750 words
	K6		

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/SM44												
	Course Title: SOCIAL MEDIA MANAGEMENT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	3	3	1	-	-	-	3	3	2	2	3
CO 2	3	2	1	1	2	2	-	-	3	3	1	1	3
CO 3	3	2	3	3	2	3	-	-	3	2	1	1	3
CO 4	3	1	3	1	3	3	-	-	3	3	3	2	3
CO 5	2	2	3	3	2	3	-	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

DISSERTATION

CODE:23PR/PC/DS47

CREDITS:7

OBJECTIVES OF THE COURSE:

- To enable the students to identify and define relevant and significant problems or issues within the field of Public Relations that warrant further investigation
- To develop advanced research skills, including the ability to conduct thorough literature reviews, gather primary and secondary data, and analyze findings effectively
- To cultivate critical thinking and analytical skills to assess and critique existing theories and practices in different fields of PR
- To make use of the research findings for further study or change in the field of Public Relations
- To enable students to make a significant contribution to the field of Public Relations by generating new knowledge, proposing innovative strategies, or offering practical solutions to PR problems

GUIDELINES FOR DISSERTATION

Students are to design and deliver an academically written report of the study that they have undertaken in various topics in the field of Public Relations and Communication. It is important that the aims and the objectives of the study are expressed with clarity. A research proposal must be submitted to the research supervisor for approval of the topic. A clear report in the prescribed format should be submitted duly recommended by the research supervisor at the end of the semester and the candidates must be presented for a viva-voce examination.

Chapterization:

Chapter 1: Purpose and Theoretical Background

The purpose of the study to be undertaken should be specified with a strong theoretical grounding. The significance or the scope of the study should talk about how the research contributes to the existing theoretical material/ knowledge that is seen in the chosen field. The contribution thus made, must be original and contemporary in the field of Public Relations and Communication.

Chapter 2: Review of Literature

While the conceptual Review of Literature elaborates the theoretical framework of the study, the empirical review should comprise of the previous research done in the same topic. The chapter should aim at bringing together the various studies under one focal point of the subject and should effectively contribute to the current research. The chapter should determine the research question or the hypothesis.

Chapter 3: Methodology

The chapter must give a description of the different methods used for the collection of data. The chapter must consist of the description of research design, approach, tools and techniques that were used for conducting the inquiry for the study.

Chapter 4: Analysis

The chapter must consist of the statistical data analysis or the qualitative forms of analysis (eg. interpretations of narratives) of the data collected for inquiry.

Chapter 5: Findings and Discussion

This chapter must elaborate on the findings or results of the analysis done. These may be the results of an experimental study or descriptive research or an exploratory inquiry. The findings and inferences may be conclusive or may lead to a substantial study in future. The chapter may also contain a summary on the research and discuss benefits and limitations in a brief format.

REFERENCING:

Acknowledging the contributions made by authors, specialists, experts, academicians and other scholars to the study is very important. Referencing helps in providing evidence to support the assertions made in the dissertation. References must be accurate, allowing the examiners track the sources from which ideas or inspirations for the study have been drawn. References can be cited from

- Books, journals and articles by experts and scholars
- Newspapers, magazines
- Films, documentaries and other audio-visual sources
- Websites, blogs and other online sources (reviewed/verified)
- Emails and discussion forums
- Interview bytes (audio/video), discourses, narratives or performances
- Lectures and public speeches

PATTERN OF ASSESSMENT:

Continuous Assessment Test:

Total marks: 50

Rubrics of Assessment	Marks	Cognitive Level
Defining Purpose, Theories and Conceptual Framework	10	K1, K2
Data Collection and Documentation	10	K3
Analysis and Interpretation	20	K4, K5
Findings and Conclusion	10	K6

End-Semester:

Total marks: 100

Viva-voce Examination

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PC/DS47												
	Course Title: DISSERTATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	1	2	2	-	3	3	1	2	3
CO 2	3	3	3	2	1	3	2	1	2	2	2	2	2
CO 3	3	3	3	3	3	3	3	2	3	2	3	2	3
CO 4	3	3	3	2	2	3	2	2	3	2	2	2	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

EVENT MANAGEMENT

CODE:23PR/PE/EM15

CREDITS: 5

L T P: 4 0 2

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To understand the components of event management
- To learn the role of Public Relations in reaching through events
- To understand the PR skills needed for event marketing and special events

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	define event management and identify the role of events as a facet of Public Relations at a global level	K1
CO2	discuss the importance of the event management as a career opportunity for entrepreneurship and the market demands that it has	K2
CO3	apply the acquired knowledge and skills required to implement an event plan	K3
CO4	categorize the event planning processes, analyse the strategies of communication and critically evaluate the crisis management process	K4, K5
CO5	organize an event by formulating effective communication tactics and tools to market special events	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Definitions, Types, 5Cs and 5Ws 1.2 Characteristics and Elements of events 1.3 Market and business demand for events 1.4 Event Component Mix 1.5 Role of critical thinking and creativity for event management	K1-K3	16	1-3
2	2.1 Meaning, need and kinds of event marketing 2.2 Role and need of PR in event marketing 2.3 Process of event marketing 2.4 Advertising and PR for event marketing 2.5 Target approach for event marketing among stakeholders	K1-K5	15	1-4

UNIT	CONTENT	CL	HRS	CO
3	3.1 Planning: preparation and purpose 3.2 Implementation: execution and managing crisis 3.3 Communication: Media Relations and Social Media promotions 3.4 Evaluation: effectiveness and outcome 3.5 Image building and reputation management through events	K3-K6	16	3-5
4	4.1 Need, Objectives and purpose for special events 4.2 Role of PR in Managing Special Events 4.3 PR skills involved in organizing special events 4.4 Special events – case study 4.5 Organizing Special Events - Practical	K1-K6	15	1- 5
5	5.1 Knowledge, attitude and skills required for an Event Manager 5.2 Government and non-profit events – case studies 5.3 Corporate or business events– case studies 5.4 Social and Media Events– case studies 5.5 Organizing an event – Practical	K3-K6	16	3-5

BOOKS FOR STUDY

Charles, Bladen; Kennell, James; Emma Abson; Wilde, Nick. Events Management: An Introduction. 2nd Ed. Routledge, 2017.

Mittal, Saurav, Event Management. Independently Published, 2017

BOOKS FOR REFERENCE

Arantxa Castella. The Event Planning handbook: Essentials to successful event management (e book) Amazon Digital Services LLC, 2017.

CreateSpace Independent Publishing Platform, 2015.

Goldblatt, Joe. Special Events: Creating and Sustaining a new world for celebration. 7th Ed. Wiley, 2013.

Ferdinand, Nicole & Kitchin, Paul. J. Event management: An International Approach. Sage Publications Ltd, 2017.

Genadinik, Alex. Event Planning: Management & Marketing for successful events.

Judy Allen. The Business of Event Planning. Wiley, 2002.

Kilkenny, Shannon. The Complete Guide to Successful Event Planning. 3rd Ed. Atlantic Publishing Group, Inc. 2016.

Miziker, Ron. Miziker's Complete Event Planner's Handbook. University of New Mexico Press, 2015.

Preston C.A. Event Marketing: How to successfully promote events, Festivals, Conventions and Expositions. 2nd Ed. Wiley, 2012.

Raj, Razaq; Walters, Paul; Rashid, Tahir. Event Management: Principles and Practice. 3rd Ed. SAGE Publications Ltd, 2017.

Ruth Dowson. Event Planning and Management: A practical handbook for PR and Event Professionals. Kogan Page, 2015.

JOURNAL

Emerging knowledge and innovation in event management, Emerald Group Publishing
Event Evaluation: Definition, Concepts and State of the art Review, Emerald Group Publishing

Event Management Research: The focus today and in the future, ScienceDirect

Event Management, Cognizant Communication. ISSN 1525-9951

International journal of Hospitality and Event Management, Inderscience Publishers. ISSN Online 2050-0491

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50words
	K2		
B	K3	20	4 x 5 =20 Answer the following in not less than 350words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750words with internal choice
	K6		

Other Components

Total Marks: 50

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Theory - Total Marks: 50

Duration: 90 Mins

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50words
	K2		
B	K3	20	4 x 5 =20 Answer the following in not less than 350words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750words with internal choice
	K6		

Practical: End Semester Project (Online/Offline events):

Total Marks: 50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PE/EM15												
	Course Title: EVENT MANAGEMENT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	1	3	1	3	3	3	1	2	1
CO 2	3	3	3	2	3	3	1	1	3	2	1	1	2
CO 3	3	3	3	2	3	3	1	3	3	2	1	1	1
CO 4	3	3	3	2	3	2	1	3	2	3	1	2	2
CO 5	3	2	3	2	3	3	1	3	3	2	1	3	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

ADVERTISING IN PUBLIC RELATIONS

CODE:23PR/PE/AP15

CREDITS: 5

L T P: 4 0 2

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To give students the knowledge of the concepts of Advertising and its principles
- To enable an understanding of the strategies involved in creating an Advertisement that are acceptable to all the levels of audience
- To enable the students to create a media plan keeping in mind the monetary and ethical considerations
- To discuss the various choices of media and the types of ads and appeal that will suit each of the traditional and digital media
- To enable and encourage the students to conceive and plan an Ad Campaign

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define the key concepts and terminology related to advertising management in the context of public relations	K1
CO2	explain the role of advertising as a strategic component and discuss the impact of cultural, social, and technological trends on advertising strategies	K2
CO3	apply audience segmentation and targeting techniques to reach specific stakeholder groups effectively	K3
CO4	analyse the effectiveness of different advertising channels and platforms to achieve specific brand objectives	K4
CO5	evaluate the ethical and social responsibility aspects of advertising decisions and create persuasive and compelling advertising messages that resonate with target audiences	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 - Introduction to Advertising Management – Concepts Need, Scope, objectives and Types of Advertising 1.2 - Functions of Advertising in Image and Reputation Management 1.3 - Commercial and Social Advertising – Trends 1.4 - Advertising and PR – similarities and differences; Digital Advertising and its Scope 1.5 – Ethics of Advertising and Advertising Laws	K1, K2	13	1, 2
2	2.1 – In-house Advertising Departments Vs. Ad Agency 2.2 – Structure and Functions of an Ad Agency 2.3 – Types of Ad Agencies 2.4 – Departments, functions and budgeting in an Ad Agency 2.4.1 – Account Management 2.4.2 – Creative Department 2.4.3 – Media Planning and Buying 2.4.3 – Events Marketing 2.4.4 – Research Analytics and Measurement 2.4.5 – International Advertising and Strategies and legal compliance 2.5 - Roles of Creative Teams in an Ad Agency	K2- K4	16	2-4
3	3.1 – Advertising Messages – planning and strategies 3.2 – Creative Brief, Budgeting, branding decisions and reach 3.3 – Target Audience – Identification, Segmentation and adaptability 3.4 – Choice of Media 3.4.1 - visual elements and copywriting 3.4.2 - Persuasive Strategies and types of appeals 3.5 – Ad copywriting – Introduction and its role in call to action	K2- K5	13	2-5
4	4.1 – Advertising in the Traditional Media – Importance and relevance 4.2 – Audience Reach and Frequency of Advertising on traditional media 4.3 – Ad copy and communication Strategies for Print Media – Magazines and News Papers; Posters and Brochures; working with photographs, cartoons and sketches 4.4 – Copywriting and placement strategies for Broadcast media – Television, Radio and Cinema; Creation of storyboards, scripting, content imagery, jingles, voiceover and production of commercials 4.5-- Concept of Outdoor Advertising, Direct Mail, Tradeshow and Exhibitions	K1-K6	16	1- 5

UNIT	CONTENT	CL	HRS	CO
5	5.1 – Digital Advertising – Introduction 5.2 – Types of Internet advertising – Banner/ Display ads, Pop-up/pop-under ads, Floating and Expanding ads, email ads 5.3 – Video Advertising – YouTube and other video platforms; skippable and non-skippable ads and their revenue generation 5.4 – Social Media Ads- Creation of ads for social media platforms; user demographics, interests and behaviour; forms of social media ads (carousel, image, short-video and sponsored); advertising in Games and Apps 5.5 – Native ads – Content blend; Ad on news feeds, boosted posts and Mobile ads on SMS and push notifications 5.6 – Regulations and Safety Measures for Digital Advertising	K1-K6	16	1-5

BOOKS FOR STUDY

Kelley, Larry D., and Bartel Sheehan, Kim. *Advertising Management in a Digital Environment: Text and Cases*. United Kingdom, Taylor & Francis, 2021.
 Kelly, Larry. D; Jugenheimer, Donald. W, Sheehan, Kim Bartel. *Advertising Media and Planning*. Taylor and Francis, New York, 2015

BOOKS FOR REFERENCE

Gabriela Taylor. *Advertising in a Digital Age*. Global & Digital Publications, 2013
 Jaisree Jethwani; Shruthi Jain. *Advertising Management*. OUPPublication, Delhi, 2012
 Jugenheimer, Donald; Bradley, Samuel.D; Kelly, Larry. D; Hudson, Jerry. C. *Advertising and Public Relations Research*. PHI Learning Pvt Ltd., Delhi, 2010
 Leiss, William; Stephanie Kline; Jhally, Sut; Jaqueline Botterill. *Social Communication in Advertising: Consumption in the Mediated Market Place*. Routledge, UK, 2013
 Marla. R Stafford; Faber, Ronald. J (Ed.). *Advertising, Promotion and New Media*. Routledge, London, 2015
 O'Guinn, Thomas; Allen, Chris; Angeline Close. *Advertising and Integrated Brand Communication*. Cengage Learning, USA, 2018
 Percy, Larry. *Strategic Advertising Management*. Oxford University Press, UK, 2016
 Singh, Shiv; Stephanie Diamond. *Social Marketing for Dummies*. John Wiley & Sons, India, 2013
 Sinha, Sam. *Online Advertising- Your Quick Start Guide*. Lulu Press Inc., 2015
 Young, Miles. *Ogilvy on Advertising in the Digital Age*. Bloomsbury publications, 2018

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Journal of Advertising Research. Advertising Research Foundation (online)
 Journal of Advertising. Taylor and Francis. ISSN: 0091-3367(p); 1557- 7805(e).
 Journal of Advertising Education. SAGE Journals. ISSN: 1098-0482(p); 2516-1873(E). Media Watch: Journal of Communication (SCOPUS). ISSN: 0976-0911(P); 2249-8818

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50 words
	K2		
B	K3	20	4 x 5 = 20 Answer the following in not less than 350 words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750 words with internal choice
	K6		

Other Components**Total Marks: 50**

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours****Theory - Total Marks: 50****Duration: 90 Mins**

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50 words
	K2		
B	K3	20	4 x 5 = 20 Answer the following in not less than 350 words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750 words with internal choice
	K6		

Practical: End Semester Project: Digital Ad Campaign**Total Marks: 50**

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PE/AP15												
	Course Title: ADVERTISING IN PUBLIC RELATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	3	1	1	3	3	1	2	3
CO 2	3	3	3	3	2	3	3	3	3	3	2	1	1
CO 3	2	2	3	3	1	2	1	1	3	3	2	2	1
CO 4	2	3	3	3	2	3	2	1	3	3	3	1	2
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

MEDIA MANAGEMENT

CODE:23PR/PE/MM15

CREDITS:5

L T P:4 0 2

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To enable the students to acquire knowledge on operating media organizations
- To enable students in handling the strategic situations in media enterprises
- To give the students an understanding on media economic factors of print, electronic and online medium
- To give the students knowledge about the converging media technologies and the impact it has
- To enable an understanding about the various laws and acts concerning the media

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define key terms and concepts related to media management and tell the ethical considerations relevant to media management decisions	K1
CO2	explain the role of media managers in contemporary media organizations and summarize the major challenges and opportunities facing media management today	K2
CO3	create a media management strategy for addressing challenges in the industry.	K3
CO4	evaluate the economic factors influencing media content creation and distribution and critique the effectiveness of media advertising strategies.	K4
CO5	assess the role of media management in fostering a diverse and inclusive media environment and design a media revenue diversification strategy that includes both traditional and innovative approaches	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 - The Evolving and Volatile Nature of Media 1.2 – Media Management – Definition, Need and Challenges 1.3 Organizational Communication – Meaning and Approaches 1.3.1 – Types of Media Organizations 1.3.2 Organizational hierarchy and communication flow 1.3.3 Leadership in Media Industry and its Impact 1.4 - Media Managers Roles and Responsibilities 1.5 Media Management Skills	K1, K2	15	1, 2
2	2.1- Media Economics – Definition and Types 2.2 – Media Market: Meaning, Nature and Structure 2.3 – Media Ownership: Patters and Trends 2.4 – Importance of Audience and Analysis in Managing Media Companies 2.4 - Media Planning and Media Buying	K2, K3	15	2,3
3	3.1 – Management of Print and Electronic Media 3.1.1 – Organization Structure and Economic Aspects of Print and Electronic Media 3.1.2 – Newspaper, Magazine and Radio Advertising: Scope and Advantages 3.2 – Readership, Circulation, Subscription and Sales 3.3 – Electronic Media Advertising and Funded Programmes 3.4 – Media Revenue Diversification 3.5 – Media Metrics - Audience Rating, Audience Analysis and Methods	K2-K4	16	2-4
4	4.1 – Technological Advancement and Media Convergence 4.2 – Elements of Media Convergence 4.3 – Information Gathering and Management 4.4 – Understanding Audience: 4.4.1 – Getting the Right Data 4.4.2 – Paid Media Plan 4.4.3 - Web Analytics 4.5 – Facebook, Google and Youtube Ads	K1- K6	16	1- 5
5	5.1 – Media Policy and Regulations 5.2 – Media Privileges and Liabilities 5.3 – Media Laws and Acts 5.4 – Media Sustainability and Strategies 5.5 – Government Support and Media Policy	K1- K6	16	1-5

BOOKS FOR STUDY

Stephen, Robbins.P; Coulter Mary. *Management*. Pearson Education, 2017

Vanita Kohli- Khandekar. *The Indian Media Business*. Sage Publications India, 2017

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Dr. Mishra Kr. Saroj. Media Management. GS Publisher Distributors. 2019
Arpita Menon. Media Planning and Buying: Principles and Practice in the Indian Context. Baron, Roger; Sissors, Jack. Advertising Media Planning, Seventh Edition. McGraw Hill Education, 2017
Chaturvedi B.K. Media Management. Global Vision Publishing House, 2014
Pavlik, John.V. McIntosh, John. Converging Media. Oxford University Press. New Delhi, 2018
Pringle, Peter; Starr, Michael.F; Electronic Media Management. Routledge, 2015
Paul, Sebastian. Law, Ethics and The Media. Lexis Nexis, 2015
Reddi, Narasimha. Effective Public Relations and Media Strategy. PHI learning, 2014
Robbins, Stephen.P; Judge, Timothy.A; Neharika Vohra. Organizational Behavior. Pearson Education, 2016
Rogers, Jason. Building Newspaper Advertising: Selling the By-Product of the Newspaper, Printed Salesmanship; Management and Organization of the Selling Force--Development of New Lines of Business. Arkose Press, 2015
Sunetra Sen Narayan. Shalini Narayanan. India Connected: Mapping the Impact of New Media, Sage Publications. New Delhi, 2016

JOURNALS

Global Media and Communication. SAGE Journals. ISSN: 17427665 International
Journal of Research in Organizational Behavior and Human Resource
Management. IndianJournals.Com. ISSN: 2320-8716 (p); 2320-8724 (e)
Journal of Advanced Research in Journalism and Mass Communication. ADR Publications. ISSN: 2395-3810
International Journal of Media Management. Taylor & Francis. ISSN: 1424-1277 (p); 1424- 1250 (e)
Journal of Media Management and Entrepreneurship. IGI Global: Disseminator of Knowledge. ISSN: 2577-5103 (p); 2577-5111 (e)

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10
	K2		Answer all questions in not less than 50 words
B	K3	20	4 x 5 = 20
	K4		Answer the following in not less than 350 words with internal choice
C	K5	20	2 x 10 = 20
	K6		Answer the following in not less than 750 words with internal choice

Other Components

Total Marks: 50

Role Play, Social Media Storytelling, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Theory - Total Marks: 50

Duration: 90 Mins

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50 words
	K2		
B	K3	20	4 x 5 = 20 Answer the following in not less than 350 words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750 words with internal choice
	K6		

Practical: End Semester Project (Creation of Media Marketing Campaign):

Total Marks: 50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PE/MM15												
	Course Title: MEDIA MANAGEMENT												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	2	2	3	1	3	1	3	3	3
CO 2	3	3	3	-	2	3	3	1	3	3	3	2	2
CO 3	3	3	3	3	3	3	3	-	3	3	3	2	3
CO 4	3	3	2	2	-	2	1	-	1	3	2	2	1
CO 5	3	3	-	1	2	3	3	-	2	3	1	1	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

COMMUNICATION TOOLS FOR PUBLIC RELATIONS

CODE:23PR/PE/CT15

CREDITS: 5

L T P: 4 0 2

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To enable an understanding of how various tools for communication are created
- To enable a sense of creativity in conceiving and designing messages through the communication tools
- To encourage skill development on working with different sections of the audience using one or a combination of these tools

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to

COs	DESCRIPTION	CL
CO1	define the facets of communication in Public Relations and describe the significance of communication skills required for a range of social, cultural, economic and environmental issues	K1
CO2	express one's ideas and visions boldly in the fast-paced innovative world efficiently through communication tools including public speaking, presentations, visual media and the internet	K2
CO3	assess powerfully resonating stories of organizations across the world through vivid photographs and videos and apply the strategies for real world solutions	K3
CO4	analyze and present tactful communication through persuasion and influence as corporate leaders in an ethical manner	K4
CO5	evaluate the need for digital communication for PR and create content for the digital platforms for image building, business as well as to provide solutions to the larger community	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Overview of the importance of communication in Public Relations 1.2 Impact of communication – information, persuasion and influence 1.3 Learning audience needs and specifications 1.4 Skills for communication: 1.4.1 Written Communication: Feature, content, descriptions and taglines	K1-K3	16	1-3

UNIT	CONTENT	CL	HRS	CO
	1.4.2 Oral Communication: Storytelling, debates, group & discussions, interviews and meetings 1.4.3 Audio and Visual Communication: Corporate films, VNR, podcasts, jingles and Advertisements			
2	2.1 Public Speaking and Conversations – similarities and differences 2.2 Selection of topic, organization and research, techniques of delivery (gesture, posture, expressions and eye contact) 2.3 Overcoming stage fright – reasons for nervousness, controlling fear, value of fear and methods to overcome audience rejection 2.4 Self Confidence – Listening skills, giving expressions to thoughts, observations and feelings 2.5 Techniques of speech: Voice modulation, supportive aids and creativity 2.6 Tips to making effective presentations 2.7 Practical Workshop	K2-K6	16	2-5
3	3.1 Photography is PR – Importance and scope 3.2 Basics of photography 3.2.1 Understanding camera – SLR and DSLR 3.2.2 Controls – Shutter speed, Aperture, ISO and other camera settings 3.2.3 Compositions - Subject, Rule of Thirds, Line and Frame 3.2.4 Lighting – Exposure, Flash and Fixing common problems 3.3 Types of Photography 3.4 Photography for News, Features, Blogs and Web Content 3.5 Practical Workshop	K2-K6	15	2-5
4	4.1 Introduction to Short films and Documentaries 4.2 Setting the objectives 4.3 Stages of film-making – Pre-Production 4.3.1 Conceptualization 4.2.2 Budgeting 4.3.3 Scripting and Story Board 4.4 Stages of film-making –Production 4.4.1 Costumes and Lighting 4.4.2 Shooting – techniques and angles 4.4.3 Camera Movement 4.5 Stages of film-making – Post-Production 4.5.1 Editing and Sound Techniques 4.5.2 Distribution	K1-K6	16	1-5

UNIT	CONTENT	CL	HRS	CO
5	5.1 Digital communication and its relevance today 5.2 The application of Digital communication to PR 5.3 Use of digital communication – Information, Education and Entertainment 5.4 Tools of Digital communication - Blogs, Websites, Social media, SEO, Digital newsrooms, Inbound PR 5.5 Digital communication – Case studies	K1-K6	15	1-5

BOOKS FOR STUDY

Carnegie, Dale. *Develop Self Confidence, Improve Public Speaking*. Amazing Reads. Mumbai, 2018
Kirsten Johnson; Jodi Radosh. *Shoot, Edit, Share: Video Production for Mass Media, Marketing, Advertising and Public Relations*. Routledge, 2016

BOOKS FOR REFERENCE

Dilts, Brian, Robert. *Effective Presentation Skills*. Dilts Strategy Group. 2017
Esta De Fossard. *Writing and Producing for Television and Film: Communication for Behavior Change – Vol.2*: SAGE India. New Delhi, 2015
Friedmann, Anthony. *Writing for Visual Media*. Routledge. England, 2014
Ghosh, Arjun. *A History of the Jana Natya Manch: Plays for the People*. SAGE India, 2012
Lewis, Hedwig. *Body Language: A Guide for Professionals*. SAGE Publications. New Delhi, 2012
Mamer, Bruce. *Film Production Technique, Creating the Accomplished Image*. Wadsworth Centage Learning, USA, 2009
Oberg, Brent.C. *An Introduction to Public Speaking*. Jaico, Mumbai, 2011
O.P Singh. *Art of Effective Communication in Group Discussion and Interview*. S Chand & Company. 2014
Sandra Stahl, *The Art and Craft of PR: Creating the Mindset and Skills to Succeed in Public Relations Today*. SAGE Publications, 2018
Tuhovsky, Ian. *Communication Skills: A Practical Guide to Improving Your Social Intelligence, Presentation, Persuasion and Public Speaking (Volume 9)*. Createspace Independent Pub, 2015

JOURNALS

International Journal of Communication. Bahri Publications. ISSN: **0975-640X**
Indian Theatre Journal. Intellect Journals. ISSN: 2059-0660 (p); 2059-0679
Journal of Creative Communication. SAGE Publishing. ISSN: 0973-2586 (p); 0973-2594 (e)
Public Relations Inquiry. SAGE Publishing. ISSN: 2046-174X (p); 2046-1488 (e)
Media Watch: Journal of Communication. Indian Journals.Com. ISSN: 0976-0911(p); 2249- 8818(e)

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50words
	K2		
B	K3	20	4 x 5 =20 Answer the following in not less than 350words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750words with internal choice
	K6		

Other Components**Total Marks: 50**

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours****Theory - Total Marks: 50****Duration: 90 Mins**

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50words
	K2		
B	K3	20	4 x 5 =20 Answer the following in not less than 350words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750words with internal choice
	K6		

Practical: End Semester Project (Shortfilms / Documentary) :**Total Marks: 50**

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PE/CT15												
	Course Title: COMMUNICATION TOOLS FOR PUBLIC RELATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	1	3	3	-	3	2	3	1
CO 2	3	3	3	3	3	3	3	3	-	3	3	2	3
CO 3	2	3	2	3	3	3	3	2	3	3	3	2	3
CO 4	3	3	3	3	3	3	3	1	3	3	3	3	2
CO 5	3	3	2	3	3	3	2	1	1	3	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

DESIGN TOOLS FOR PUBLIC RELATIONS

CODE:23PR/PE/DT15

CREDITS: 5

L T P: 4 0 2

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To enable an understanding of design principles and components
- To enable an understanding of visual analysis techniques and apply them on creative strategies
- To enhance the skills of using visual elements to convey complex information effectively
- To enable an understanding of various designing software to create effective visual communication materials
- To enable an understanding of the difference between designing for print and digital medium

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	recall foundational principles of visual communication such as typography, colour theory and layout	K1
CO2	explain design principles to create effective PR materials and collaterals	K2
CO3	apply the design techniques in creating a brand's visual identity elements including logos	K3
CO4	analyse and assess the effectiveness of print and digital branded materials, in aligning with visual identities	K4, K5
CO5	develop engaging publications that effectively convey key messages to the Public Relations stakeholders	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Creative designing for PR: Introduction 1.2 Trends in visual designing techniques for Public Relations 1.3 Colour: Theory of colours, colour models, types of colours, colours and their meanings, 1.4 Elements and principles of design 1.4.1 Understanding lines, shapes and patterns 1.5 Types of Page Layout, framing and composition 1.5.1 Grid systems and breaking the grid systems	K1	16	1

UNIT	CONTENT	CL	HRS	CO
2	2.1 Typography and typesetting: Anatomy of type, classification and hierarchy 2.2 Design Analysis - Semiotics, Rule of thirds, Perspectives and aesthetics 2.3 Brand Style Guide - Components 2.4 Personality Archetypes for brands 2.5 Creating brand style guide for B2B and B2C brands	K2, K3	16	2,3
3	3.1 Logo Research - client research, organisational mission, vision and values, previous logos and creatives 3.2 Logo Psychology: Role of colour, shape and font in logo 3.3 Types of logo and their use 3.4 Conceptualising and sketching of logo 3.5 Protecting the logo - Trademark 3.5.1 Monetising pre-designed logos	K3	15	3
4	4.1 Designing for Print - Introduction, document sizing, spacing, using CMYK colour space 4.2 Types of printing techniques - Flexography, offset printing, rotogravure, large format, 3D printing and screen printing 4.3 Print Collaterals: Visiting cards, Letterheads, Brochures, flyers, pamphlets and posters 4.4 Print Publishing: Newsletter, Magazine, Newspaper, Tabloid and books 4.5 Software/Tools: Adobe Photoshop, Adobe InDesign	K4-K6	16	4, 5
5	5.1 Designing for Websites - Sourcing Images, themes and templates 5.2 Designing for Social Media - Posts, Stories, Ads, Videos 5.3 Digital Publishing: Infographics, E-books, White papers, Multimedia Magazine/E-Zines 5.4 Inclusive Designing - User-centred approach and diversity consideration 5.5 Software/Tools: Adobe Illustrator, Canva, Wordpress, Behance, Adobe Portfolio, Adobe Premiere Pro	K4-K6	15	4, 5

BOOKS FOR STUDY

Ambrose, Gavin and Harris, Paul. *Design Thinking for Visual Communication*. Bloomsbury Publication, London, 2015

Alina Wheeler. *Designing Brand Identity*. John Wiley & Sons, New Jersey, USA, 2018

BOOKS FOR REFERENCE

Airey, David. *Identity Designed: The Definitive Guide to Visual Branding*. Rockport Publishers, 2019

Airey, David. *Logo Design Love: A Guide to Creating Iconic Brand Identities (Voices that Matter)*. Peachpit Press, 2014

Catherine Slade Brooking. *Creating a Brand Identity: A Guide for Designers*. Laurence King Publishing, 2016

Green, Andy. *Creativity in Public Relations (PR in Practice)*. Kogan Page, 2009

Johnson. *Infographics: Resume, Social Media Infographic, Data Visualization Tools*. Createspace Independent Pub, 2014

Lisa Danae Dayley. *Adobe Photoshop CS6 Bible*. Wiley, 2012

Kogent Learning Solutions Inc. *Indesign CS6 in Simple Steps*. Dreamtech Press, 2012

Kogent Learning Solutions Inc. *CorelDraw 2018 in Simple Steps*. Dreamtech Press, 2018

Kotler, Philip; Kartajaya, Hermawan; Setiawan, Iwan. *Marketing 4.0: Moving from Traditional to Digital*. Wiley India Pvt. Ltd., 2017

Singh, Shiv; Stephanie Diamond. *Social Marketing for Dummies*. John Wiley & Sons, India, 2013

JOURNALS

Journal of Visual Communication. SAGE Journals. ISSN 1470-3572 (P); 1741-3214(E). Visual communication Quarterly. Taylor and Francis online. ISSN 1555-1393 (P); 1555- 1407(E).

Journal of Creative Communication. SAGE Publishing. ISSN: 0973-2586 (p); 0973-2594 (e)

Public Relations Inquiry. SAGE Publishing. ISSN: 2046-174X (p); 2046-1488 (e)

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10
	K2		Answer all questions in not less than 50 words
B	K3	20	4 x 5 =20
	K4		Answer the following in not less than 350 words with internal choice
C	K5	20	2 x 10 = 20
	K6		Answer the following in not less than 750words with internal choice

Other Components

Total Marks: 50

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours****Theory - Total Marks: 50****Duration: 90 Mins**

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50 words
	K2		
B	K3	20	4 x 5 = 20 Answer the following in not less than 350 words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750 words with internal choice
	K6		

Practical: End Semester Project (Creative Strategy for brands/Website Development/Digital Publishing):

Total Marks: 50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PE/DT15												
	Course Title: DESIGN TOOLS FOR PUBLIC RELATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	1	1	-	1	-	-	3	1	1	-	1
CO 2	3	3	3	1	1	1	-	-	3	3	1	-	-
CO 3	3	3	2	3	2	3	-	-	3	3	1	-	3
CO 4	3	2	1	2	2	2	-	-	3	3	1	-	3
CO 5	3	3	3	3	3	3	-	1	3	3	3	1	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

ARTIFICIAL INTELLIGENCE FOR PUBLIC RELATIONS

CODE:23PR/PE/AI15

CREDITS: 5

L T P: 4 0 2

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To enable an understanding of the importance of Artificial Intelligence and its role in disrupting Public Relations Practices
- To comprehend the theories and concepts related to Artificial Intelligence
- To develop the skills in using AI-based tools for Public Relations
- To enable an understanding of AI and Big Data in automating PR Activities
- To enable an understanding of the laws and ethics pertaining to Artificial Intelligence

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define Artificial Intelligence and understand its need in the Public Relations Industry	K1
CO2	classify the areas of Public Relations where Artificial Intelligence is can aid in generating better outcome	K2
CO3	apply tools and techniques to complement traditional Public Relations Exercises	K3
CO4	analyse the roles of AI, Machine Learning and Big Data in enhancing PR practice	K4
CO5	plan and develop Strategies for businesses with the help of AI-based tools and techniques	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Artificial Intelligence - Definition, Need and Types 1.2 Historical context of Artificial Intelligence 1.3 Chatbots and Virtual Assistants 1.4 AI Theories and concepts: Turing test, Machine Learning, Natural Language Processing, Computer Vision, Neural Networks, and Singularity 1.5 Role of AI in transforming Public Relations	K1	15	1

UNIT	CONTENT	CL	HRS	CO
2	2.1 Media Monitoring, social listening and sentiment analysis using AI 2.2 Audience Persona creation and segmentation using AI 2.3 AI Content generation - Ideas and Inspiration to draft Press Release, reports, emails and pitch letters 2.4 Predictive Analytics - Forecasting trends and crises with machine learning 2.5 Crisis Management training through simulation for PR Practitioners	K2	15	2
3	3.1 AI-powered social media management 3.2 Automated Email campaigns - segmenting and personalisation 3.3 Media Outreach - Reaching media and follow up automation 3.4 Targeted Campaigns for Niche Audience - Ideas and A/B Testing 3.5 AI Tools for PR: Google Alerts, Brandwatch, Meltwater, Talkwalker, Cision, Skribe, Muck Rack, Prezly, GPT, Canva	K3	16	3
4	4.1 AI and Human Collaboration 4.2 AI in measuring ROI for businesses 4.3 Integrating Big Data and AI - Data-driven Insights 4.4 Limitations of Artificial Intelligence 4.5 Case Studies: AI-powered PR Campaigns	K4	16	4
5	5.1 AI and Data Privacy - GDPR 5.2 Ethical Data use in Public Relations 5.3 Social Effects of Artificial Intelligence 5.4 Impact of AI and automation in the PR Industry 5.5 Future Trends in Artificial Intelligence	K5, K6	16	5

BOOKS FOR STUDY

Moore, Simon; Hübscher, Roland. *Strategic Communication and AI: Public Relations with Intelligent User Interfaces*. Taylor & Francis, United Kingdom, 2021

Felton, Jakera. *Understanding the Perceptions of Artificial Intelligence in Public Relations*. University of Florida, United States, 2023

BOOKS FOR REFERENCE

Theaker, Alison; Yaxley, Heather. *The Public Relations Strategic Toolkit: An Essential Guide to Successful Public Relations Practice*. N.p., Taylor & Francis, 2012

Luttrell, Regina, et al. *Digital Strategies: Data-Driven Public Relations, Marketing, and Advertising*. Oxford University Press, United Kingdom, 2021

King, Katie. *Using Artificial Intelligence in Marketing: How to Harness AI and Maintain the Competitive Edge*. Kogan Page, India, 2019

Ireni-Saban, Liza, and Sherman, Maya. *Ethical Governance of Artificial Intelligence in the Public Sector*. Taylor & Francis, United Kingdom, 2021

Swiatek, Lukasz, et al. *Artificial Intelligence, Strategic Communicators and Activism*. N.p., Taylor & Francis, 2023

Artificial Intelligence and the Media: Reconsidering Rights and Responsibilities. Edward Elgar Publishing, United Kingdom, 2022

JOURNALS

Public Relations Review: A Global Journal for Research and Comment. Elsevier. ISSN 0363-8111

Panda, G., Upadhyay, A. K., & Khandelwal, K. (2019). Artificial Intelligence: A Strategic Disruption in Public Relations. *Journal of Creative Communications*, 14(3), 196–213

Galloway, Chris, and Lukasz Swiatek. "Public relations and artificial intelligence: It's not (just) about robots." *Public relations review*, 44.5 (2018): 734-740

Buhmann, Alexander, and Candace L. White. "Artificial intelligence in public relations: role and implications." *The Emerald handbook of computer-mediated communication and social media*. Emerald Publishing Limited, 2022. 625-638

Bourne, Clea. "AI cheerleaders: Public relations, neoliberalism and artificial intelligence." *Public Relations Inquiry* 8.2 (2019): 109-125

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10
	K2		Answer all questions in not less than 50words
B	K3	20	4 x 5 =20
	K4		Answer the following in not less than 350words with internal choice
C	K5	20	2 x 10 = 20
	K6		Answer the following in not less than 750words with internal choice

Other Components

Total Marks: 50

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours****Theory - Total Marks: 50****Duration: 90 Mins**

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50 words
	K2		
B	K3	20	4 x 5 = 20 Answer the following in not less than 350 words with internal choice
	K4		
C	K5	20	2 x 10 = 20 Answer the following in not less than 750 words with internal choice
	K6		

Practical: End Semester Project (PR Strategy using AI Tools)**Total Marks: 50**

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PE/AI15												
	Course Title: ARTIFICIAL INTELLIGENCE PUBLIC RELATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	3	2	-	-	3	3	-	-	1
CO 2	3	2	3	3	1	3	1	-	3	3	2	1	3
CO 3	3	2	3	3	3	3	1	1	3	3	3	-	3
CO 4	3	3	3	3	2	1	1	-	3	3	3	-	3
CO 5	3	3	3	3	3	3	1	-	3	3	3	-	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

ENTERTAINMENT PUBLIC RELATIONS

CODE:23PR/PE/ET15

CREDITS:5

L T P:4 0 2

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To enable an understanding about the need for Public Relations in the Entertainment Industry
- To give the students knowledge of the importance of stakeholders for all the areas of Entertainment including Films, TV, OTT, Sports, Arts and Celebrities
- To enable an understanding about the multi thronged strategies and management in Entertainment PR
- To provide a detailed understanding on the tools employed to create publicity, maintain reputation and deal with crises for individual celebrities and entertainment media industries
- To make the students aware of the key trends in Entertainment PR and evaluate the challenges in the same

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define Entertainment PR and identify the needs and requirement for PR in the Entertainment industry	K1
CO2	analyze and interpret PR case studies within the entertainment industry to understand the context, challenges, and outcomes of PR campaigns.	K2
CO3	develop strategic media plans for the Entertainment industry considering media buys, content partnerships, and distribution channels.	K3
CO4	analyze the effectiveness of PR strategies and tactics used in the entertainment industry, considering their impact on audience engagement and brand image and Critique crisis management responses in entertainment PR scenarios	K4
CO5	develop and propose strategic PR recommendations for real-world entertainment PR challenges, demonstrating creativity and critical thinking.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 - Entertainment Public Relations – Meaning, Overview of the Entertainment Industry 1.2 - Essential Elements of Entertainment PR 1.3 - Types of Entertainment PR 1.4 - Skills Required to be Entertainment PR Professionals 1.5 – Trends in Entertainment PR. Entertainment Advertising Vs Entertainment PR	K1, K2	15	1, 2
2	2.1 - Celebrity Public Relations – Definition and an Overview of the Area 2.2 – Key Reasons Why Celebrities need PR 2.3 – Impact of Celebrities: Opinion Leaders, Third Party Endorsers, and Socio-economic Issues Discourse Stakeholders of Celebrities. Advantages of Celebrity PR 2.4 – Celebrity PR Strategy and Management: the Key Components. Case Studies 2.5 – Managing Celebrity PR Crisis: The Elements, Process and Case Studies	K2, K3	15	2,3
3	3.1 – Arts Management – Meaning, Need and an Overview of the Industry 3.2 – Branches of Arts Management: Arts Management, Arts Marketing, Fundraising and Development, Event Management, Arts Education and Outreach, Arts Consulting, Arts Entrepreneurship, Arts Technology and Digital Media 3.3 – PR for Arts Management 3.3.1 – Key Stakeholders 3.3.2 – PR Services: Understanding Clients’ Goals, Mission and Values Communication, Financial Management, Event Management, Marketing, Opportunities seeking, Audience Development, Ethical Considerations 3.4 – PR Strategies for Arts Management 3.5 – Marketing Tools	K2-K5	16	2-4

UNIT	CONTENT	CL	HRS	CO
4	4.1 – Sports PR – Meaning, Need and Objectives 4.2 – Sports Management 4.2.1– Types of Sports Marketing 4.2.2 - Types of Sports Marketing Sponsorships 4.3 – Strategies and Best Practices in Sports PR 4.3.1 – Crisis Management 4.3.2 – Managing Reputation through Online and Offline Platforms 4.4 – The Dynamic Relationship between Sports and Audience 4.5 – Important Tools and Key Trends in Sports PR	K1- K6	16	1- 5
5	5.1 – PR for Films, TV and OTT – Need and Objectives 5.2 – Key Stakeholders for Films, TV and OTT 5.3 - PR Strategies and Tools 5.4 - Importance of Audience and Engaging with them 5.5 – Key Trends and Challenges	K1- K6	16	1-5

BOOKS FOR STUDY

Ames, Carol. *Entertainment Public Relations: Communicating with Audiences*. Austria, Peter Lang, 2016.

Levine, Michael. *A Branded World: Adventures in Public Relations and the Creation of Superbrands*. United Kingdom, Wiley, 2003.

BOOKS FOR REFERENCE

McAuley, Jordan, and Vitale, Joe. *Celebrity Leverage: Insider Secrets to Getting Celebrity Endorsements, Instant Credibility and Star-Powered Publicity, Or How to Make Your Business - Plus Yourself - Rich and Famous*. United States, Mega Niche Media, 2010.

Applebee, R.. *How to Be an Entertainment PR Pro*. N.p., Independently Published, 2017.

Foutz, Natasha Zhang. *Entertainment Marketing*. United States, Now Publishers, 2017.

Tonks, Ann. *The A to Z of Arts Management: Reflections on Theory and Reality*. United Kingdom, Taylor & Francis, 2020.

Radbourne, Jennifer. *Arts Management: A Practical Guide*. United Kingdom, Taylor & Francis, 2023.

Stahl, Sandra. *The Art & Craft of PR: Creating the Mindset and Skills to Succeed in Public Relations Today*. United Kingdom, LID Publishing, 2018.

Walmsley Ben, Moss Stuart. *Entertainment Management: Towards Best Practice*. United Kingdom, CABI, 2014.

Stoldt, G. Clayton, et al. *Sport Public Relations*. United Kingdom, Human Kinetics, 2021.

L'Etang, Jacquie. *Sports Public Relations*. United Kingdom, SAGE Publications, 2013.

Kirkpatrick, Scott. *Introduction to Media Distribution: Film, Television, and New Media*. United Kingdom, Routledge, 2019.

Stradling, Linda. *Production Management for TV and Film: The Professional's Guide*. United Kingdom, A&C Black, 2010.

JOURNALS

Journal of Promotion Management, Taylor & Francis Public Relations Review, Elsevier

Journal of Communication Management, Emerald Publishing. ISSN:1363-254X

Journalism & Mass Communication Quarterly, SAGE Publications.

International Journal of Entertainment Technology and Management. InderScience Publishers. ISSN online 1741-8046, ISSN print 1475-8954

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10
	K2		Answer all questions in not less than 50words
B	K3	20	4 x 5 =20
	K4		Answer the following in not less than 350words with internal choice
C	K5	20	2 x 10 = 20
	K6		Answer the following in not less than 750words with internal choice

Other Components Total Marks: 50

Role Play, Social Media Storytelling, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Theory - Total Marks: 50 Duration: 90 Mins

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10
	K2		Answer all questions in not less than 50words
B	K3	20	4 x 5 =20
	K4		Answer the following in not less than 350words with internal choice
C	K5	20	2 x 10 = 20
	K6		Answer the following in not less than 750words with internal choice

Practical: End Semester Project (Development of PR plan and strategies for a celebrity or business) Total Marks: 50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PE/ET15												
	Course Title: ENTERTAINMENT PUBLIC RELATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	2	1	3	3	2	2	3
CO 2	3	3	3	3	2	2	2	1	3	3	3	2	2
CO 3	3	3	3	2	2	3	2	1	3	3	2	3	3
CO 4	3	3	3	3	2	3	2	1	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

STORYTELLING FOR PUBLIC RELATIONS

CODE:23PR/PE/ST15

CREDITS:5

L T P:4 0 2

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To recognize the importance of storytelling as a strategic communication tool in public relations and understand the psychological and emotional impact of storytelling on audiences.
- To learn the art of crafting compelling narratives that align with an organization's brand and messaging and practice creating stories that resonate with diverse target audiences.
- To understand how to adapt and tailor stories for various communication channels, including social media, press releases, blog posts, and video content
- To explore ethical dilemmas in PR storytelling and understand the importance of transparency, accuracy, and authenticity in narratives.
- To develop skills to measure the effectiveness of PR storytelling campaigns using key performance indicators (KPIs) and metrics.

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define the concept of Storytelling and recall how the popular art is used for marketing and Public relations	K1
CO2	explain the different approaches to Storytelling and demonstrate an understanding on the elements that integrate to make a great story	K2
CO3	develop Content Strategies that can be applied to real world scenarios	K3
CO4	analyze the core branding messages and craft compelling stories to communicate brand voice, shape thoughts and behaviors and social narratives	K4
CO5	evaluate the online and offline tools and platforms for telling stories and integrate them to develop powerful stories to brand individuals and organizations to connect with stakeholders	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 - Storytelling – Meaning and Significance to Public Relations 1.2 - The Art of Storytelling and the Cultural Tradition Behind 1.3 - Beneficial Reasons of Telling Stories in the Data Driven World 1.3.1 – Stories as Game changers 1.3.2 – Communicating Abstract and Complex Concepts 1.3.3 – Promoting Ideas, Shaping and Changing Behaviours 1.3.4 Inspiring and Motivating 1.3.5 Connecting People 1.4 – Types of Storytelling: Oral, Written, Visual and Digital. Transmedia Storytelling 1.5 Stories as a Great Marketing Strategy – Case Studies	K1, K2	16	1, 2
2	2.1 The Role of Storytelling in PR 2.1.1 – Reaching out to Stakeholders and Influencing Changes in Thoughts and Behaviors Using Narratives 2.1.2 – Injecting Personality into Media Relations 2.1.3 – Establishing Brand Voice Through PR 2.1.4 - Achieving Quality and Authenticity 2.2 Strategic Storytelling: 2.1.1 - Characteristic Elements, Linear and Non-linear Storytelling 2.1.2 - Qualities of a Great Story 2.1.3 – Miller’s Model of Storynomics 2.3 – Storytelling as an Integrator 2.4 - The Steps: Situation, Complication and Resolution 2.5 Crafting, Producing and Sharing Compelling PR Stories: The Storytelling Process	K2, K3	16	2,3
3	3.1 – Personal Branding and Individual Storytelling – Meaning and Relevance to PR 3.2 – Benefits of Personal Branding and the Power of Soft Marketing: KVP Formula – Knowledge, Victories and Passions 3.3 – Usage of Storytelling for Personal Branding 3.4 – Inspirational Storytelling 3.5 – Storytelling Platforms for Personal Branding: LinkedIn, Twitter, Facebook, Blogging, Videos	K2-K4	15	2-4

UNIT	CONTENT	CL	HRS	CO
4	4.1 – Organizational Storytelling for Sales, Brand building, Attracting Investors and Edutainment 4.2 – Organizational Storytelling – The Story Flow Factors and The Stakeholders 4.3 – Successful Case Studies on Business Storytelling 4.4 – Storytelling for Small Businesses 4.5 – Product and Services Storytelling and its Impact on the Business	K1- K6	15	1- 5
5	5.1 – Storytelling on Social Media Channels 5.2 - Storytelling as a Part of Content Marketing Strategy 5.3 – Offline Storytelling Tools 5.4 – Social Issue Narratives as Basis for Storytelling: Climate Change and Environmental Conservation, Gender Inclusivity and Diversity, Mental Health Awareness, Healthcare Access and Education Equity 5.5 KPIs to Measure Storytelling Effectiveness: Audience Engagement, Reach and Visibility, Conversion Metrics, Qualitative Feedback, Audience Behavior and RoI	K1- K6	16	1-5

BOOKS FOR STUDY

Dr.Nagpal, Amit. Dr.Hindustani Prakash, Personal Branding, Storytelling and Beyond.

StoryMirror Infotech Pvt.Ltd. 2017

Lazauskas, Joe, and Shane Snow. The Storytelling Edge: How to Transform Your Business, Stop Screaming into the Void, and Make People Love You. Wiley, 2018

BOOKS FOR REFERENCE

Heath, Chip, and Dan Heath. Made to Stick: Why Some Ideas Survive and Others Die. Random House, 2007

Unerman, Sue, and Jonathan Salem Baskin. Tell the Truth: Honesty Is Your Most Powerful Marketing Tool. Wiley, 2012

Fog, Klaus, and Christian Budtz. Storytelling: Branding in Practice. Springer, 2014.

Wilcox, Dennis L., Bryan H. Reber, and Jae-Hwa Shin. Public Relations Writing and Media Techniques. Pearson, 2020

Scott, David Meerman. The New Rules of Marketing & PR: How to Use Social Media, Online Video, Mobile Applications, Blogs, News Releases, and Viral Marketing to Reach Buyers Directly. Wiley, 2020.

Miller, Donald. Building a StoryBrand: Clarify Your Message So Customers Will Listen. HarperCollins, 2017.

McKee, Robert, and Thomas Gerace. Storynomics: Story-Driven Marketing in the Post-Advertising World. Publisher, Year.

Rodriguez, Miri. Brand Storytelling: Put Customers at the Heart of Your Brand Story. Kogan Page. 2023

JOURNALS

Storytelling, Self, Society. Taylor & Francis Online. Print ISSN: 1550-5340 Online ISSN: 1932-0280

Public Relations Review. Elsevier.

Journal of Public Relations Research. Taylor & Francis Online. ISSN: 1062-726X

Journal of Marketing Communications. Taylor & Francis. ISSN: 1352-7266

Co-creating stories: Collaborative experiments in storytelling. Sage Journals.

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10
	K2		Answer all questions in not less than 50words
B	K3	20	4 x 5 =20
	K4		Answer the following in not less than 350words with internal choice
C	K5	20	2 x 10 = 20
	K6		Answer the following in not less than 750words with internal choice

Other Components Total Marks: 50

Role Play, Social Media Storytelling, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination: Total Marks: 100 Duration: 3 hours
Theory - Total Marks: 50 Duration: 90 Mins

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10
	K2		Answer all questions in not less than 50words
B	K3	20	4 x 5 =20
	K4		Answer the following in not less than 350words with internal choice
C	K5	20	2 x 10 = 20
	K6		Answer the following in not less than 750words with internal choice

Practical: End Semester Project (Storytelling strategies through various media):

Total Marks: 50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PR/PE/ST15												
	Course Title: STORYTELLING FOR PUBLIC RELATIONS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	3	2	1	3	3	3	1	2	1	-	1
CO 2	3	3	2	2	3	2	3	3	2	3	2	3	3
CO 3	3	3	-	2	3	2	3	3	2	3	-	3	3
CO 4	3	3	3	3	3	2	3	3	2	3	3	2	3
CO 5	3	3	2	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

**Postgraduate Elective Course offered by Department Public Relations for
M.A. / M.Sc./ M. Com Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

INTRODUCTION TO PUBLIC RELATIONS

CODE:23PR/PE/IP23

CREDITS: 3

L T P: 2 0 1

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- To introduce the fundamental concepts of Public Relations
- To enable an understanding of the working of PR different sectors
- To enable an understanding of various forms of digital platforms and communication tools used today for effective PR activities

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define Public Relations and identify internal and external publics for individual organizations	K1
CO2	explain the role of public relations in organizations and society	K2
CO3	apply ethical principles to solve dilemmas in public relations scenarios	K3
CO4	compare and contrast various communication channels used in public relations.	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Meaning and Definition of Public Relations 1.2 Publics: Internal and External 1.3 Need, Scope and Functions of Public Relations 1.4 Skills for a PR professional 1.5 Public Relations and Advertising/Propaganda/Publicity: Similarities and Differences 1.6 Spinning and Public Relations	K1	8	1

UNIT	CONTENT	CL	HRS	CO
2	2.1 Introduction to Relationship Management 2.1.1 Stakeholder Relations 2.1.2 Working with the Media 2.2 Event Management 2.3 Brand Building and Reputation Management 2.4 Crisis Management 2.5 Ethics in Public Relations	K1, K2	8	1,2
3	3.1 Overview of the importance of communication in PR 3.2 Introduction to Corporate Communications – need and functions 3.3 Impact of communication – information, persuasion and influence 3.4 Learning audience needs and specifications	K1, K2	8	1, 2
4	4.1 Skills for communication: Internal and External 4.2 Written Communication: Feature, content, descriptions and taglines 4.3 Oral Communication: Storytelling, debates, discussions, interviews and meetings 4.4 Audio and Visual Communication: Corporate films, VNR, podcasts, jingles and Advertisements	K3, K4	7	3,4
5	5.1 Introduction to Digital Communication and its impact 5.2 Functions of Digital PR 5.2.1 Content Management on Websites, Blogs and Mobile Applications 5.2.2 Introduction to Search Engine Optimization 5.2.3 Introduction to Data Analytics 5.3 PR Strategies for Social Media Platforms – Facebook, Twitter, Instagram, Snapchat, LinkedIn, Pinterest 5.4 Creative Stories – YouTube and Vlogs	K1- K4	8	1-4

BOOKS FOR STUDY

Alison Theaker. Heather Yaxley. *The Public Relations Strategic Toolkit: An Essential Guide to Successful Public Relations Practice*. Routledge, 2017
 Bernays, Edward L. *Public Relations*. Snowball Publishing, 2016

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Aniisu K Verghese. *Internal Communication: Insights, Practices and Models*. Sage Publications. New Delhi, 2012

Bernays, Edward. L. *Crystallizing Public Opinion*. Open Road Media. New York, 2015

Fitz Patrick, Liam; Valskov, Klavs. *Internal Communications: A Manual for Practitioners*. Kogan Page. 2014

Mishra, Abhishek. Er. *Ethics and Public Relations*. Jnanada Prakashan. New Delhi

Reddi, Narasimha. *Effective Public Relations and Media Strategy*. PHI learning, 2014

Rita Bhimani. *PR 2020: The Trending Practice of Public Relations*. Bee Bee Books, 2018

Sandra Stahl, *The Art and Craft of PR: Creating the Mindset and Skills to Succeed in Public Relations Today*. SAGE Publications, 2018

Smith, Ron. *Public Relations: The Basics*. Routledge, 2013

Vilanilam. J.V. *Public Relations in India: New Tasks and Responsibilities*. Sage Publications. New Delhi, 2011

Yadav, Shyamlal. *Journalism Through RTI: Information Investigation Impact*. Sage Publications. New Delhi, 2017

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International Journal of Communication. Bahri Publications. ISSN: 0975-640X

International Journal of Management Studies. ERM Publications. ISSN: 2249-0302 (p); 2231-2528 (e)

Journal of Advanced Research in Journalism and Mass Communication. ADR Publications. ISSN: 2395-3810

Journal of Communication Management. Emerald Insight. ISSN: 1363-254X

Public Relations Review: A Global Journal of Research and Comment. Elsevier. ISSN: 0363- 8111

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50 words
B	K2 K3	20	4 x 5 = 20 Answer the following in not less than 350 words with internal choice
C	K4	20	2 x 10 = 20 Answer Any 2 in not less than 750 words

Other Components

Total Marks: 50

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	20	2x 10 = 20 Answer all Questions in not less than 50 words
B	K2, K3	40	4 x 10 = 40 Answer the following in not less than 350 words with internal choice
C	K4	40	2 x 20 = 40 Answer ANY 2 in not less than 750 words

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

**Postgraduate Elective Course offered by Department Public Relations for
M.A. / M.Sc./ M. Com Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

DIGITAL MARKETING

CODE:23PR/PE/DM23

CREDITS:3

L T P:2 0 1

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- To introduce the various forms of digital platforms and communication tools used today for effective marketing
- To encourage skill development on working with different stakeholders using digital tools of communication
- To demonstrate an understanding of how social media is utilized for effective brand communications

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	define key digital marketing terms and concepts, such as SEO, SEM, social media marketing, and email marketing	K1
CO2	summarize the customer journey in the digital space and its impact on marketing strategies.	K2
CO3	develop a simple digital marketing plan for a fictional business, including the selection of appropriate digital channels and strategies.	K3
CO4	evaluate the effectiveness of different digital marketing channels and strategies for specific business objectives.	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Meaning and Definition Marketing 1.2 Need, Scope and Functions of Marketing 1.3 Introduction to Digital Communication platforms 1.4 Meaning and Definition of Digital Marketing 1.5 Traditional Vs. Digital Marketing – Similarities and Differences 1.6 Need for Data Analytics for effective Digital Marketing	K1	8	1
2	2.1 Definition and Functions 2.2 Online Reputation Building 2.3 Video and Image Marketing 2.4 Online Campaigns 2.5 Feedback, Tags and Mentions 2.6 Search Spiders and AI	K1, K2	8	1, 2
3	3.1 Meaning and Definition 3.2 Elements of SEO – keyword research, website analysis, content strategy, link building 3.3 Content Optimization and Image Optimization 3.4 Ethics of SEO - Organic Vs. Pay Per Click SEO 3.5 In-house SEO Vs. Outsourced SEO	K1-K2	7	1,2
4	4.1 Definition and Meaning of Mobile Marketing 4.2 Growth of Mobile Marketing in India 4.3 SMS and Push Message Strategies 4.4 Mobile Applications Marketing 4.5 Creating Content for Apps 4.6 App Store Ads Vs. Notifications 4.7 In-game Promotions – the most effective mobile marketing strategy	K3-K4	8	3-4
5	5.1 Social Media Marketing and Ethics 5.2 Tools of communication for Social Media Marketing 5.3 Marketing Strategies for Social Media Platforms – Facebook, Twitter, Instagram, Snapchat, LinkedIn, Pinterest 5.4. Creative Stories for Brand Promotion – YouTube and Vlogs 5.5 Effective campaigns and Brand Communication on Social Media	K1- K4	8	1-4

BOOKS FOR STUDY

Kotler, Philip; Kartajaya, Hermawan; Setiawan, Iwan. *Marketing 4.0: Moving from Traditional to Digital*. Wiley India Pvt. Ltd., 2017

Lancaster, Geoff; Massingham, Lester. *Essentials of Marketing Management*. Routledge Publications, UK, 2018

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Becker, Michael; Arnold, John. *Mobile Marketing for Dummies*. John Wiley & Sons, 2010

Dodson, Ian. *The Art of Digital Marketing*. John Wiley & Sons, New Jersey, 2016

Evans, Dave. *Social Media Marketing – An Hour a Day*. John Wiley & Sons, 2012

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Nagpal, Amit, Hindustani, Prakash. *Personal Branding, Storytelling and beyond*. Story Mirror Infotech, India, 2017

Nargundkar, Rajendra; Sainy, Romi. *Digital Marketing- Cases from India (E-book)*. Amazon Digital Services. 2018

Singh, Shiv; Stephanie Diamond. *Social Marketing for Dummies*. John Wiley & Sons, India, 2013

Susan Chritton. *Personal Branding for Dummies*. John Wiley & Sons, India, 2013

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International Journal for Research in Marketing. Elsevier. ISSN 0167-8116

Journal of Brand Strategy. Henry Stewart Publications. ISSN 2045-855x (p);
ISSN 2045- 8568 (e)

Indian Journal of Marketing (Scopus). Associated Management Consultants Private Limited.
ISSN 0973-8703

Public Relations Review: A Global Journal for Research and Comment. Elsevier.
ISSN 0363- 8111

Journal of Public Relations Research. Routledge (Taylor and Francis Online)
ISSN 1062- 726x (p); 1532-754x (e)

Public Relations Inquiry. SAGE Journals. ISSN 2046-147x (p); 2046-1488 (e)

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Marks	Pattern
A	K1	10	$5 \times 2 = 10$ Answer all questions in not less than 50 words
B	K2, K3	20	$4 \times 5 = 20$ Answer the following in not less than 350 words with internal choice
C	K4	20	$2 \times 10 = 20$ Answer any two questions in not less than 750 words

Other Components**Total Marks: 50**

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Marks	Pattern
A	K1	20	$2 \times 10 = 20$ Answer all questions in not less than 50 words
B	K2, K3	40	$4 \times 10 = 40$ Answer the following in not less than 350 words with internal choice
C	K4	40	$2 \times 20 = 40$ Answer any two in not less than 750 words

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

**Postgraduate Elective Course offered by Department Public Relations for
M.A. / M.Sc./ M. Com Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

PUBLIC RELATIONS SKILLS

CODE:23PR/PE/PS23

CREDITS: 3

L T P: 2 0 1

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- To realise the importance of presenting oneself
- To apprehend the significance of Etiquette during various situations
- To enable the students to understand the vital role played by communication in public relations

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION	CL
CO1	understand the basic communication requirements and concepts	K1
CO2	demonstrate skills required to write effective PR messages in print and electronic media	K2
CO3	apply PR tools and techniques in creating engaging content for various media	K3
CO4	analyse the effectiveness of different communication channels and tactics	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Communication Types – Verbal and Non-Verbal; Levels - Interpersonal, Group and Mass Communication 1.2 Listening – Importance, Types and Barriers 1.3 Telephone and Mic Techniques	K1	8	1
2	2.1 Public Speaking 2.2 Interview – Preparation and Facing Interviews 2.3 Group Discussion – Meaning, Elements and Participation in Group Discussion 2.4 Different Modes of Speaking: Voice Modulation and Supportive Aids	K1, K2	8	1, 2

UNIT	CONTENT	CL	HRS	CO
3	3.1 Searching for Job Opportunities 3.2 Bio – Data, Resume, Curriculum Vitae 3.3 Preparation of Job Application 3.4 Interviewer Skills – Employer’s Perspective	K1, K2	7	2-4
4	4.1 Flair for Writing – an important PR Skill 4.2 Press Releases, House Publication, Blogs, Feature Stories, Backgrounders 4.3 Electronic Media: Preparing and writing for web page	K3, K4	8	3, 4
5	5.1 Media – A Platform to Build Relationship with Publics 5.2 Classification of Media 5.3 Media and PR – Relationship, Media Networking 5.4 Social Media Savvy 5.5 Creativity using Media	K1- K4	8	1-4

BOOKS FOR STUDY

Beebe, Steven. A. Masterson, John.T. *Communicating in Small Groups: Principles and Practices (11th Edition)*. Pearson. London, 2014
Carnegie, Dale. *Develop Self Confidence, Improve Public Speaking*. Amazing Reads. Mumbai, 2018

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Asha Kaul. *Effective Business Communication*. PHI Learning. New Delhi, 2015
Dilts, Brian Robert. *Effective Presentation Skills*. Dilts Strategy Group, 2017
Jane Johnston. *Media Relations: Issues and Strategies*. Allen & Unwin, 2008
Lewis, Hedwig. *Body Language: A Guide for Professionals*. Sage Publications. New Delhi, 2012
Oberg, Brent.C. *An Introduction to Public Speaking*. Jaico. Mumbai, 2011
O.P Singh. *Art of Effective Communication in Group Discussion and Interview*. S Chand & Company, 2014
Reddi, Narasimha. *Effective Public Relations and Media Strategy*. PHI learning, 2014
Rita Bhimani. *PR 2020: The Trending Practice of Public Relations*. Bee Bee Books, 2018
Sandra Stahl, *The Art and Craft of PR: Creating the Mindset and Skills to Succeed in Public Relations Today*. SAGE Publications, 2018
Tuhovsky, Ian. *Communication Skills: A Practical Guide to Improving Your Social Intelligence, Presentation, Persuasion and Public Speaking (Volume 9)*. Createspace Independent Pub, 2015

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Communicator. Indian Institute of Mass Communication. ISSN: 0588-8093

International Journal of Communication. Bahri Publications. ISSN: 0975-640X

Journal of Advanced Research in Journalism and Mass Communication. ADR Publications. ISSN: 2395-3810

Journal of Creative Communication. SAGE Publishing. ISSN: 0973-2586 (p); 0973-2594

(e) Public Relations Review: A Global Journal of Research and Comment. Elsevier. ISSN: 0363- 8111

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Marks	Pattern
A	K1	10	5 x 2 = 10 Answer all questions in not less than 50 words
B	K2, K3	20	4 x 5 =20 Answer the following in not less than 350 words with internal choice
C	K4	20	2 x 10 = 20 Answer any two questions in not less than 750words

Other Components

Total Marks: 50

Quiz, Group Discussions, Role Play, Case Studies, Seminars and Presentations, Creative Assignments

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Marks	Pattern
A	K1	20	2x10=20 Answer all questions in not less than 50 words
B	K2, K3	40	4 x 10 = 40 Answer the following in not less than 350 words with internal choice
C	K4	40	2 x 20 = 40 Answer any two in not less than 750 words

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

DIGITAL COMMUNICATION

CODE:23PR/PI/DC24

CREDITS:4

OBJECTIVES OF THE COURSE

- To enable an understanding of the basic premises and the fundamental concepts of digital communication
- To enable comprehension of the effectiveness of digital communication in the field of PR
- To appreciate the role of social media platforms for creating persuasive content

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION
CO1	Define and recall the key principles of digital communication in Public Relations
CO2	Describe the role of Digital media in shaping public opinion
CO3	Apply digital communication strategies to create Marketing ideas
CO4	Analyse the effectiveness of various digital communication channels in reaching target audiences
CO5	Critique the success of a real-world PR campaign that relied heavily on Digital Communication

UNIT	CONTENT	CO
1	1.1 Introduction to digital communication 1.2 Need for and importance of digital communication 1.3 Scope of digital communication 1.4 Growth of digital communication in India 1.5 Digital communication as a modern tool of PR	1, 2
2	2.1 Blog – Meaning and definition 2.2 Nature of blogging – characteristics and elements Types of blogging 2.3 Skills set required for blogging 2.4 Effective communication through blogging	3-5

UNIT	CONTENT	CO
3	3.1 Websites – purpose of websites, characteristics and elements 3.2 Websites as an integral tool of communication for the organization/business 3.3 Importance of news emphasis and frequent updates on web portals 3.4 Importance and purpose of hyperlinks and keywords 3.5 Writing specialized content for websites	3-5
4	4.1 social media – Use and need of social media for communication and its types 4.2 A shift from traditional media to social media 4.3 Technical skill sets for social media communication 4.3.1 Visual elements – cartoons, caricatures, pictures and infographics 4.3.2 Text elements – buzz words, messages with limited characters and hashtag 4.4 Effectiveness of social media communication	3-5
5	5.1 Impact of globalization on e-commerce 5.2 USP of E-Commerce 5.2.1 Design, color, features and layout 5.2.2 Content – Headlines, taglines and body copy 5.2.3 Advertisements and promotions 5.3 E-commerce through mobile applications 5.3.1 Communication through mobile apps 5.3.2 Effectiveness of notifications and push messages 5.4 Effective handling of complaints and grievance redressal	3-5

BOOKS FOR STUDY

Gray, Kyle. *The Story Engine: An Entrepreneur's Guide to Content Strategy and Brand Storytelling Without Spending All Day Writing*. CreateSpace Independent Publishing Platform, 2017

Nagpal, Amit, Hindustani, Prakash. *Personal Branding, Storytelling and beyond*. Story Mirror Infotech, India, 2017

BOOKS FOR REFERENCE

Andrews, Adrian. *Website Marketing and Promotion (E-Book)*. 2014

Bly, Robert. W. *The Digital Marketing Handbook*. Entrepreneur Press, 2018

Dodson, Ian. *The Art of Digital Marketing*. John Wiley & Sons, New Jersey, 2016

Emma Lopez. *Regulations for Blogging Business*. Creative Space Independent Pub,

2015 Evans, Dave. *Social Media Marketing – An Hour a Day*. John Wiley & Sons,

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Singh, Shiv; Stephanie Diamond. *Social Marketing for Dummies*. John Wiley & Sons, India, 2013

Susan Chritton. *Personal Branding for Dummies*. John Wiley & Sons, India, 2013

Susanna Gardener, Birley, Shane. *Blogging for Dummies*. John Wiley & Sons Inc., New Jersey, USA, 2012

JOURNALS

International Journal for Research in Marketing. Elsevier. ISSN 0167-8116

Journal of Brand Strategy. Henry Stewart Publications. ISSN 2045-855x (p); ISSN 2045-8568 (e)

Indian Journal of Marketing (Scopus). Associated Management Consultants Private Limited. ISSN 0973-8703

Public Relations Review: A Global Journal of Research and Comment. Elsevier. ISSN: 0363-8111

PATTERN OF ASSESSMENT

End- Semester Exam: Total Marks: 100 Duration: 3 hours

Part A: 10X2 = 20Marks (Answer All questions)

Part B: 5X 8 = 40 Marks (Answer any Five out of Eight questions)

Part C: 2X20= 40 Marks (Answer any Two out of Four questions)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: PUBLIC RELATIONS

SYLLABUS

(Effective from the academic year 2023-2024)

GLOBAL PUBLIC RELATIONS

CODE:23PR/PI/GP24

CREDITS:4

OBJECTIVES OF THE COURSE

- To understand the basic premises and fundamental concepts of Public Relations
- To understand the Public Relations scenario worldwide
- To discuss the perspectives and relationship between Global public relations and various cultures

COURSE LEARNING OUTCOMES:

On completion of the course, the students will be able to –

COs	DESCRIPTION
CO1	recall key theories and models relevant to global public relations and memorize important global pr case studies and their outcomes
CO2	describe the challenges of cross-cultural communication in global pr campaigns
CO3	utilize cultural sensitivity in crafting pr messages for diverse global audiences
CO4	analyze the impact of globalization on the practice of public relations
CO5	evaluate the impact of globalization on the practice of public relations

UNIT	CONTENT	CO
1	1.1 Theoretical Framework for Global Public Relations 1.2 Political Economy and Public Relations 1.3 Relationship Between Culture and Public Relations	1, 2
2	2.1 Traditional Media and Public Relations 2.2 Mass Media and Public Relations 2.3 Digital Medium and Public Relations	1-3
3	3.1 Public Relations in the United States of America 3.2 Public Relations in Canada 3.3 Public Relations in Mexico	1-5
4	4.1 Public Relations in UK 4.2 Public Relations in France 4.3 Public Relations in Germany	1-5
5	5.1 Public Relations in China, Japan and Australia 5.2 Public relations in India 5.3 Public Relations in Thailand, Singapore	1-5

BOOKS FOR STUDY

Bardhan, Nilanjana and C. Kay Weaver (Eds). Public Relations in Global Cultural Contexts: Multi-Paradigmatic Perspectives. New York and London: Routledge, 2011.

Black, Sam. Practical Public Relations. New Delhi: Universal, 2005.

Cutlip, S.M., A.H. Center and G.M. Broom. Effective Public Relations. New Jersey : Pearson Education, 2006.

Darrow, R.W., D.J. Forrestal and A.D. Cookman. The Dartnell Public Relations – Handbook Chicago and London: Dartnell, 2007.

McKee, Kathy .B and L.F. Lamb. Applied Public Relations: Cases in Stakeholder Management. New York and London: Routledge, 2009.

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Harrison, Shirley. Public Relations: An Introduction. U.K.: Thomson Learning, 2008.

Black, Sam. Practical Public Relations. New Delhi: Universal, 2005.

Moss, D and Santo De Barbara (Eds). Public Relations Cases: International Perspectives. London and New York: Routledge Taylor and Francis Group, 2009.

Marconi, J. Public Relations: The Complete Guide. U.K.: Thomson and Racom Communications, 2006.

Wilcox, D.L, P.H. Ault, and W.K. Agree. Public Relations. New York: Longman, 2007.

Lesly, P. Handbook of Public Relations& Communications. Mumbai: Jaico, 2008.

JOURNALS

Key messages in public relations campaigns: Melanie James

Exploring the Concept of Mindfulness in Public Relations Practice: Douglas J. Swanson, Ed.

D

Asia Pacific Public Relations Journal: Public Relations Institute of Australia

Public Relations Journal – Public Relations Society of America

Public Relations Inquiry (online): SAGE Publications

PATTERN OF ASSESSMENT

End-Semester Examination: Total Marks:100 Duration: 3 hours

Section A –10x2=20 marks (Answer all the questions)

Section B – 5x8=40 marks (Five out of Eight to be answered)

Section C – 2x20=40 marks (Two out of four to be answered)



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

M.Sc. Degree
PSYCHOLOGY
(CHOICE BASED CREDIT SYSTEM)

OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI- 600 086

DEPARTMENT OF PSYCHOLOGY

PROGRAMME DESCRIPTION

The Master's programme in Psychology seeks to cultivate in the student a scientific mind set and comprehension in the working of the human mind and behaviour. The programme exposes students to psychological knowledge, development, and application. This will allow them to have a greater understanding of themselves, recognise and value the diversity of human behaviour. The course familiarizes students with conceptual frameworks, practicum, field exposure, therapeutic approaches, training, and research. This holistic approach ensures that students develop an interpretation of human experiences as well as the immense diversity of human behaviour and mental processes. The programme eventually empowers students to be confident in their skills to meet a wide array of mental health needs in society.

VISION OF THE DEPARTMENT

To create an inclusive, integrated and healthy community that facilitates in building an empathetic, humane and empowered society

MISSION OF THE DEPARTMENT

Maximize individual potential by equipping every student with the knowledge of Psychology thereby bringing about holistic growth of self and transforming them into ambassadors for social intervention

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

PROGRAMME SPECIFIC OUTCOMES (PSOS)

On successful completion of the M.Sc. Psychology Programme, the students will be able to:

PSO 1	Critically evaluate psychological theories and models in several niche areas of psychology and integrate it into practice
PSO 2	Apply theoretical knowledge in specialized contexts, customize treatment plans for clients and enhance personal and professional development
PSO 3	Exhibit skills required to work in highly specialized occupations concerning the field of psychology and mental health
PSO 4	Summarize scientific findings, construct psychometric tools, administer psychological assessments, conduct research, present case studies and create reports
PSO 5	Communicate efficiently, display critical thinking and problem-solving capabilities, practice the discipline's code of ethics in their academic, personal and professional lives and create an inclusive and integrated system that caters to people of diverse sociocultural backgrounds

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
DISTRIBUTION OF CREDITS AND HOURS
M.Sc. Psychology 2022-2023

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	5	4	5	4	5	4	5	16	20
	4	5	4	5	4	5	4	5	16	20
	4	5			4	6			8	11
					4	6			4	6
PC Practical	5	8	5	8			2	3	12	19
Dissertation							7	9	7	9
PE-dept.	5	5	5	5			5	5	15	15
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PA	2	2							2	2
PN					2				2	0
Library						3		3	0	6
TOTAL	24	30	25	30	23	30	22	30	94	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: PSYCHOLOGY

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continous Assessment Marks, ES-End Semester Marks, M-Maximum Marks										
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M	
SEMESTER-I										
23PY/PC/CP14	Cognitive Psychology	4	4	1	0	3	50	50	100	
23PY/PC/TP14	Theories of Personality	4	4	1	0	3	50	50	100	
23PY/PC/PM14	Psychometry	4	4	1	0	3	50	50	100	
23PY/PC/P115	Psychological Assessment - Practical I	5	0	0	8	3	50	50	100	
	PA/PL									
	Department Elective I									
SEMESTER-II										
23PY/PC/SP24	Applied Social Psychology	4	4	1	0	3	50	50	100	
23PY/PC/NP24	Neuropsychology	4	4	1	0	3	50	50	100	
23PY/PC/P225	Psychological Assessment - Practical II	5	0	0	8	3	50	50	100	
23PY/PK/SS22	Soft Skills	2	2	0	0	-	50	-	100	
CD / ET	Value Education									
	Department Elective II									
	Common Elective I									
SEMESTER-III										
23PY/PC/PP34	Psychopathology	4	4	1	0	3	50	50	100	
23PY/PC/CT34	Counseling Skills and Techniques	4	4	2	0	3	50	50	100	
23PY/PC/RM34	Research Methods and Applied Statistics	4	4	1	0	3	50	50	100	
23PY/PC/BM34	Behaviour Modification	4	4	2	0	3	50	50	100	
23PY/PN/SI32	Summer Internship	2	0	0	0	-	-	50	100	
CD / ET	Value Education									
	Common Elective II									
SEMESTER-IV										
23PY/PC/TD44	Training and Development	4	4	1	0	3	50	50	100	
23PY/PC/PT44	Psychotherapy	4	4	1	0	3	50	50	100	
23PY/PC/CS42	Case Study	2	1	0	2	0	-	50	100	
23PY/PC/DS47	Dissertation	7	0	0	9	0	-	50	100	
	Department Elective III									
Postgraduate Elective Courses Offered to Parent Department										
23PY/PE/EP15	Educational Psychology	5	5	0	0	3	50	50	100	
23PY/PE/ST15	Sports Psychology	5	5	0	0	3	50	50	100	
23PY/PE/OB15	Organisational Behaviour	5	5	0	0	3	50	50	100	
23PY/PE/PO15	Positive Psychology	5	5	0	0	3	50	50	100	
23PY/PE/MA15	Marketing and Advertising	5	5	0	0	3	50	50	100	
23PY/PE/GS15	Gender and Sexuality	5	5	0	0	3	50	50	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086**M.Sc. DEGREE: PSYCHOLOGY****COURSES OF STUDY****(Effective from the academic year 2023-2024)****CHOICE BASED CREDIT SYSTEM**

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continous Assessment Marks, ES-End Semester Marks, M-Maximum Marks										
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M	
Postgraduate Elective Courses Offered to Other Departments										
23PY/PE/PE23	Personal Effectiveness	3	3	0	0	3	50	50	100	
23PY/PE/PW23	Psychology of Well-being	3	3	0	0	3	50	50	100	
The Department will offer one Social Awareness Course										
Social Awareness										
23PY/PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100	
23PY/PA/CR12	Child Rights	2	2	0	0	-	50	-	100	
23PY/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100	
23PY/PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100	
23PY/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100	
23PY/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100	
23PY/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100	
23PY/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100	
23PY/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100	
Independent Elective Courses										
23PY/PI/PC24	Psychology of Conflict and Peace	4	0	0	0	3	-	100	100	
23PY/PI/IR24	Interpersonal Relationship and Communication	4	0	0	0	3	-	100	100	

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

COGNITIVE PSYCHOLOGY

CODE: 23PY/PC/CP14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To define and explain the basic processes of cognitive psychology and different types and theories of Intelligence
- To compare and distinguish the processes of attention, perception and consciousness
- To classify and illustrate types of memory and forgetting and understand language and thought processes
- To examine the techniques used in problem solving and creativity
- To distinguish between thinking, reasoning and decision making processes and understand the techniques in all these cognitive processes

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	explain and distinguish the various cognitive processes.	K1 & K2
CO2	apply theoretical concepts to real life scenarios.	K3
CO3	examine the barriers in various cognitive processes.	K4
CO4	critically evaluate the existing concepts and theories on different cognitive functions.	K5
CO5	integrate various aspects of cognition underlying complex mental processes.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Definition and Scope of Cognitive Psychology 1.2 History and Development of Cognitive Psychology 1.3 Intelligence- Definition, Theories of Intelligence 1.4 Emotional Intelligence- Definition and components 1.5 Artificial Intelligence- Definition and applications	K1- K6	12	1-5
2	Attention, Perception and consciousness 2.1 Nature and definition of attention, perception and consciousness 2.2 Selective attrition and division of attention 2.3 Theories of attention- Filter theory, Attenuation theory, Late selection theory 2.4 Theories of perception- Bottom up and top down process, Gestalt approaches to perception 2.5 Disruptions of perception, subliminal perception 2.6 Consciousness of complex mental processes	K1- K6	14	1-5

3	Memory and language 3.1 Short term vs long term memory, Types of long term memory 3.2 Encoding, storage, and retrieval 3.3 Working memory- definition and model 3.4 Process of forgetting – memory distortions, reconstructive retrieval, eyewitness testimony 3.5 Language- Properties of language, process of language comprehension, language and thought 3.6 Language in social context	K1-K6	13	1-5
4	Problem solving and creativity 4.1 Problem solving- Meaning 4.2 Problem solving cycle, Types of problems 4.3 Problem solving techniques, obstacles and aids in problem solving, knowledge and problem solving 4.4 Creativity- definition, divergent thinking, steps in creative thinking, nature of creative people 4.5 Blocks to creative thinking and promoting creativity	K1-K6	13	1-5
5	Reasoning and decision-making 5.1 Types of thinking 5.2 Reasoning- Meaning, categorical syllogisms, conditional syllogism, syllogistic reasoning, inductive reasoning 5.3 Heuristics and biases and its types 5.4 Decision making- Meaning and types of decision making	K1-K6	13	1-5

BOOKS FOR STUDY

Sternberg, Robert J. *Applied Cognitive Psychology. Perceiving, Learning and Remembering*. Belmont, Cengage Learning, 2009.

Smith, Edward E., and Stephen Michael Kosslyn. *Cognitive Psychology. Mind and Brain*, 1st ed., Essex, Pearson Education Limited, 2014.

Galotti, Kathleen M. *Cognitive Psychology. In and out of the Laboratory*. 5th ed., New Delhi, SAGE Publications Inc, 2020.

Robinson-Riegler, Bridget., and Gregory Robinson-Riegler. *Cognitive Psychology: Applying the Science of the Mind*. 2nd ed., Boston, Pearson Education Limited, 2014.

BOOKS FOR REFERENCE

Kellogg, Ronald T. *Fundamentals of Cognitive Psychology*. 2nd ed., New Delhi, SAGE Publications, 2012.

Parkin, Alan. *Essential Cognitive Psychology*. 1st ed., India, Psychology Press, 2014.

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PY/PC/CP14												
I	Course Title: Cognitive Psychology												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	2	3	3	2	2	3	3	2
CO 2	3	3	3	2	3	3	3	3	3	3	2	2	2
CO 3	3	3	3	2	3	2	3	3	3	3	2	2	2
CO 4	3	3	3	2	3	2	3	3	3	2	3	3	3
CO 5	3	3	3	2	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

THEORIES OF PERSONALITY

CODE: 23PY/PC/TP14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To deepen the students understanding on the concept of personality
- To familiarize students with social psychology and Personology approaches to personality
- To introduce the theoretical importance of existential and trait approach to personality
- To analyse and understand social learning and cognitive approaches to personality
- To evaluate personality theories from other different philosophical perspectives

COURSE LEARNING OUTCOMES

On successful completion of the course, the student will be able to:

COs	DESCRIPTION	CL
CO1	describe and interpret the major approaches and concepts in personality.	K1 & K2
CO2	utilize theoretical knowledge of personality theories to explain individual differences.	K3
CO3	compare and contrast personality theories from different philosophical perspectives.	K4
CO4	critically evaluate the efficacy of personality theories.	K5
CO5	integrate theoretical knowledge to enhance one's personal growth.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Definition & Brief history of personality 1.2 Personality, the internet and social networking, Types of personality 1.3 Determinants of personality 1.4 Varieties of personality measures- Objective tests, projective tests, situational tests	K1-K6	11	1-5
2	Social Psychological and Personology Approach 2.1 Erich Fromm (Freedom Theory)- Nature of human beings, Structure of personality, development of personality, Application and evaluation 2.2 Harry Stack Sullivan (Interpersonal Theory)- Nature of human beings, Structure of personality, Development of personality, Application and evaluation 2.3 Henry Murray (Personology)- Structure of personality, Development of personality, Current status and evaluation	K1-K6	13	1-5

UNIT	CONTENT	CL	HRS	CO
3	Existential and Trait Approach 3.1 Rollo May- Nature of human beings, Structure of personality, Development of personality, Application and evaluation 3.2 Victor Frankl- View of Human Nature, Key Concepts: Phenomenology, Death and Non-Being, Freedom, Responsibility, Isolation, Meaninglessness, Anxiety, Guilt, Will To Meaning and Authenticity 3.3 Gordon Allport- Nature of human beings, Structure of personality, Development of personality, Assessment in Allport's theory, Application and evaluation	K1-K6	13	1-5
4	Cognitive Approach 4.1 George Kelley (Personal construct theory)- Nature of human beings, Structure of personality, Development of personality, Assessment in George Kelley's theory, Application and evaluation 4.2 Kurt Lewin (Field Theory)- Structure of Personality: Differentiation, Connections between regions, Number of regions, Person in Environment, The dynamics of personality, Development of Personality 4.3 Julian Rotter- Locus of Control: Internal vs External control of Reinforcement, Age, Cultural, Behavioural and Physical Health Differences, Developing Locus of Control in Childhood and Reflections on Locus of Control	K1-K6	13	1-5
5	Other Approaches to Personality 5.1 Mc Clelland- Theory of motivation: Need for achievement, Power and Affiliation 5.2 Eric Berne- Basic Assumptions, Theoretical Principles, Eight Fundamental TA "Therapeutic Operations" 5.3 Marvin Zuckerman- Sensation Seeking: Characteristics of sensation seekers, Behavioral and Personality differences, Cognitive process, Occupational preferences, Heredity vs Environment, Reflections on Sensation seeking 5.4 Martin E.P. Seligman- Learned Helplessness in Elderly persons, learned helplessness and Emotional Health; Explanatory Style: optimism and pessimism, Development of Learned helplessness in childhood, Reflections on learned Helplessness	K1-K6	15	1-5

BOOKS FOR STUDY

Friedman, Howard S., and Miriam W. Schustack. *Personality: Classic Theories and Modern Research*. 6th ed., Boston, Pearson, 2016.

Schultz, Duane P. *Theories of Personality*. 10th ed., New Delhi, Cengage Learning India Pvt. Ltd., 2013.

BOOKS FOR REFERENCE

Hall, Calvin Springer, et al. *Theories of Personality*. 4th ed., New Delhi, Wiley India Pvt. Ltd, 2016.
 Feltham, Colin, et al. *The SAGE Handbook of Counselling and Psychotherapy*. 4th ed., London, SAGE Publications Ltd, 2017.

Frazer, Robert, and James Fadiman. *Personality and Personal Growth*. 6th ed., Upper Saddle River, N.J., Pearson Prentice Hall, 2005.

Neukrug, Edward. *Counseling Theory and Practice*. 1st ed., New Delhi, Thomson Press (India) Ltd., 2012.

Reeves, Andrew. *An Introduction to Counselling and Psychotherapy: From Theory to Practice*. 1st ed., London, SAGE Publications Ltd, 2012.

Ewen, Robert B. *An Introduction to Theories of Personality*. 7th ed., New York, Psychology Press, 2014.

Shaffer, David R. *Social and Personality Development*. 6th ed., Belmont, Wadsworth Cengage Learning, 2008.

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

Mapping of Course Outcomes (COs)

to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PY/PC/TP14												
I	Course Title: Theories of Personality												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	2	2	2	2	3	2	1	2	2
CO 2	3	2	3	3	2	2	3	3	3	3	3	2	2
CO 3	3	3	3	3	2	2	3	3	3	3	3	3	3
CO 4	3	3	3	3	2	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

PSYCHOMETRY

CODE: 23PY/PC/PM14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To impart understanding of important concepts of test development
- To equip students to apply the theoretical knowledge in constructing items for intelligence tests
- To foster knowledge about construction of objective and projective tests
- To develop statistical understanding about item selection in psychometry
- To enable students to develop skills and competencies in standardization of tests

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	describe and explain different types of psychometric tests	K1 & K2
CO2	use various tools of psychometry	K3
CO3	perform analysis of items in the process of test construction	K4
CO4	evaluate the standardization process used in different psychometric tests	K5
CO5	construct and standardize items for psychometric tests	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Test Construction 1.1 Defining the test, Classification of tests 1.2 Brief history of testing 1.3 Scaling-Selecting a scaling method, representative scaling methods 1.4 Construction, testing, revision and publishing of the test 1.5 Other methods of test construction: Overview of Criterion keyed tests and Factor analytic tests	K1- K6	13	1-5
2	Intelligence and Personality Tests 2.1 Item writing for Intelligence tests- Analogies, odd-man-out, sequences 2.2 Tests of ability and attainment: Content of items, multiple choice items 2.3 Advantages of multiple choice items, true-false items, matching items, Choosing the item type 2.4 Other item types, arrangement of items for a test trial, guessing 2.5 Personality Inventories: Problems in constructing personality inventories, Writing items for personality inventories: item forms, guidelines for item writing, eliminating response sets, item content	K1-K6	14	1-5

3	Other Types of Tests 3.1 Objective tests: Advantages, principles, distinction between objective tests of ability, temperament and dynamics, Practical hints for objective test construction in personality and motivation, Influence of ability and achievement on objective test scores, Group vs Individual tests, Objective test dimensions 3.2 Overview of projective tests 3.3 Item writing for mood and state scales 3.3 Attitude measurement: types of attitude scales	K1- K6	14	1-5
4	Item Analysis 4.1 Important variables for item analysis 4.2 Two indices in item analysis-correlations of items and the total score, choice of item-analytic statistics 4.3 Item scoring and item analysis-Item difficulty, Item discrimination, Item response theory 4.4 Selection of items after item analysis, Rewriting items, Failure to form a test	K1- K6	12	1-5
5	Test Standardization 5.1 Reliability: An overview of the different types of reliability, Factors affecting reliability estimates, Special issues in reliability, Interpretation of reliability coefficient, 5.2 Validity: An overview of the different types of validity, Validity coefficient and error of estimate-conditions affecting validity coefficient, Magnitude of validity coefficient, Relationship between reliability and validity 5.3 Standardizing the test-obtaining a representative normative sample 5.4 Sampling specific groups, rules for sampling special groups. 5.5 Norms: Meaning and purpose of norms, Raw score transformation	K1-K6	12	1-5

BOOKS FOR STUDY

Kline, Paul. *A Handbook of Test Construction: Introduction to Psychometric Design*. New York, Routledge, 2016.

Gregory, Robert. *Psychological Testing: History, Principles, and Applications*. 7th ed., India, Pearson Education, 2017.

BOOKS FOR REFERENCE

Urbina, Susana, and Anastasi Anne. *Psychological Testing*. 7th ed., India, Pearson Education, 2016.
Hussain, Akbar. *Psychological Testing*. India. Dorling Kindersley Pvt. Ltd., 2012.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PY/PC/PM14												
I	Course Title: Psychometry												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	3	2	2	2	2	2	2	3	2
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	2
CO 3	3	3	3	2	3	3	2	2	3	3	3	3	2
CO 4	3	3	3	2	3	3	2	2	3	3	3	3	2
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

PSYCHOLOGICAL ASSESSMENT: PRACTICAL I

CODE: 23PY/PC/P115

CREDITS: 5

L T P: 0 0 8

TOTAL TEACHING HOURS: 104

OBJECTIVES OF THE COURSE

- To discern the test that will be most applicable for a given target group based on norms, psychometric properties and contradictors for the test
- To demonstrate competency in administering psychological assessments to relevant population groups
- To interpret the results of a psychological assessment using norms
- To display report writing skills
- To interact respectfully with people of diverse backgrounds

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify and classify the various psychological tests based on their utility.	K1 & K2
CO2	illustrate the skills required for appropriate and ethical administration of psychological tests.	K3
CO3	analyze and interpret the psychological findings based on the norms provided.	K4
CO4	provide recommendations based on the results of the test administered.	K5
CO5	draw and report conclusions of psychological tests.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

Ten Experiments to be conducted:

1. INTELLIGENCE
2. INTEREST
3. PERSONALITY AND ATTITUDE
4. PERCEPTION AND ATTENTION
5. MOTIVATION

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 3 hrs**

Cognitive Level	Mark Allocation
K1 Aim Materials Required	5
K2 Plan & Procedure	5
K3 Rapport and Conduction	10
K4 General Discussion	10
K5 Individual Discussion	10
K6 Viva Interpretation & Conclusion	10

End-Semester Examination:**Total Marks: 50****Duration: 3 hrs**

Cognitive Level	Mark Allocation
K1 Aim Materials Required	5
K2 Plan & Procedure	5
K3 Rapport and Conduction	10
K4 General Discussion	10
K5 Individual Discussion	10
K6 Viva Interpretation & Conclusion	10

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PY/PC/P115												
I	Course Title: Psychological Assessment - Practical I												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	1	1	1	2	3	3	3	3
CO 2	3	3	3	3	3	2	2	2	2	3	3	2	3
CO 3	3	3	3	3	3	3	2	3	2	3	3	3	2
CO 4	3	3	3	3	3	2	2	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	2	2	2	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

APPLIED SOCIAL PSYCHOLOGY

CODE: 23PY/PC/SP24

CREDITS: 4

LTP: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To provide contextual information on the field of social psychology
- To sensitize students on the facets of social cognition
- To make students aware of the impact of social influence on performance, perception and cognition
- To familiarize some aspects of social psychology in real life situations
- To encourage students to apply their understanding of social psychology in various fields of life

COURSE LEARNING OUTCOMES

On successful completion of the course, the student will be able to:

COs	DESCRIPTION	CL
CO1	identify and infer aspects of social psychology in real life situations	K1&K2
CO2	make use of effective social psychological practices in interacting with the society	K3
CO3	examine the impact of social thought and influence on various arenas of life	K4
CO4	assess the current patterns of social functioning in some specific systems	K5
CO5	estimate the value of implementing strategies to improve efficiency in some areas of living	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Definition of Social Psychology and Applied Social Psychology 1.2 Historical Context of Applied Social Psychology 1.3 Social psychological Theories: Cognitive Dissonance Theory, Groupthink theory 1.4 Research Methods in Applied Social Psychology 1.5 Role of Applied Social Psychologists	K1- K6	13	1-5

UNIT	CONTENT	CL	HRS	CO
2	Understanding Others & Social Cognition 2.1 Definition of communication, communication as a tool, communication as a transaction, communication and social relationship 2.2 Nonverbal Communication: Basic Channels, Recognizing Deception 2.3 Social Cognition: Automatic and deliberate thinking, Heuristics, Cognitive errors and biases	K1- K6	13	1-5
3	Social Influence 3.1 Social Facilitation of Performance 3.2 Influence on perception and cognition through social norms 3.3 Social influence and altruism 3.4 Social influence through manipulation 3.5 Social influence through fear, shame and guilt	K1- K6	13	1-5
4	Applying Social Psychology 4.1 Applying social psychology in media 4.2 Applying social psychology in the criminal justice system 4.3 Applying Social Psychology to the environment	K1- K6	12	1-5
5	Applications of Social Psychology 5.1 Applying social psychology in the community 5.2 Applying Social Psychology to Diversity 5.3 Applying Social Psychology to culture	K1- K6	14	1-5

BOOKS FOR STUDY

Branscombe, Nyla R., and Robert A Baron. *Social Psychology*. 14th ed., England, Pearson Education Limited, 2017.

Myers, David G., and Jean M. Twenge. *Social Psychology*. 13th ed., New York, McGraw Hill Education, 2021.

Lindgren, Henry C., and John H. Harvey. *An Introduction to Social Psychology: A Student Study Guide*. 3rd ed., Noida, McGraw Hill Education, 1981.

Baumeister, Roy F., and Brad J. Bushman. *Social Psychology and Human Nature*. 5th ed., Chennai, Cengage Learning, 2020.

BOOKS FOR REFERENCE

Feldman, Robert S. *Social Psychology*. 3rd ed, New Jersey, Prentice Hall, 2001.

Schultz P. Wesley and Stuart Oskamp. *Social Psychology : An Applied Perspective*. 1st ed, Hoboken, Prentice Hall, 2000.

Gruman, Jamie A., et al. *Applied Social Psychology: Understanding and Addressing Social and Practical Problems*. 3rd ed., Los Angeles., SAGE Publications, 2017.

WEB RESOURCES

<https://bitly.ws/WxjR>

<https://bitly.ws/Wxne>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PY/PC/SP24												
II	Course Title: Applied Social Psychology												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	3	3	3	3	2	3	3	3
CO 2	3	3	3	2	3	3	3	3	3	2	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

NEUROPSYCHOLOGY

CODE: 23PY/PC/NP24

CREDITS: 4

LTP: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To impart knowledge on important diagnostic tests and tools used in neuropsychology
- To explore the physiology of the brain in understanding behaviours of self and others
- To facilitate an understanding of neurological aspects underlying neuropathology
- To communicate the impact of neuropathology on mental illnesses
- To demonstrate suitability of neuropsychological batteries and expound on the ethical practices in assessment

COURSE LEARNING OUTCOMES

On successful completion of the course, student will be able to:

COs	DESCRIPTION	CL
CO1	summarize the functions and structures of major brain structures and discuss their contributions to cognitive and emotional processes.	K1 & K2
CO2	apply theoretical concepts to interpreting neuropsychological assessment and symptoms of neurological or cognitive deficits	K3
CO3	critically assess theories and research in neuropsychology, identifying their implications for clinical practice.	K4
CO4	evaluate the effectiveness of various intervention strategies in improving the cognitive and emotional functioning of individuals with neurological deficits.	K5
CO5	develop novel interventions for addressing specific neuropsychological challenges.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to neuropsychology 1.1 Neuropsychology- Definition and Branches 1.2 History of Neuropsychology- Early Hypotheses, Localization Theory, Integrated Theories, Modern Neuropsychology 1.3 Tools of Human Neuropsychology: Neurohistology techniques, Radiologic procedures, Electrophysiological procedures, Imaging of brain metabolism, Magnetic imaging procedures, Behavioural examinations, Advancements in imaging techniques	K1- K6	12	1-5

UNIT	CONTENT	CL	HRS	CO
2	Neuropsychology of the brain 2.1 Overview of the CNS 2.2 Frontal Lobe: Motor and premotor cortex, Prefrontal cortex, Orbital cortex, Modern Theories, Lateralization, Intelligence 2.3 Temporal Lobe: Audition, Vision, Attention, Memory, Personality 2.4 Parietal Lobe: Somatosensory perception, Tactile perception, Spatial orientation, Spatial neglect, Symbolic syntheses 2.5 Occipital Lobe: Anatomy, Visual functions, Visual perception functions	K1- K6	14	1-5
3	Disorders of perception and language 3.1 Disorders of perception 3.1.1 Agnosias -Visual, Prosopagnosia, Landmark agnosia 3.1.2 Auditory, Somatosensory, Unilateral spatial neglect 3.2 Language disorders 3.2.1 Aphasia, Forms of Aphasia: Broca's, Wernicke's, Conduction, Anomic, Transcortical motor, Transcortical sensory 3.2.2 Dyslexia and Dysgraphia	K1- K6	15	1-5
4	Movement disorders and Degenerative diseases 4.1 Movement Disorders: Ataxia; Apraxia - types, tests, cerebral basis; Hemiplegia 4.2 Parkinsonism and Parkinson's Disease-clinical features, Neuropathology and treatment 4.3 Huntington's Disease- clinical features, Neuropathology and treatment 4.4 Alzheimer's Disease- clinical features, Neuropathology and treatment, Other dementias	K1- K6	12	1-5
5	Neuropsychological Assessments 5.1 Neurological Examination, Principles of Neuropsychological Assessment, Fixed vs Flexible Testing 5.2 Neuropsychological batteries-Wechsler Adult Intelligence scales, Halstead Reitan Battery, Luria –Nebraska Neuro Psychological Battery; Individual tests; Memory – the WMS 5.3 Practical Issues in Neuropsychological Assessment 5.4 Faults in conducting and reporting the results of neuropsychological assessment, Computer-based assessment.	K1- K6	12	1-5

BOOKS FOR STUDY

Martin, G Neil. *Human Neuropsychology*. 2nd ed., London, Pearson Education Ltd, 2006.
Beaumont, J Graham. *Introduction to Neuropsychology*. 2nd ed., New York, Guilford Publications, 2008.

BOOKS FOR REFERENCE

Zillmer, Eric A, et al. *Principles of Neuropsychology*. 2nd ed., Belmont, Thomson Wadsworth, 2008.
Kolb, Bryan., and Ian Q Whishaw. *Fundamentals of Human Neuropsychology*. 7th ed., New York, Worth Publishers, 2015.

WEB RESOURCES

<https://shorturl.at/aemrV>
<https://shorturl.at/jzTW9>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PY/PC/NP24												
II	Course Title: Neuropsychology												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	2	3	2	2	1	2	3	3	2	2	2
CO 2	3	2	2	3	2	2	2	2	3	3	3	3	3
CO 3	3	3	3	3	3	3	2	2	3	3	2	2	3
CO 4	3	3	3	3	2	3	3	1	3	3	2	3	3
CO 5	2	3	3	3	1	3	3	1	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

PSYCHOLOGICAL ASSESSMENT: PRACTICAL II

CODE: 23PY/PC/P225

CREDITS: 5

L T P: 0 0 8

TOTAL TEACHING HOURS:104

OBJECTIVES OF THE COURSE

- To discern the test that will be most applicable for a given target group based on norms, psychometric properties and contradictors for the test.
- To demonstrate competency in administering psychological assessments to relevant population groups.
- To interpret the results of a psychological assessment using norms.
- To display report writing skills.
- To interact respectfully with people of diverse backgrounds.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify and classify the various psychological tests based on their utility.	K1 & K2
CO2	illustrate the skills required for appropriate and ethical administration of psychological tests.	K3
CO3	analyze and interpret the psychological findings based on the norms provided.	K4
CO4	provide recommendations based on the results of the test administered.	K5
CO5	draw and report conclusions of psychological tests.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

Ten Experiments to be conducted:

1. INDUSTRY / ORGANISATION / WORKPLACE
2. EDUCATION
3. COUNSELLING
4. CLINICAL
5. SPECIAL POPULATION

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 3 hrs

Cognitive Level	Mark Allocation
K1 Aim Materials Required	5
K2 Plan & Procedure	5
K3 Rapport and Conduction	10
K4 General Discussion	10
K5 Individual Discussion	10
K6 Viva Interpretation & Conclusion	10

End-Semester Examination:

Total Marks: 50

Duration: 3 hrs

Cognitive Level	Mark Allocation
K1 Aim Materials Required	5
K2 Plan & Procedure	5
K3 Rapport and Conduction	10
K4 General Discussion	10
K5 Individual Discussion	10
K6 Viva Interpretation & Conclusion	10

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PY/PC/P225												
II	Course Title: Psychological Assessment - Practical II												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	1	1	1	2	3	3	3	3
CO 2	3	3	3	3	3	2	2	2	2	3	3	2	3
CO 3	3	3	3	3	3	3	2	3	2	3	3	3	2
CO 4	3	3	3	3	3	2	2	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	2	2	2	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 -2024)

SOFT SKILLS

CODE: 23PY/PK/SS22

CREDITS: 2

L T P: 2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- To empower students and create opportunities for self-development
- To instill confidence in students to face challenges
- To manage emotions and resolve conflicts
- To organize activities and manage time
- To set goals and plan ahead

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- Communicate with confidence and poise
- Accept themselves and improve on their weaknesses
- Strengthen their relationships through confronting and solving problems
- Work more effectively and complete activities on time
- Plan their future with clarity and focus

Unit 1

Behavioural Traits

(6 Hours)

- 1.1 Self- Awareness
- 1.2 Communication Skills –Verbal and Non-Verbal
- 1.3 Leadership Qualities
- 1.4 Etiquette and Good Manners
- 1.5 Experiential Learning –based on activities

Unit 2

Team Work

(5 Hours)

- 2.1. Interpersonal Skills
- 2.2. People Management
- 2.3. Creative Thinking
- 2.4. Critical Thinking
- 2.5. Experiential Learning – based on activities

Unit

3

Time Management

(5 Hours)

- 3.1. Importance of time management
- 3.2. Planning and Prioritizing
- 3.3. Organizing skills
- 3.4. Action Plan
- 3.5. Experiential Learning – based on activities

Unit 4**Conflict Resolution****(5 Hours)**

- 4.1. Reasons for conflict
- 4.2. Consequences of conflict
- 4.3. Managing emotions
- 4.4. Methods of resolving conflicts
- 4.5. Experiential Learning – based on activities

Unit 5**Career Mapping****(5 Hours)**

- 5.1. Goal-setting and Decision-making
- 5.2. Career Planning
- 5.3. Resume Writing
- 5.4. Handling Interviews
- 5.5. Experiential Learning – based on activities

BOOKS FOR REFERENCE

Khera, Shiv. *You Can Win*. Macmillan India, 2002.

Mishra, Rajiv. K. *Personality Development: Transform Yourself*. Rupa, 2004.

Newstorm, John. W. and Scannell. Edward. E. *Games Trainers Play: Experiential Learning*. Tata McGraw Hill, 1980.

PATTERN OF EVALUATION**Internal Assessment:****Total Marks: 50**

Quiz / Group Presentation /Assignment

No End Semester Examination.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

PSYCHOPATHOLOGY

CODE: 23PY/PC/PP34

CREDITS: 5

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To introduce the concepts of normality and abnormality in the context of psychopathology
- To aid students to apply knowledge by analyzing symptoms and identifying causative factors for Anxiety Disorders, Obsessive Compulsive Disorder, and Sleep-Wake Disorders.
- To help students evaluate the symptoms and causative factors of Personality Disorders
- To enable students to critically assess the symptoms and causative factors of Mood disorders, Substance-related disorders.
- To guide students, devise advanced strategies and solutions for recognizing and managing Developmental Disorders.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the basis of abnormal psychology and explain the differences between normal and abnormal behavior	K1 & K2
CO2	apply diagnostic criteria to identify various mental illnesses	K3
CO3	analyze the classification of major psychopathological conditions.	K4
CO4	evaluate multiple influences of maladaptive behavior as viewed from different theoretical perspectives	K5
CO5	conceptualize cases and develop psychotherapeutic interventions.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Psychopathology 1.1 Definition of Normality and Abnormality 1.2 DSM V classification of mental disorders 1.3 Ethics of mental health professionals	K1-K6	12	1-5
2	Anxiety Disorders, Obsessive Compulsive Disorder and Sleep Disorders 2.1 Social phobia - generalized anxiety disorder, panic disorder and agoraphobia 2.2 Obsessive Compulsive Disorder 2.3 Sleep –wake disorders – insomnia, hypersomnolence, narcolepsy, circadian rhythm sleep disorder 2.4 Causes, treatment and management	K1-K6	13	1-5

UNIT	CONTENT	CL	HRS	CO
3	Personality Disorders 3.1 Personality Disorders – Paranoid, Schizoid, Schizotypal 3.2 Antisocial, Borderline, Histrionic, 3.3 Narcissistic, Avoidant, Dependent, Obsessive Compulsive. 3.4 Causes, treatment and management	K1-K6	14	1-5
4	Mood disorders, Suicide and Substance related disorders 4.1 Unipolar and Bipolar disorders 4.2 Warning signs of suicide, preventive measures of suicide 4.4 Substance related disorders, Alcohol and drug abuse and dependence 4.4 Causes, treatment and management	K1-K6	13	1-5
5	Developmental Disorders 5.1 Attention-Deficit, Autism spectrum disorder 5.2 Enuresis, Sleep walking 5.3 Tics, Specific Learning disorders 5.4 Intellectual Development disorder and Alzheimer's Disease 5.5 Causes, treatment and management	K1-K6	13	1-5

BOOK FOR STUDY

Barlow, David H., et al. *Abnormal Psychology: An Integrative Approach*. 8th ed., New York, Cengage Learning, 2016.
Comer, Ronald J. *Fundamentals of Abnormal Psychology*. 9th ed., New York, Worth Publishers, 2009.

BOOKS FOR REFERENCE

Whitbourne, Halgin R. P., et al. *Abnormal Psychology: Clinical Perspectives on Psychological Disorders*. 7th ed., Columbia, McGraw Hill Education Pvt. Ltd, 2016.
Butcher, J. N., Hooley, J. M., et al, *Abnormal Psychology*. 16th ed., New Delhi, Pearson India Education Services, 2017.

WEB RESOURCES

<https://bit.ly/3rDjD7R>
<https://bit.ly/3ZGURjK>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

Mapping of Course Outcomes (COs)

to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PY/PC/PP34												
III	Course Title: Psychopathology												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	2	2	2	3	2	2	2	2	2
CO 2	3	3	3	2	2	3	3	3	3	2	3	2	2
CO 3	2	2	2	2	2	2	2	3	2	3	3	2	3
CO 4	3	3	2	2	3	3	3	3	3	2	2	2	2
CO 5	2	3	3	2	3	2	3	3	2	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

COUNSELLING SKILLS AND TECHNIQUES

CODE: 23PY/PC/CT34

CREDITS: 4

L T P: 4 2 0

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To impart foundational knowledge in counseling
- To assist in application of Egan's and Ivey's counseling models
- To facilitate change in students using advanced counseling strategies
- To enhance skills in students to use specific counselling approaches
- To equip students with the expertise to deliver specialized counseling to diverse groups

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define counseling and guidance while explaining the essential components of a therapeutic relationship in counseling.	K1 & K2
CO2	differentiate Egan's problem management approach and Ivey's Micro skills model for effective counseling.	K3
CO3	critique intervention strategies for enhancing client self-perception and planning behavior change in counseling.	K4
CO4	integrate contemporary counseling trends and optimize therapeutic practices	K5
CO5	adeptly tailor counseling approaches for specific groups, addressing a range of issues	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to counselling 1.1 Counselling and guidance - definition 1.2 Therapeutic relationship 1.3 Relationship building strategies and methods 1.4 Ethical issues and consideration	K1- K6	14	1-5
2	Skill-Based Models of Counselling 2.1 Egan's problem management approach to helping. 2.1.1 Stage I Problem Clarification 2.1.2 Stage II Setting goals based on dynamic understanding 2.1.3 Stage III Facilitating action 2.2 Ivey and Ivey's Step by Step Micro skills model- Towards Intentional Interviewing and Counselling 2.2.1 The Micro skills hierarchy	K1- K6	17	1-5

UNIT	CONTENT	CL	HRS	CO
	2.2.2 Drawing out client stories 2.2.3 Relationship-Story and Strengths-Goals- Restory-Action 2.2.4 Increasing skills and flexibility 2.2.5 Theory and Micro skills			
3	Strategies for facilitating and evaluating change: 3.1 Principles of selecting intervention strategies 3.2 Strategies for restructuring the clients' self - perception 3.3 Strategies for managing physical and emotional distress 3.4 Strategies for planning and implementing behaviour change	K1- K6	16	1-5
4	Counselling approaches 4.1 Cognitive Behavioural Therapies 4.1.1 Introduction to Ellis's REBT and Beck's CBT, Key concepts 4.1.2 Therapeutic process-goals, therapist's function and role, client's experience, therapeutic relationship. 4.1.3 Application-Therapeutic techniques and procedures 4.2 Solution Focussed Brief Therapy 4.2.1 Understanding Key concepts 4.2.2 Therapeutic Techniques and application 4.3. Acceptance Commitment Therapy 4.3.1 Understanding Key concepts 4.3.2 Therapeutic Techniques and application	K1- K6	16	1-5
5	5.1 Counselling Specific groups 5.1.1 Counselling students-children and adolescents, relationship problems and career counselling 5.1.2 Counselling applied to health settings- Counselling for eating problems, psychosomatic problems, substance abuse 5.1.3 Counselling for emotional management- Anger control, anxiety and panic, depression, post-traumatic stress disorder 5.2 Current trends in counselling 5.2.1 Teletherapy and online counselling - teletherapy and hybrid models, 5.2.2 Technological integration - Virtual reality therapy and Ai assisted therapy - therapeutic process 5.2.3 Multicultural competence - cultural sensitivity and inclusive therapies 5.2.4 Evidence-based therapy - personalized therapies and integration of neuroscience	K1- K6	15	1-5

BOOKS FOR STUDY

Patterson, Lewis E., and Elizabeth R. Welfel. *The Counseling Process*, 4th ed., Pacific Grove, Thomson Brooks/Cole Publishing Co., 1994.

Brammer, Leonard M., and Everett L. Shostrom. *Therapeutic Psychology: Fundamentals of Counseling and Psychotherapy*, Hoboken, Prentice-Hall, 1960.

BOOKS FOR REFERENCE

Palmer, Stephen. *Introduction to Counselling and Psychotherapy: The Essential Guide (Counselling in Action)*. 1st ed., New York, SAGE Publications Ltd, 2000.

Corey, Gerald. *Theory and Practice of Counseling and Psychotherapy*. 9th ed., California, Brooks/Cole Publishing Co., 2001.

Prochaska, James O., and John C. Norcross. *Systems of Psychotherapy*. 9th ed., New York, Cengage, 2010.

WEB RESOURCES

<https://bit.ly/3PTy7Kh>

<https://bit.ly/3PR6rpl>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PY/PC/CT34												
III	Course Title: Counseling Skills and Techniques												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	2	2	2	2	2	3	3	3	3
CO 2	3	3	2	2	3	2	2	2	2	2	3	3	3
CO 3	2	3	2	2	2	2	2	3	3	3	3	3	3
CO 4	2	3	3	2	3	2	3	3	2	2	3	3	3
CO 5	3	3	2	2	2	2	3	3	2	3	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023-2024)

RESEARCH METHODS AND APPLIED STATISTICS

CODE: 23PY/PC/RM34

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To introduce students with the philosophy of the research process
- To explain review of existing literature and research designs
- To enhance skills in picking appropriate samples and tools for data collection
- To interpret data using quantitative and qualitative techniques
- To discuss ethical principles in conducting and reporting research

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	explain various research designs and approaches	K1 & K2
CO2	apply research principles to formulate the various steps in the research process	K3
CO3	critically analyze research articles and findings	K4
CO4	evaluate the implications of research findings and their relevance to broader fields of study	K5
CO5	develop research proposals and design and execute research studies from formulation to reporting	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Foundations of Research and the research process 1.1 Meaning of research, Scientific method, Hypothetico-deductive method 1.2 Philosophy of research: Ontology, Epistemology, Axiology, Research Approach/Methodology, Research Designs/Method 1.3 Paradigms: Positivism, Post Positivism, Constructivism, Transformative worldview (Critical theories), Pragmatic worldview 1.4 Research problem and questions 1.5 Review of literature: Steps, Literature Map	K1- K6	13	1-5
2	Methodology 2.1 Types of variables, Measurement characteristics of variables, operationalising concepts and variables 2.2 Hypothesis-Meaning, Types, Difficulties in formulating aims and hypotheses 2.3 Hypothesis Testing: Type I and Type II errors, statistical significance and errors	K1- K6	14	1-5

	2.4 Sampling: Sampling bias, Probability and Non- probability sampling, sample size 2.5 Data collection methods- Observational method, Survey method, Qualitative methods- Case study, Archives, Interviews, Focused group interviews, Field study, Action research			
3	Quantitative Research Design 3.1 Experimental designs 3.1.1 Two group between-subjects design 3.1.2 Correlated groups- Within-subjects, Matched- subjects 3.1.3 Experiments with more than 2 levels of independent variable 3.1.4 Experiments with more than 1 independent variable 3.2 Quasi Experiments: Types of quasi experiments 3.3 Developmental Designs: Cross-sectional, longitudinal, sequential 3.4 Single-case designs: Reversal, Multiple baselines	K1- K6	12	1-5
4	Quantitative analysis* 4.1 Organizing data- Frequency distribution, Graphs 4.2 Descriptive statistics- Measures of central tendency, Measures of variation, Types of distributions 4.2 Inferential statistics- z test, t test, Analysis of Variance, Correlation: Concepts related to correlation, Correlation coefficient, Regression 4.3 Non-parametric statistics- Mann-Whitney test, Wilcoxon, Chi- square, Spearman Rank correlation, Kruskal-Wallis test 4.4 Analysis of data using SPSS	K1- K6	14	1-5
5	Qualitative analysis and Reporting 5.1 Coding: Open coding, selective coding, axial coding 5.2 Thematic analysis, Grounded theory, Discourse analysis, Conversation analysis, Interpretive Phenomenological analysis 5.3 Writing Proposals: Formats for quantitative and qualitative proposals 5.4 Report writing: Research articles 5.5 Ethical issues in psychological research	K1- K6	12	1-5

***Only theoretical understanding to be tested**

BOOKS FOR STUDY

Jackson, Sherri L. *Research Methods and Statistics: A Critical Thinking Approach*. 5th ed., New Delhi, Cengage Learning India Pvt. Ltd, 2016.

Coolican, Hugh. *Research Methods in Statistics in Psychology*. 6th ed., New Delhi, Rawat Publications, 2014.

Creswell, John W., and J. David Creswell. *Research design: Qualitative, quantitative, and mixed methods approaches*. 6th ed., New Delhi, Sage Publications, 2022.

Howitt, Dennis., and Duncan Cramer. *Introduction to Research Methods in Psychology*. 3rd ed., New Delhi, Prentice Hall, 2011.

BOOKS FOR REFERENCE

Rooney, Bryan J., and Evans, Annabel Ness. *Methods in Psychological Research*. 4th ed., New Delhi, Sage Publications India Pvt. Ltd, 2018.

Flick, Uwe. *An Introduction to Qualitative Research*. 7th ed., New Delhi, Sage Publications, 2023.

Gravetter, Frederick J., and Lori-Ann B. Forzano. *Research methods for the behavioral sciences*. 6th ed., Chennai, Cengage learning, 2018

Kerlinger, Fred Nichols., and Howard Bing Lee. *Foundations of behavioural research*. 4th ed., San Diego, Harcourt College Publishers, 2000.

Singh, Arun Kumar. *Tests, measurements and research methods in behavioural sciences*. 6th ed., Patna, Bharati Bhawan, 2019.

WEB RESOURCES

<https://www.mendeley.com/>

<https://endnote.com/>

AI research tools

<https://consensus.app/>

<https://elicit.com/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
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	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PY/PC/RM34												
III	Course Title: Research Methods and Applied Statistics												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	1	2	1	2	2	1	2	2	1	2	2
CO 2	3	3	2	2	2	2	3	1	3	3	2	3	3
CO 3	2	3	3	3	2	3	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 5	2	3	2	3	3	3	3	3	1	2	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

BEHAVIOUR MODIFICATION

CODE: 23PY/PC/BM34

CREDITS: 4

L T P: 4 2 0

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To enable understanding of reinforcement and punishment techniques.
- To facilitate new behaviours using behavioural techniques.
- To bring about behavioural change in self and other.
- To guide appropriate behavioural change procedures to the special needs.
- To impart knowledge on specific interventions to treat individuals with clinical conditions.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and infer the basic concepts of behaviour therapy.	K1 & K2
CO2	illustrate the various behavioural change procedures based on their underlying behavioural techniques.	K3
CO3	analyze individual behaviour using functional behaviour assessment.	K4
CO4	choose appropriate behavioural techniques according to the needs of the individual.	K5
CO5	design treatment strategies for special needs and clinical conditions.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Basic Concepts 1.1 Definition and characteristics of behavior modification, Historical aspects, ethology, Areas of application 1.2 Reinforcement- Positive and negative reinforcement, escape and avoidance behaviors, conditioned and unconditioned reinforcers, factors that influence the effectiveness of reinforcement, schedules of reinforcement 1.3 Punishment- Positive and negative punishment, Factors that influence the effectiveness of punishment 1.4 Respondent conditioning, timing of neutral and unconditioned stimulus, higher order conditioning, conditioned emotional responses, extinction of conditioned responses,	K1 – K6	16	1-5

UNIT	CONTENT	CL	Hrs	CO
	discrimination and generalization of respondent behavior, Influential factors of respondent conditioning. 1.5 Introduction to a functional behavioural analysis- Basic behavioural principles of the A-B-C contingency, Formal behavioural assessment			
2	Procedures to Establish New Behaviours 2.1 Stimulus control: discrimination and generalization, Defining stimulus control, stimulus discrimination training, the three-term contingency. 2.2 Shaping and its applications- How to use shaping, shaping of problem behaviors 2.3 Prompting and fading techniques, Types of prompts, Use of prompting and transfer of stimulus control 2.4 Chaining- Examples of behavioral chains, analyzing stimulus-response chains, task analysis, backward chaining, forward chaining, total task presentation 2.5 Components of behavioral skills training procedures- Modeling, instructions, rehearsal, feedback	K1-K6	15	1-5
3	Procedures to Increase Desirable Behaviour and Decrease Undesirable Behaviour 3.1 Differential reinforcement of alternative behavior 3.2 Differential reinforcement of other behavior 3.3 Differential reinforcement of low rates of responding 3.4 Antecedent control procedures, using antecedent control strategies 3.5 Using punishment- Time out, response cost	K1-K6	15	1-5
4	Other Behaviour Change Procedures 4.1 Token economy, practical considerations, implementing a token economy, applications of token economy, advantages and disadvantages of a token economy 4.2 Behavioral contract, components of a behavioral contract 4.3 Cognitive behavior change procedures – assertiveness training, thought stopping 4.4 Introduction to third wave therapies – Dialectical behavior therapy, metacognitive therapy	K1-K6	16	1-5
5	Overview of Assessment, Formulation and Intervention in Clinical Conditions 5.1 Clinical Conditions – Depression, panic, OCD, GAD, and eating disorders 5.2 Anxiety reduction procedures – Defining fear and anxiety problems, procedures to reduce fear and anxiety – relaxation, systematic desensitization, in vivo desensitization 5.3 Anxiety induction procedures – implosive therapy flooding, aversive counter conditioning – use of electric shock, covert sensitization	K1-K6	16	1-5

BOOK FOR STUDY

Miltenberger, Raymond G. *Behavior Modification: Principles and Procedures*. 5th ed, United States of America, Wadsworth Cengage Learning, 2012.

BOOKS FOR REFERENCE

Masters, John C., et al. *Behavior Therapy: Techniques and Empirical Findings*. 3rd ed, United States of America, Houghton Mifflin Harcourt P, 1987.

Simos, G. *Cognitive Behavior Therapy: A Guide for the Practicing Clinician*. Vol. 1, London, Brunner-Routledge, 2002.

Kanfer, Frederick H., and George Saslow. "Behavioral Analysis: An Alternative to Diagnostic Classification." *Archives of General Psychiatry* 12.6 (1965): 529-538.

WEB RESOURCE

<https://bitly.ws/VoFq>

<https://rb.gy/6q71n4>

<https://rb.gy/jm1jjg>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 'Other Components' will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PY/PC/BM34												
III	Course Title: Behaviour Modification												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	2	1	2	3	2	2	2	3
CO 2	3	3	3	3	3	2	2	3	3	2	3	3	3
CO 3	3	3	3	3	3	2	3	2	3	3	3	3	3
CO 4	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	2	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

SUMMER INTERNSHIP

CODE: 23PY/PN/SI32

CREDITS: 2

OBJECTIVES OF THE COURSE

- To enhance the knowledge about the workings of organisations and institutes related to psychology
- To enable application of various psychological concepts in clinical settings and corporates.
- To help understand work culture and develop work ethics
- To aid students to integrate theory and practice
- To guide students to function as part of a multidisciplinary team

COURSE LEARNING OUTCOMES

On successful completion of the course, student will be able to:

COs	DESCRIPTION	CL
CO1	understand the organization's mission and values and explain how these align with their own career goals	K1 & K2
CO2	apply theoretical knowledge to real-world tasks and projects	K3
CO3	analyze and evaluate complex issues or challenges within the organization	K4
CO4	critically assess problems and needs of the organization	K5
CO5	synthesize their internship experiences, reflect on personal and professional growth, and contribute innovative solutions and valuable recommendations demonstrating skill development	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

The Summer Internship program is for a period of 100 hours. The students are expected to do an internship in a Clinical Institute or in any Organisation depending on their area of interest to gain first-hand experience of the roles and responsibilities of a psychologist in the respective settings.

Student is required to

- Maintain a log book duly countersigned by the staff in-charge in the organisation. The log book should contain the number of hours they worked and the duties/tasks carried out by them on a daily basis.
- Record the nature of work in terms of taking case histories, conduction of training programs, implementation of recommendations (provided by the student), administration of assessments etc.
- Submit a consolidated project report to the department upon completion of the internship.

PATTERN OF ASSESSMENT**Total Marks: 50**

Cognitive Level	DESCRIPTION	Mark Allocation
K1	Introduction- Profile of the organization, Hierarchy	5
K2	Oral Presentation	15
K3	Roles performed	10
K4	Learning Experience-Skills and Reflections	10
K5	Challenges	5
K6	Recommendations	5

Internal Evaluation by the faculty in charge.

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PY/PN/SI32												
III	Course Title: Summer Internship												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	3	1	2	2	1	2	3	1	2	2	2	3
CO 2	3	3	2	1	3	1	2	2	3	3	3	3	3
CO 3	3	3	2	2	3	2	3	3	3	3	3	2	3
CO 4	2	3	3	2	3	2	2	2	2	3	3	3	3
CO 5	2	3	3	3	3	3	1	3	2	2	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

TRAINING AND DEVELOPMENT

CODE: 23PY/PC/TD44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To introduce the scope of training in the empowerment of an individual.
- To acquaint the students with the different modalities of training
- To educate the students on the importance of need assessment prior to training
- To enable them to design and conduct training programs
- To assist them to choose appropriate evaluation techniques for training

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	describe and explain the key concepts related to training and development	K1 & K2
CO2	select and apply appropriate methods and approaches for training programs	K3
CO3	analyze and assess training models based on needs and requirements	K4
CO4	evaluate training programs in terms of the goals/objectives to be met	K5
CO5	develop effective training modules as per the needs of the organization.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Nature and Meaning of Training and Development 1.1 Training: Definition 1.2 Development: Definition 1.3 Relevance of Human resource management 1.4 Nature & Scope, Reasons for Training, Types of training 1.5 Skills and Qualities of a trainer – Learning Process in Training 1.6 Training Cycle: An Overview	K1- K6	12	1-5
2	Assessing Needs and Developing Learning Objectives 2.1 Need Assessment (Training need analysis) : meaning & definition, reasons, levels, methods of data collection, process, criteria to be used to select a data gathering method, identifying participants to be trained	K1- K6	14	1-5

	2.2 General Features of adult learners: Gagne’s five domains, Malcolm Knowle’ assumptions; Andragogical and Pedagogical Training, Types of learning; Learning Styles, factors influencing learning 2.3 Writing objectives: SMART objectives, ideas for writing objectives, task analysis 2.4 Barriers to learning			
3	Training Methods 3.1 On-the-job training methods 3.2 Off the job training methods 3.3 Experiential learning activities-five stage cycle 3.4 Audio-visual aids 3.5 Training approaches to improve productivity and quality - TQM, Quality Circles,KAIZEN	K1- K6	13	1-5
4	Designing and Conducting Training Programmes 4.1 Conducting training programmes, Explaining the four training styles, Gauging group dynamics 4.2 Training like a professional: presentation skills, participation materials, asking and answering questions, smooth transitions, wrap up and effective training sessions 4.3 Executive Development: meaning, objectives, process, designing, common practices, benefits, limitations 4.4 Career Progression and Personal Development	K1- K6	14	1-5
5	Evaluation of training 5.1 Meaning and definition, objectives, levels 5.2 Approaches of Training Evaluation- Kirkpatrick’s Model, CIRO Model, Cost-Benefit analysis, ROI in training 5.3 Methods of training evaluation 5.4 Barriers in training Evaluation	K1- K6	12	1-5

BOOKS FOR STUDY

Thorne, Kaye, and David Mackey. *Everything You Ever Needed to Know about Training*. London ; Sterling (Virginia), Kogan Page, 2003.

Biech, Elaine. *Training for Dummies*. Hoboken, New Jersey, Wiley Pub, 2005.

Rajesh, R, et al. *Human Resource Management*. Chennai, Thakur Publication Private Limited, 10 Mar. 2022.

Wilson, John P. *Human Resource Development : Learning & Training for Individuals & Organizations*. London ; Sterling, Va, Kogan Page Ltd, 2005.

BOOKS FOR REFERENCE

Thacker Blanchard. *Effective Training: Systems, Strategies and Practices*. 6th ed., S.L., Chicago Business Press, 2018.

Lynton, Rolf P, and Udai Narain Pareek. *Training for Development*. Thousand Oaks, Sage Publications, 2011.

Agochiya, Devendra. *Every Trainer’s Handbook*. New Delhi, SAGE Publications India, 2009.

WEB RESOURCES

<https://shorturl.at/cAFG5>

<https://shorturl.at/bBJOW>

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1x5 marks)	1 (Internal Choice-Answer Any 1)	300 words
	K2	5 (1x5 marks)	1 (Internal Choice-Answer Any 1)	300 words
B	K3	10 (1x10 marks)	1 (Internal Choice-Answer Any 1)	700 words
	K4	10 (1x10 marks)	1 (Internal Choice-Answer Any 1)	700 words
C	K5 & K6	20 (1x20 marks)	1 (Answer any one of two questions)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2x5 marks)	2 (Internal Choice-Answer Any 1)	300 words
	K2	10 (2x5 marks)	2 (Internal Choice-Answer Any 1)	300 words
B	K3	20 (2x10 marks)	2 (Internal Choice-Answer Any 1)	700 words
	K4	20 (2x10 marks)	2 (Internal Choice-Answer Any 1)	700 words
C	K5 & K6	40 (2x20 marks)	2 (Answer any two of four questions)	1200 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PY/PC/TD44												
IV	Course Title: Training and Development												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	2	2	3	1	3	3	2	2	2
CO 2	3	2	3	3	3	3	3	3	3	3	3	2	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

PSYCHOTHERAPY

CODE: 23PY/PC/PT44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To introduce students to various theoretical orientations to psychotherapy
- To facilitate comparison between different psychotherapy approaches
- To encourage critical thinking and self-reflection on the strengths and limitations of various therapeutic approaches
- To explore practically how therapists can use these approaches to address everyday mental health challenges
- To guide students to choose appropriate therapeutic techniques in dealing with mental health issues.

COURSE LEARNING OUTCOMES

On successful completion of the course, the student will be able to:

COs	DESCRIPTION	CL
CO1	recall and describe fundamental principles of psychotherapy	K1& K2
CO2	use psychotherapy techniques to address common mental health challenges	K3
CO3	compare and contrast different psychotherapy approaches	K4
CO4	evaluate and critique view-points offered by various realms of psychotherapy	K5
CO5	develop innovative and ethically sound psychotherapeutic interventions	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Psychotherapy 1.1 Definition of Psychotherapy, Difference between Counselling and Psychotherapy 1.2 Processes of change 1.3 Overview of Integrative, Eclectic and Multi modal approaches to Psychotherapy	K1- K6	13	1-5
2	Psychoanalytic Therapy 2.1 Introduction, Key concepts- structure of personality, Consciousness and unconscious, anxiety, defense mechanisms, development of personality. 2.2 Therapeutic process- goals, therapist's function and role, client's experience, therapeutic relationship. 2.3 Application- Therapeutic techniques and procedures	K1- K6	14	1-5

	Adlerian Therapy 2.4 Introduction, Key concepts- subjective perception of reality, patterns of personality, social interest and community feeling, birth order 2.5 Therapeutic process- goals, therapist's function and role, client's experience, therapeutic relationship 2.6 Application-Therapeutic techniques and procedures			
3	Person Centred Psychotherapy 3.1 Introduction, Key Concepts-view of human nature 3.2 Therapeutic process-goals, therapist's function and role, client's experience, therapeutic relationship. 3.3 Application-Therapeutic techniques and procedures Gestalt Therapy 3.4 Introduction, Key Concepts-view of human nature 3.5 Therapeutic process-goals, therapist's function and role, client's experience, therapeutic relationship. 3.6 Application-Therapeutic techniques and procedures	K1- K6	13	1-5
4	Family therapy 4.1 Introduction-Family Systems perspective, Difference between systemic and individual approaches 4.2 Development of Family systems therapy 4.3 Multilayered process of Family therapy Couples therapy 4.4 Overview of Self-Object Relationship Therapy 4.5 Overview and Application of Object Relations Couples therapy	K1- K6	13	1-5
5	Post Modern Approaches/ Contemporary Approaches 5.1 Narrative Therapy- Key Concepts, Therapeutic process, Techniques and procedures 5.2 Transactional Analysis- Over view, basic assumptions, structure of personality, manifestation of script, theory of change, skills and strategies 5.3 Mindfulness Based Interventions 5.4 Creative Art therapies-Art therapy, Drama Therapy, Dance Movement Therapy	K1- K6	14	1-5

BOOKS FOR STUDY

Capuzzi, Dave, and Mark D Stauffer. *Counseling and Psychotherapy: Theories and Interventions*. 6th ed., Alexandria, American Counseling Association, 2016.

Corey, Gerald. *Theory and Practice of Counseling and Psychotherapy*. 10th ed., Boston, Cengage Learning, 2021.

Prochaska, James O, and John C Norcross. *Systems of Psychotherapy: A Transtheoretical Analysis*. 9th ed., New York, Oxford University Press, 2018.

Florence Whiteman Kaslow. *Comprehensive Handbook of Psychotherapy*. New York, Chichester, Wiley, 2004.

.

BOOKS FOR REFERENCE

Carey, Timothy A, et al. *Principles-Based Counselling and Psychotherapy*. 1st edition, London, Routledge, 2015.

Palmer, Stephen. *Introduction to Counselling and Psychotherapy: The Essential Guide*. London, Sage Publications, 2001.

WEB RESOURCES

<https://shorturl.at/aiAOV>

<https://shorturl.at/abLT5>

<https://t.ly/tMPB1>

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1x5 marks)	1 (Internal Choice-Answer Any 1)	300 words
	K2	5 (1x5 marks)	1 (Internal Choice-Answer Any 1)	300 words
B	K3	10 (1x10 marks)	1 (Internal Choice-Answer Any 1)	700 words
	K4	10 (1x10 marks)	1 (Internal Choice-Answer Any 1)	700 words
C	K5 & K6	20 (1x20 marks)	1 (Answer any one of two questions)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2x5 marks)	2 (Internal Choice-Answer Any 1)	300 words
	K2	10 (2x5 marks)	2 (Internal Choice-Answer Any 1)	300 words
B	K3	20 (2x10 marks)	2 (Internal Choice-Answer Any 1)	700 words
	K4	20 (2x10 marks)	2 (Internal Choice-Answer Any 1)	700 words
C	K5 & K6	40 (2x20 marks)	2 (Answer any two of four questions)	1200 words

Mapping of Course Outcomes (COs)

to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PY/PC/PT44												
IV	Course Title: Psychotherapy												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	2	3	3	2	3	3	2	2
CO 2	3	2	3	3	3	3	3	3	3	3	3	2	3
CO 3	3	2	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

CASE STUDY

CODE: 23PY/PC/CS42

CREDITS: 2

L T P: 1 0 2

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- To discuss and apply the theories and approaches in psychology
- To encourage students to critically analyze their theoretical understanding of clinical disorders through practical field experiences
- To prepare the students to collect relevant information from individuals and record the same
- To develop the skills required in the practice of psychology
- To facilitate in approaching individuals with respect and unconditional positive regard

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	recall and summarize information collected in case history and Mental Status Examination	K1 & K2
CO2	apply theories and concepts of clinical psychology to understand the present condition of the case	K3
CO3	analyse and investigate various sources of information to get a holistic understanding of the case	K4
CO4	diagnose the case after critically evaluating the present information in light of theoretical underpinnings	K5
CO5	generate suggestions for further investigations and formulate treatment plans based on diagnoses	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

Submission of report to faculty supervisor describing the tasks undertaken towards fulfilment of requirements.

Submission of completed record of work.

Evaluation by faculty supervisor on submission of reports by student and after conduction of Viva.

PATTERN OF ASSESSMENT

Total Marks – 50

Cognitive Level	DESCRIPTION	Mark Allocation
K1 & K2	Case Description	10
K3	Assessments & Diagnosis	10
K4	Case Conceptualization	10
K5	Viva	10
K6	Treatment plan & recommendations	10

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PY/PC/CS42												
IV	Course Title: Case Study												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

DISSERTATION

CODE: 23PY/PC/DS47

CREDITS: 7

OBJECTIVES OF THE COURSE

- To assist in identifying and refining an appropriate research question
- To apply principles of research design and select an appropriate methodology
- To enable performing a literature review, identifying gaps and formulating a conceptual framework.
- To facilitate data collection and analysis of data as well as designing and validating the research design.
- To aid in clear and comprehensive communication of research results and recommendations.

COURSE LEARNING OUTCOMES

On successful completion of the course, the student will be able to:

COs	DESCRIPTION	CL
CO1	enumerate and outline issues of research design and methodology and locate a piece of research within these.	K2
CO2	apply knowledge of research design and methods in the research process	K3
CO3	critique research articles and analyse gaps in research	K4
CO4	evaluate collected data and its interpretation in the context of existing literature	K5
CO5	develop critical thinking skills and writing skills and engage in independent inquiry	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

GUIDELINES FOR DISSERTATION REPORT

Page Limit: The Dissertation should be typed in Times New Roman font style, size 12, with 1½ line spacing.

APA format should be followed throughout the thesis.

Cover Page- should include

Logo of the College and Title of the Dissertation

Dissertation submitted to Stella Maris College (Autonomous) in partial fulfillment of the requirement for the Degree of Master of Psychology by *Name of the candidate, Department No., Department of Psychology, Month, Year.*

The dissertation report includes

- Contents Page
- Certificate of the Research Guide and Head of the Department and Acknowledgement by the Candidate

- Chapter I – Introduction to the Study
- Chapter II- Review of Literature
- Chapter III – Method of Investigation
- Chapter IV- Results and Discussion
- Chapter V – Summary and Conclusion
- References
- Appendix

SUBMISSION

Each student shall submit two copies of the dissertation to the Head of the Department on the date specified by the Controller of Examinations. One copy of the dissertation will remain in the College.

PATTERN OF ASSESSMENT

S.No	Cognitive Level	Marks
1	K2 Introduction	15
2	K3 Research Proposal Methodology	10 15
3	K4 Review of Literature	15
4	K5 Data collection and interpretation of results	20
5	K6 Comprehensive Viva-voce of the entire dissertation	25
	Total Marks	100

The dissertation will be evaluated by the Research Guide. The External Examiner will conduct and assess the Viva Voce. An aggregate of the two marks will be the final marks awarded for the dissertation out of a total of 100 marks.

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PY/PC/DS47												
IV	Course Title: Dissertation												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 2	3	3	3	2	3	3	3	3	3	3	3	3	3
CO 3	3	3	3	2	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

EDUCATIONAL PSYCHOLOGY

CODE: 23PY/PE/EP15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To discuss the meaning and processes of education at individual and social contexts
- To develop an insight into the idea of inclusivity in education
- To enhance skills that will facilitate effective teaching in the classroom as well as managing the classroom
- To improve the behavioural and social skills of imparting education
- To impart knowledge on the diagnostic methods and management techniques for helping students in schools.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	recall and describe the important concepts of educational psychology	K1 & K2
CO2	determine adaptive approaches to create a holistic learning environment	K3
CO3	outline appropriate and inclusive teaching approaches that can be opted in a given psychosocial context	K4
CO4	evaluate and diagnose problems faced by students at school	K5
CO5	generate effective intervention and teaching strategies to enhance classroom effectiveness	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1.Nature and History of Educational Psychology 1.2.Scope and Relevance of Educational Psychology 1.3.Theoretical Perspectives in Educational Psychology 1.3.1 Behaviouristic and Cognitive: Conditioning, Observational learning 1.3.2 Contemporary theories: Life Span Development; Ecological theory 1.3.3 Social Constructivism: Social Constructivist approaches to teaching, Teachers and peers as joint contributors to students' learning, structuring small group work	K1- K6	12	1-5

UNIT	CONTENT	CL	HRS	CO
2	Human Diversity and Education: 2.1 Individual Variations: Intelligence, Learning and Thinking Styles, Personality and Temperament 2.2 Sociocultural Diversity: Culture and Ethnicity, Multicultural Education: empowering students, culturally relevant thinking, issues centered education, improving relationships, Gender 2.3 Learners who are exceptional: Children with disabilities, Children who are gifted	K1- K6	14	1-5
3	Creating Learning Environments 3.1 Need for classroom management 3.2 Creating a positive learning environment 3.3 Maintaining a good environment for learning 3.4 Dealing with discipline problems 3.5 The need for communication	K1- K6	13	1-5
4	Effective Teaching 4.1 Characteristics of an effective teacher 4.2 Planning: Research on planning, flexible and creative plans 4.3 Teaching Approaches: Direct instruction, Seatwork and homework, Questioning, Discussion, Dialogue 4.4 Differentiated Instruction and Adaptive Teaching	K1- K6	13	1-5
5	School Counselling 5.1 Gifted and Creative Students, Underachievers, Students with Learning Disabilities 5.2 Assessment, Diagnosis, Counselling and Management of common problems at school: School refusal, scholastic backwardness, conduct and emotional problems 5.4 Counseling adolescents regarding sexuality and substance abuse, Counseling parents and teachers	K1- K6	13	1-5

BOOKS FOR STUDY

Santrock, John. W. *Educational Psychology*. 6th ed., New York, McGraw Hill Education, 2017.
 Lahey, R.B., & J. E. Graham. *An Introduction to Educational Psychology*. 6th ed., New Delhi, Tata McGraw Hill Publishers, 2000.
 Woolfolk, Anita. *Educational Psychology*. 14th ed., Texas, Pearson, 2018.
 Coleman Hardin L. K and Christine J Yeh. *Handbook of School Counseling*. New York, Routledge, 2008.

BOOKS FOR REFERENCE

Slavin, R. *Educational Psychology: Theory Into Practice*. 9th ed., Boston, Allyn and Bacon, 2008.
 Ormrod, J.E. & B. Jones. *Essentials of Educational Psychology*. 5th ed, New York, Pearson, 2018.

WEB RESOURCES

<https://t.ly/nD8Au>
<https://t.ly/NXEuU>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PY/PE/EP15												
I/ II/ IV	Course Title: Educational Psychology												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	2	2	2	2	3	1	2	2	2
CO 2	3	2	3	2	3	3	3	3	3	2	3	2	3
CO 3	3	2	3	2	3	3	3	3	3	3	3	2	3
CO 4	3	3	3	2	3	3	3	3	3	3	3	3	2
CO 5	3	3	3	2	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

SPORTS PSYCHOLOGY

CODE: 23PY/PE/ST15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To elucidate on the various roles of sports psychologists.
- To describe psychological processes associated with sports performance.
- To show the role of stressors in the output and performance of sports people.
- To instill knowledge about the effects of socio-environmental factors in the area of sport psychology.
- To impart theoretical knowledge in facilitating training sessions and interventions to promote athletic performance.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and describe the key concepts of sports psychology.	K1 & K2
CO2	employ psychological perspectives to understand sports and sportspeople.	K3
CO3	analyze the role of psychological and socioeconomic factors on sports behaviour.	K4
CO4	evaluate the multiple factors influencing sports behaviour.	K5
CO5	build on psychological skills to improve performance of sportsperson.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Definition and Perspectives of sport psychology 1.2 Historical evolution of sport psychology 1.3 Understanding present and future trends 1.4 Roles of sport psychologist	K1- K6	12	1 –5

UNIT	CONTENT	CL	HRS	CO
2	Attribution, Personality and Motivation in Sports 2.1 Self perceptual system and Physical activity 2.2 Attribution and perceived control 2.3 Personality and sport 2.4 Measurement, theory, identification of psychologist role in understanding personality 2.5 Motivation – Approaches, theory, developing achievement motivation	K1-K6	13	1 –5
3	Emotions in Sports 3.1 Arousal, Stress and anxiety in sportspeople 3.2 Understanding sources of stress and anxiety, managing stress 3.3 Psychological characteristics of peak performance 3.4 Flow perspective of optimal experience 3.5 Link between aggression and performance, Situational factors affecting aggression and Reduction of aggression	K1-K6	13	1 –5
4	Socio Environmental Factors and sport behaviour 4.1 Group dynamics in sports and physical activity 4.2 Leadership – Definition, approaches, components of leadership, research, leadership training 4.3 Coaching effectiveness in sports domain 4.4 Social influence in sports, Competition and cooperation 4.5 Feedback, reinforcement and intrinsic motivation	K1-K6	13	1 –5
5	Improving Performance 5.1 Psychological skills training: Introduction, importance of PST, reasons for PST neglect 5.2 Overview of techniques to improve performance: Arousal regulation, Imagery, Self-confidence, Goalsetting, concentration 5.4 Exercise and psychological wellbeing 5.5 Athletic injuries, Burnout and overtraining	K1-K6	14	1 –5

BOOKS FOR STUDY

Weinberg, Robert Stephen, and Daniel Gould. *Foundations of Sport and Exercise Psychology*. United States of America, Human Kinetics, 2019.

BOOKS FOR REFERENCE

Williams, Jean, and Vikki Krane, editors. *Applied Sport Psychology: Personal Growth to Peak Performance*. 7th ed., United States of America, McGraw Hill, 2014. (2015,2019)

Horn, Thelma, editor. *Advances in Sport Psychology*. 3rd ed., United States of America, Human Kinetics, 2008.

Jarvis, Matt. *Sport Psychology: A Student's Handbook*. 2nd ed., United States of America, Routledge, 2006.

Kremer, John, and Deirdre Scully, editors. *Psychology in Sport*. United States of America, Taylor and Francis, 1994.

WEB RESOURCES

<https://rb.gy/t6rik>

<https://rb.gy/vdhlz>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PY/PE/ST15												
I/ II/ IV	Course Title: Sports Psychology												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	1	2	2	3	2	3	2	2
CO 2	3	2	3	3	3	2	1	2	3	3	3	2	3
CO 3	3	3	3	2	3	2	1	2	3	3	3	2	2
CO 4	3	3	3	2	3	2	3	3	3	3	3	3	2
CO 5	3	3	3	3	3	3	3	3	2	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

ORGANIZATIONAL BEHAVIOUR

CODE: 23PY/PE/OB15

CREDITS: 4

LTP: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To explain the theoretical foundations of organizational psychology
- To identify and make use of the role of individual in organizational behaviour
- To apply the understanding of group related processes in organization's functioning
- To construct a view about the nature and characteristics of an organization
- To examine the contemporary trends that are driving today's organizations

COURSE LEARNING OUTCOMES

On successful completion of the course, the student will be able to:

COs	DESCRIPTION	CL
CO1	understand the concepts and models of organizational psychology	K1&K2
CO2	apply concepts of organizational behaviour to recognize the individual and group dynamics in the workplace	K3
CO3	dissect the structure and ethical guidelines in place in an organization	K4
CO4	appraise knowledge of contemporary developments in the field of organizational psychology	K5
CO5	develop trends and structures essential to running a successful organization	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Organizational Behaviour 1.1 Definition of Organizational Behaviour 1.2 Theoretical foundation for Organizational Behaviour 1.3 Fundamental concepts of Organizational Behaviour 1.4 Basic approaches of Organizational Behaviour 1.5 Models of Organizational Behaviour 1.6 Limitations of Organizational Behaviour and Challenges of Organizational Behaviour	K1- K6	12	1-5

UNIT	CONTENT	CL	HRS	CO
2	Individual-related Components and Processes in Organizational Behavior 2.1 Personality- Dominant personality frameworks, Personality traits relevant to OB 2.2 Perception- Sub Processes of Perception, Social perception; 2.3 Attribution theory 2.4 Motivation- Theories of work motivation (Hertzberg, Expectancy, Equity) 2.5 Stress - Products of stress - Job-related causes of stress - Stress management strategies 2.6 Decision making- Process and Styles 2.7 Applications in Organizational Behaviour - Job Satisfaction - Job Involvement - Organizational commitment	K1- K6	15	1-5
3	Group-related Components and Processes in Organizational Behaviour 3.1 Overview of Group Dynamics and Group Norms 3.2 Teams 3.2.1 Types of work teams 3.2.2 Creating effective teams 3.3 Communication 3.3.1 Direction of communication 3.3.2 Choice of communication channel 3.3.3 Barriers to effective communication 3.4 Leadership-Theories and types 3.5 Power and Politics 3.5.1 Types of power, Power tactics 3.5.2 Causes and consequences of political behaviour 3.6 Conflict Resolution and Cooperation- 3.6.1 Types of conflict, The conflict process 3.6.2 Strategies to manage conflict	K1-K6	13	1-5
4	Organization-related Processes and Outcomes 4.1 Organisational structure 4.2 Organisational designs 4.3 Organisational justice ethics and Corporate Social Responsibility 4.4 Creativity in organisations 4.5 Reward systems 4.6 Organisational Citizenship Behaviour	K1-K6	13	1-5
5	Contemporary Trends in Organizational Behaviour 5.1 Contemporary Organisational Designs 5.2 Positive Organisational Behaviour and Psychological Capital 5.3 Empowerment and Participation 5.4 Managing an International workforce	K1-K6	12	1-5

BOOKS FOR STUDY

Luthans, Fred, et al. *Organizational Behavior : An Evidence-Based Approach*. North Carolina, Information Age Publishing Incorporated, 2021.

Robbins, Stephen P., and Tim Judge. *Organisational Behaviour*. Sydney, N.S.W. Pearson Australia, 2019.

Newstrom, John W. *Organizational Behavior : Human Behavior at Work*. 14th ed., Noida, McGraw-Hill, 2015.

BOOKS FOR REFERENCE

Robbins, Stephen P., et al. *Organizational Behaviour: An Indian Perspective*. 13th ed., Pearson Education India, 2017.

Greenberg, Jerald. *Behavior in Organizations*. 10th ed., New Delhi, Pearson Education India, 2015.

Andre, Rae, and L. J. Taplin. *Organizational Behaviour: An Introduction to Your Life in Organizations*, First Canadian Edition, Canada, Pearson Education, 2013.

WEB RESOURCES

<https://bitly.ws/Wxpg>

<https://bitly.ws/WxqR>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PY/PE/OB15												
I/ II/ IV	Course Title: Organisational Behaviour												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	3	2	2	1	3	2	3	3	3
CO 2	3	3	3	3	3	3	2	2	3	2	3	3	3
CO 3	3	3	3	2	3	3	2	2	3	2	3	3	3
CO 4	3	3	3	3	3	3	2	2	3	2	3	3	3
CO 5	3	3	3	3	3	3	2	2	3	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

POSITIVE PSYCHOLOGY

CODE: 23PY/PE/PO15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To demonstrate knowledge of the principles and dimensions of positive psychology
- To evaluate their own emotions and become more emotionally intelligent
- To analyse the importance of positive health and develop different coping strategies.
- To inculcate positive subjective states to optimize interpersonal relationship.
- To examine the level of wellbeing and improve on nurturing relationships.

COURSE LEARNING OUTCOMES

On successful completion of the course, the student will be able to:

COs	DESCRIPTION	CL
CO1	identify and explain the core concepts, assumptions and the scope of positive psychology in empowering individuals.	K1 & K2
CO2	apply positive health and wellbeing strategies in daily life scenarios.	K3
CO3	examine the relationships and nurture positive traits.	K4
CO4	appraise coping mechanisms suitable for personal wellbeing.	K5
CO5	facilitate personal growth by adopting and integrating core tenets of positive psychology.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Positive psychology 1.1 Definitions and dimensions of Positive psychology 1.2 Basic themes of Positive psychology 1.3 Assumptions, goals and Scope of Positive psychology 1.4 Positive psychology Today	K1- K6	13	1-5
2	Positive Emotions and Wellbeing 2.1 Basic emotions and Components of emotion 2.2 The Broaden and Build Model 2.3 Emotional Intelligence 2.4 Happiness and wellbeing: One dimensional and Multidimensional theories	K1- K6	12	1-5
3	Positive Health 3.1 Psychological factors important to positive health 3.2 Daily hassles and positive coping 3.3 Coping styles 3.4 Positive ageing	K1- K6	13	1-5
4	Leisure, Flow, Mindfulness and Peak experience 4.1 Leisure and wellbeing 4.2 Flow and optimal experience 4.3 Approaches to mindfulness 4.4 Savouring and Peak performance	K1- K6	13	1-5

UNIT	CONTENT	CL	HRS	CO
5	Love and wellbeing 5.1 The varieties of Love 5.2 Relationship satisfaction and stability 5.3 Positive families 5.4 Conflicts and nurturing positive relationship	K1- K6	14	1-5

BOOKS FOR STUDY

Compton, William C and Edward Hoffman. *Positive Psychology: The Science of Happiness and Flourishing*. 3rd ed., Delhi, Wadsworth Cengage Learning, 2019.

Baumgardner, Steve R., and Marie K Crothers. *Positive Psychology*. Chennai, Pearson, 2015.

Lopez, Shane J, et al., *Positive Psychology: The Scientific and Practical Explorations of Human Strengths*. 4th ed., Chennai, Sage publications, 2018.

Boniwell, Ilona. *Positive Psychology in a Nutshell: The Science of Happiness*. 3rd ed., Noida, McGraw-Hill Education, 2012.

BOOKS FOR REFERENCE

Carr, Alan. *Positive psychology: The Science of Wellbeing and Human Strengths*. 3rd ed., New Delhi, Routledge, 2022.

Snyder, Charles Richard, et al., *The Oxford Handbook of Positive Psychology*. 2nd ed., Chennai, Oxford University Press, 2016.

Ivtzan, Itai, et al. *Second Wave Positive Psychology: Embracing the Dark Side of Life*. New Delhi, Routledge, 2016.

Fredrickson, Barbara. *Positivity: Groundbreaking research reveals how to embrace the hidden strength of positive emotions, overcome negativity, and thrive*. Noida, Crown Archetype, 2009.

Keyes, Corey L. M., and Jonathan Haidt, editors. *Flourishing: Positive Psychology and the Life Well Lived*. Washington, American Psychological Association, 2003.

Seligman, Martin EP. *Authentic Happiness: Using the New Positive Psychology to Realize Your Potential for Lasting Fulfillment*. New York, Simon and Schuster, 2002.

Csikszentmihalyi, Mihalyi. *Flow: The Psychology of Optimal Experience*. New York, Harper & Row, 1990.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23PY/PE/PO15												
I/ II/ IV	Course Title: Positive Psychology												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	3	3	3	3	2	3	1	2	2
CO 2	3	3	3	3	3	3	3	3	3	3	3	2	3
CO 3	3	3	2	3	3	2	3	3	3	3	3	2	3
CO 4	3	3	3	3	3	3	3	3	3	3	3	2	3
CO 5	3	3	3	3	2	2	3	3	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

MARKETING AND ADVERTISING

CODE: 23PY/PE/MA15

CREDITS: 5

LTP: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To describe the scope of marketing in the current age.
- To explain how businesses segment their target markets.
- To impart knowledge of personality concepts in the arena of advertisements.
- To demonstrate the role of cognitive processes into the marketing practices.
- To classify different forms of messages presented by businesses.

COURSE LEARNING OUTCOMES

On successful completion of the course, the student will be able to

COs	DESCRIPTION	CL
CO1	state and describe key concepts of marketing and advertising.	K1&K2
CO2	relate various models involved in marketing and advertising.	K3
CO3	analyse the role of consumers in developing marketing and advertising strategies.	K4
CO4	predict the psychological principles implicated in marketing and advertising.	K5
CO5	formulate a plan for marketing and advertising a product.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Marketing in the twenty first century 1.2 Scope of marketing 1.3 Core marketing concepts 1.4 Direct and online marketing	K1- K6	12	1-5
2	Market segmentation 2.1 Introduction to market segmentation 2.2 Levels and patterns of market segmentation 2.3 Segmenting consumers 2.4 Business markets - market targeting – marketing mix	K1- K6	13	1-5
3	The world of Advertising and Personality 3.1 Defining Advertising, functions of advertising, characteristics of an effective advertisement, advertising and psychology 3.2 The psychological principles and advertisement, personality and advertising 3.3 Consumer innovativeness and related personality traits, cognitive personality factors – brand personality 3.4 Role of advertisements in creating brand personality –user image, personality and color, uses of self-image and altered image in advertising.	K1- K6	13	1-5

UNIT	CONTENT	CL	HRS	CO
4	Selected Psychological Process in Advertising 4.1 Internal psychological process of consumer decision making, consumer motivation 4.2 Translating Maslow's hierarchical needs into advertising techniques and consumer buying habits 4.3 Attention and selective perception in advertising, subliminal perception and advertising – consumer's attitudes, Multi attribute model, tri component attitude model 4.4 Attitude toward the advertisement model, Attitude change strategies, Consumer learning process: classical, operant and cognitive learning models used in advertising	K1- K6	14	1-5
5	Communication and Creativity in Advertising 5.1 Basic model of communication: source, encoding, message, channel and decoding, advertising perspective 5.2 Traditional and alternative hierarchy models of communication 5.3 Cognitive processing of communication models, creative process and creative advertising 5.4 Types of appeals in advertisements	K1- K6	13	1-5

BOOKS FOR STUDY

Moriarty, Sandra, et al. *Advertising: Principles and Practice*. 3rd ed., Australia, Pearson Australia, 2014.

Kotler, Philip, and Keller, Kevin Lane. *Marketing Management*. India, Pearson India Education Services, 2016.

Schiffman, Leon G., et al. *Consumer Behavior*. 12th ed., New Delhi, Pearson Education India, 2018

Belch, George E., and Belch, Michael A. *Advertising and Promotion: An Integrated Marketing Communications Perspective*. United Kingdom, McGraw-Hill Education, 2017.

Batra, Satish K., and S. H. Kazmi. *Consumer Behaviour*. 2nd ed., New Delhi, Excel Books India, 2009.

BOOKS FOR REFERENCE

Kumar, Ramesh. *Consumer Behaviour : The Indian Context (Concepts and Cases)*. New Delhi, Pearson India, 2017.

Batra, Satish, and S. H. H. Kazmi. *Consumer Behaviour Test and Cases*. 2nd ed., India, Excel Books, 2009.

WEB RESOURCES

<https://bitly.ws/WxsU>

<https://bitly.ws/WxvP>

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 'Other Components' will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PY/PE/MA15												
I/ II/ IV	Course Title: Marketing and Advertising												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	2	2	3	1	2	1	2	3
CO 2	3	2	3	3	2	2	2	3	1	2	2	2	3
CO 3	3	3	3	3	3	1	3	3	2	2	2	2	3
CO 4	3	3	3	3	3	2	3	3	3	2	3	3	3
CO 5	2	3	3	3	3	3	2	2	3	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

GENDER AND SEXUALITY

CODE: 23PY/PE/GS15

CREDITS: 5

L T P: 5 0 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To familiarize students with the historical contexts of gender and sexuality
- To explore various theoretical foundations to understand sex and gender identity
- To discuss the intersectionality of experiences and issues related to gender and sexuality
- To elucidate on the development of sexual identity and orientation from diverse perspectives
- To assist students in understanding the principles and practices related to queer-affirmative counselling

COURSE LEARNING OUTCOMES

On successful completion of the course, the student will be able to:

COs	DESCRIPTION	CL
CO1	identify and describe theories and issues related to gender and sexuality	K1 & K2
CO2	apply ideas related to gender and sexuality to analyze real-world situations and experiences in a nuanced manner	K3
CO3	compare and contrast different theories and practices and their contributions to the study of gender and sexuality	K4
CO4	critically assess the existing notions and therapeutic approaches in dealing with people of diverse genders and sexualities.	K5
CO5	deconstruct existing knowledge on gender and sexuality using an intersectional lens and develop more sensitive perspectives	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction 1.1 Sex and Gender: Definitions, Key concepts, Binaries in sex and gender 1.2 Gender identity and Sexual orientation 1.3 Historical context of gender movements: Feminism, First- wave, second-wave and third-wave, Dialects of feminism 1.4 Feminist Psychology: Challenging psychology's epistemology, developing a feminist epistemology, feminist research methods	K1- K6	12	1-5

UNIT	CONTENT	CL	HRS	CO
2	Theoretical Perspectives on Sex and Gender 2.1 Biological Theories: evolution and genetic inheritance, role of hormones, differences in brain architecture, sociobiology and evolution theory 2.2 Social Learning Theory: Acquiring gender roles 2.3 Gender Schema Theory: Gender stereotyping, development of gender stereotypes 2.4 Eysenck's Theory of gender and sexuality 2.5 Freud's psychoanalytic theory: Theories of personality, psychosexual development, Freud's position on women 2.6 Kohlberg's theory of cognitive competency development in relation to gender, moral development, Gilligan's critique	K1- K6	14	1-5
3	Intersectionalities of Gender and Sexuality 3.1 Intersectionality- Definition, Brief history, Intersectionality as a perspective on research, Need for intersectionality 3.2 Engaging intersectionalities, Collaborative intersectionality, Structural and political intersectionalities, Intersectional knowledge production in gender studies 3.3 Common themes in race, class, gender and sexuality scholarship 3.4 Crossroads of Gender, Class, and Caste in India: Experiences of poverty, gender and caste-based discrimination in dalit women	K1- K6	12	1-5
4	Understanding Human Sexuality 4.1 Historical, religious and philosophical contexts of sexuality 4.2 Sexual orientations: Definitions and Types 4.3 Theoretical perspectives: Psychoanalytic theory, cognitive- behavioural theory, learning theory, exchange theory, personality theories, evolutionary theory 4.4 Lifespan sexual development: Infancy and childhood, puberty, adolescence, aging	K1- K6	14	1-5
5	Queer-affirmative Counselling Practices 5.1 Mental health of queer individuals: Unique life stressors, emotional landscape of a queer individual, common therapeutic issues while working with families of origin of queer individuals 5.2 Definition & Need for QACP: Pathologisation and medicalisation of the queer and trans subject 5.3 Tenets of QACP, Moving towards affirmative practices, Using queer-affirmative language 5.4 Queering therapeutic practices: Cognitive behavioural therapy, Person-centered therapy, Narrative therapy, Family and couples therapy	K1- K6	13	1-5

BOOKS FOR STUDY

Bosson, Jennifer K., et al. *The Psychology of Sex and Gender*. 2nd ed., New Delhi, Sage Publications, 2021.

Rogers, Wendy Stainton, and Rex Stainton Rogers. *The Psychology of Gender And Sexuality: An Introduction*. United Kingdom, McGraw-Hill Education, 2001.

Shields, Stephanie A. "Gender: An intersectionality perspective." *Sex roles* 59 (2008): 301-311.

Cho, Sumi, Kimberlé Williams Crenshaw, and Leslie McCall. "Toward a field of intersectionality studies: Theory, applications, and praxis." *Signs: Journal of women in culture and society* 38.4 (2013): 785-810.

Weber, Lynn. "A conceptual framework for understanding race, class, gender, and sexuality." *Psychology of Women Quarterly* 22.1 (1998): 13-32.

Sabharwal, Nidhi Sadana, and Wandana Sonalkar. "Dalit women in India: At the crossroads of gender, class, and caste." *Global Justice: Theory Practice Rhetoric* 8.1 (2015).

Hill, Craig A. *Human Sexuality: Personality and Social Psychological Perspectives*. New Delhi, Sage Publications, 2008.

Lehmiller, Justin J. *The Psychology of Human Sexuality*. 2nd ed., New Jersey, Wiley Blackwell, 2018.

Ranade, Ketki., et al. *Queer Affirmative Counselling Practice - A Resource Book for Mental Health Practitioners in India*. Mumbai, Mariwala Health Initiative, 2022.

BOOKS FOR REFERENCE

Killermann, Samuel. *The Social Justice Advocate's Handbook: A Guide to Gender*. Austin, Impetus Books, 2013.

Wood, Gary W. *The Psychology of Gender*. New York, Taylor and Francis, 2018.

Menon, Nivedita. *Seeing like a Feminist*. New Delhi, Zubaan and Penguin Books India, 2012.

Dess, Nancy Kimberly., et al. editors. *Gender, Sex, and Sexualities: Psychological Perspectives*. New York, Oxford University Press, 2018.

Richards, Christina., and Meg John Barker, editors. *The Palgrave Handbook of the Psychology of Sexuality and Gender*. New York, Palgrave Macmillan, 2015.

Nadal, Kevin L., and Maria R Scharron-del Rio, editors. *Queer Psychology: Intersectional Perspectives*. Switzerland, Springer Nature, 2021.

Davies, Dominic., and Charles Neal, editors. *Pink Therapy: A Guide for Counsellors and Therapists Working with Lesbian, Gay and Bisexual Clients*. Berkshire, Open University Press, 1996.

WEB RESOURCES

<https://rb.gy/icfgw>

<https://rb.gy/qgv6>

RESEARCH ARTICLES FOR FURTHER READING:

Bhasin, Kamla. *Understanding Gender*. New Delhi, Kali for Women, 2000.

Bhasin, Kamala. "What is patriarchy?" *Gender Basics, New Delhi: Women Unlimited*, 1993.

Nicholson, Linda. "Interpreting Gender." *Signs*, vol. 20, no. 1, 1994, pp. 79–105. JSTOR, <http://www.jstor.org/stable/3174928>. Accessed 26 Sept. 2023.

Carbado, Devon W., et al. "INTERSECTIONALITY: Mapping the Movements of a Theory1." *Du Bois review: social science research on race* 10.2 (2013): 303-312.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	5 (1 x 5 marks)	1 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	5 (1 x 5 marks)	1 (Internal Choice- Answer Any 1 of 2)	300 words
B	K3	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
	K4	10 (1 x 10 marks)	1 (Internal Choice- Answer Any 1 of 2)	700 words
C	K5 & K6	20 (1 x 20 marks)	1 (Answer any 1 of 2 questions- Each question contains Part A and Part B)	1200 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
	K2	10 (2 x 5 marks)	2 (Internal Choice-Answer Any 1 of 2)	300 words
B	K3	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
	K4	20 (2x 10 marks)	2 (Internal Choice-Answer Any 1 of 2)	700 words
C	K5 & K6	40 (2 x 20 marks)	2 (Answer any 2 of 4 questions- Each question contains Part A and Part B)	1200 words

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23PY/PE/GS15												
I/ II/ IV	Course Title: Gender and Sexuality												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	3	2	1	3	2	3	3	1	2	3
CO 2	3	3	3	3	3	2	3	3	3	3	3	3	3
CO 3	3	2	3	2	1	2	3	2	3	1	2	3	3
CO 4	3	3	3	2	3	2	3	3	2	2	3	3	3
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
Post Graduate Elective Course offered by the Department of Psychology for
M.A. /M.Sc. /M.Com. Degree Programme
SYLLABUS

(Effective from the academic year 2023-2024)

PERSONAL EFFECTIVENESS

CODE: 23PY/PE/PE23

CREDITS:3

L T P: 3 0 0

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- To assist students towards self -discovery
- To enable students to enhance their social skills
- To help students develop a sense of individual identity

COURSE LEARNING OUTCOMES

On successful completion of the course, the student will be able to:

COs	DESCRIPTION	CL
CO1	reiterate and explain the concepts of emotions, motives and drives	K1 & K2
CO2	display improved interpersonal relationship skills	K3
CO3	analyze and evaluate the impact of social perception and intelligence on interpersonal relationships.	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Self-Discovery 1.1 Self-Concept 1.2 Self-Image, Self-Esteem 1.3 Emotional Intelligence- Basic Emotional Competencies 1.4 Motive & Drives 1.5 Values	K1-K4	7	1- 3
2	Understanding others 2.1 Social Perception Meaning and Definition 2.2 Basic Principles of Social Perception 2.3 Social Intelligence-Social Awareness and Social Facility 2.4 Social Influence	K1-K4	8	1- 3
3	Interpersonal Communication and Relationships 3.1 Definition of Communication 3.2 Elements of Communication 3.3 Types of Communication 3.4 Listening/Responding 3.5 Developing Interpersonal Relationships 3.6 Assertive Behaviour	K1-K4	8	1- 3

UNIT	CONTENT	CL	HRS	CO
4	Interpersonal Dynamics 4.1 Transactions 4.2 Life Scripting 4.3 Life Positions 4.4 Ego States 4.5 Psychological Games	K1-K4	8	1- 3
5	Adjustment 5.1 Adjustment- Concept of Adjustment and Maladjustment 5.2 Conflict 5.3 Frustration 5.4 Stress 5.5 Coping Strategies	K1-K4	8	1- 3

BOOKS FOR STUDY:

Baron, Robert A., and Donn R. Byrne. *Social Psychology*. 13th ed., New York, Prentice Hall, 2011.
 Berne, Eric. *Games People Play: The Psychology of Human Relationships*. UK, Penguin Books, 2011.
 Davies, M. N., and Banyard, P., *Essential Psychology*. SAGE Southeast Asia, 2010.
 Goleman, Daniel. *Emotional Intelligence*. New Delhi, Bloomsbury Publishing India Private Limited, 2004.

BOOKS FOR REFERENCE:

Goleman, Daniel. *Social Intelligence*. 1st ed., New Delhi, Bloomsbury Publishing India, 2004.
 Johnson, David W. *Reaching Out: Interpersonal Effectiveness and Self-Actualization*. 2nd ed., New Delhi, Pearson College Division, 2012.
 Kravitz, Sheldon M. *Emotional Intelligence Works: Developing "People Smart" Strategies*. 2nd ed., Virginia, Viva Brooks, 2005.
 Walker, V., and L. Brooke. *Becoming Aware*. Dubuque, Kendall/Hunt, 2009.

WEB RESOURCES:

<https://bit.ly/3rsCz9g>
<https://bit.ly/466ZINw>
<https://bit.ly/3tbwSNF>

PATTERN OF ASSESSMENT

Continuous Assessment:		Total Marks: 50	Duration: 90 minutes	
Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2x5 marks)	3 (Answer any 2)	300 words
B	K2	10 (2x5 marks)	3 (Answer any 2)	300 words
C	K3	20 (1x20 marks)	1 (Internal Choice- Answer Any 1)	1200 words
	K4	10 (1x10 marks)	1 (Internal Choice- Answer Any 1)	700 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End Semester Evaluation

Case Study

Total Marks: 50

Cognitive Level	DESCRIPTION	Mark Allocation
K1 & K2	Introduction & Description	15
K3	Application of theories	15
K4	Introspective Analysis	20

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

**Post Graduate Elective Course offered by the Department of Psychology for
M.A. /M.Sc. /M.Com. Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

PSYCHOLOGY OF WELL BEING

CODE: 23PY/PE/PW23

CREDITS:3

L T P: 3 0 0

TOTAL TEACHING HOURS:39

OBJECTIVES OF THE COURSE

- To articulate and elucidate fundamental well-being principles.
- To facilitate connections between theoretical concepts and real-life experiences
- To highlight the practical significance of well-being psychology, demonstrating how the concepts studied in the course can be harnessed to improve the well-being.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to:

COs	DESCRIPTION	CL
CO1	recognize and describe the key concepts related to wellbeing.	K1 & K2
CO2	utilize the theoretical concepts to enhance personal well-being and the well-being of others in daily life.	K3
CO3	investigate and discuss the factors that contribute to psychological well being.	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Positive Emotions and Well-Being 1.1 Importance of Positive Emotions 1.2 Building Positive Feelings 1.3 Overall Well-Being- Finding the Flow 1.4 Becoming Present-Savouring	K1- K4	8	1-3
2	Happiness and Psychological Well-Being 2.1 Distinctions of Happiness 2.2 The Happiness Formula 2.3 Psychological Well-Being- Essential 2.4 Barriers to Well-Being	K1- K4	7	1-3
3	Close Relationships and Well-Being 3.1 Attachment Styles 3.2 Characteristics of Close Relationships 3.3 Purposeful Positive Relationship Behaviours	K1- K4	8	1-3
4	Resilience 4.1 What is Resilience? 4.2 Sources of Resilience in Childhood, Adulthood and Later Life, Successful Aging 4.3 Effects of Trauma 4.5 Growth Through Trauma	K1- K4	8	1-3

UNIT	CONTENT	CL	HRS	CO
5	Pro-Social Behaviour 5.1 Empathy and Altruism 5.2 Gratitude 5.3 Forgiveness	K1- K4	8	1-3

BOOKS FOR STUDY

Lopez, Shane J, et al. *Positive Psychology : The Scientific and Practical Explorations of Human Strengths*. 4th ed., Thousand Oaks, California, Sage Publications, Inc, 2019.

Style, Charlotte. *Brilliant Positive Psychology : What Makes Us Happy, Optimistic and Motivated*. London, Pearson Education UK, 2010.

BOOKS FOR REFERENCE

Steve, Baumgardner, and Crothers Marie. *Positive Psychology*. New Delhi, Pearson Education India, 2015.

Grenville-Cleave, Bridget. *Positive Psychology : A Practical Guide*. London, Icon Books, 2016.

Seligman, Martin E P. *Authentic Happiness*. North Sydney, N.S.W., William Heinemann, 2011.

WEB RESOURCES

https://t.ly/xFOR_

<https://t.ly/doO7K>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level	Mark Allocation	No of Questions	No of Words
A	K1	10 (2x5 marks)	3 (Answer any 2)	300 words
B	K2	10 (2x5 marks)	3 (Answer any 2)	300 words
C	K3	20 (1x20 marks)	1 (Internal Choice-Answer Any 1)	1200 words
	K4	10 (1x10 marks)	1 (Internal Choice-Answer Any 1)	700 words

2 to 3 ‘Other Components’ will be assessed for 50 marks, with the same range and weightage of K Levels prescribed for the course.

End Semester Evaluation

Case Study

Total Marks: 50

Cognitive Level	DESCRIPTION	Mark Allocation
K1 & K2	Introduction & Description	15
K3	Application of theories	15
K4	Introspective Analysis	20

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

PSYCHOLOGY OF CONFLICT AND PEACE

CODE: 23PY/PI/PC24

CREDITS: 4

OBJECTIVES OF THE COURSE

- To bring about awareness on the various trends and approaches to conflict, war and peace.
- To help understand the effects of violence and conflict on vulnerable populations.
- To enable them to comprehend the feminist approach to peace psychology.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION
CO1	identify and describe the key concepts of Peace Psychology.
CO2	illustrate the various issues and approaches involved in conflict, war, and peace.
CO3	examine the impact of conflict and violence over people.

UNIT	CONTENT
1	Introduction 1.1 Introduction to Peace Psychology 1.2 Trends in Peace Psychology 1.3 Peace Psychology in Asia
2	Developmental Issues: Children and Adolescents 2.1 Young people's attitudes and understandings of war and conflict, Attitudes to nuclear war 2.2 Children and adolescents as peacemakers, Child soldiers 2.3 The impact of violent conflict on psychological development
3	The Feminist Approach 3.1 Understanding the feminist approach to peace psychology 3.2 Testing women's attitudes to peace and war, Women and violence 3.3 Effects of conflict on women, Girl soldiers

4	Peacemaking 4.1 Introduction, UN Peacekeeping: Confronting the Psychological Environments of War 4.2 Cultural Context of Peace Making 4.3 Conflict Resolution: Theoretical and Practical Issues
5	Peace Building 5.1 Introduction 5.2 Towards a Psychology of Structural Peace Building 5.3 Gandhi as a Peace Builder, Peace Building and Non- Violence

BOOKS FOR STUDY

Blumberg, Herbert, et al., editors. *Peace Psychology: A Comprehensive Introduction*. United States of America, Cambridge UP, 2007.

Christie, Daniel J., et al. *Peace, Conflict, and Violence: Peace Psychology for the 21st Century*. India, Indo American Books, 2008.

Montiel, Cristina Jayme, and Noraini M. Noor. "Peace Psychology in Asia." *Peace and Conflict: Journal of Peace Psychology*, vol. 9, no. 3, USA, American Psychological Association, Sept. 2003, pp. 195–218.

BOOKS FOR REFERENCE

MacNair, Rachel M. "The Psychology of Peace: An Introduction." *Choice Reviews Online*, vol. 41, no. 08, Association of College and Research Libraries, Apr. 2004, pp. 41–4943.

Jaquish, Michael. *The Psychology of Peace: Forging a Path to Peace with Psychology and Buddhist philosophy*. United States of America, Createspace Independent Pub, 2017.

JOURNALS

Journal of Peace Research

Journal of Conflict Resolution

Peace and Change

Peace and Conflict

WEB RESOURCES

<https://bitly.ws/VopU>

<https://bitly.ws/Voqd>

<https://bitly.ws/Voqv>

<https://bitly.ws/VoqN>

PATTERN OF ASSESSMENT

End-Semester Examination:

Total Marks: 100 Duration: 3 hours

Section A – 6x10 = 60 (6 out of 8 questions to be answered in 700 words each)

Section B – 2x 20 = 40 (2 out of 4 questions to be answered in 1200 words each)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE PSYCHOLOGY

SYLLABUS

(Effective from the academic year 2023 - 2024)

INTERPERSONAL RELATIONSHIP AND COMMUNICATION

CODE: 23PY/PI/IR24

CREDITS: 4

OBJECTIVES OF THE COURSE

- To facilitate the student to identify the different types of relationships and sketch aspects pertaining to the formation and dissolution of relationships
- To reflect on positive communication skills that can optimize interpersonal relationships.
- To adapt strategies essential to minimise conflicts leading to the dissolution of relationships.

COURSE LEARNING OUTCOMES

On successful completion of the course, the student will be able to:

COs	DESCRIPTION
CO1	exhibit familiarity with various theories of relationships and their formulations.
CO2	articulate appropriate strategies of interaction and communication based on the changing nature of relationships
CO3	build personal growth by embracing tenets of relationship psychology.

UNIT	CONTENT
1	Types of Relationships 1.1 Introduction 1.2 Types of relationships- Affiliation, Friendship, Relationship with Family, Romantic Relationships 1.3 Types of love, Theories of Interpersonal Attraction- Learning theory, Social Exchange theory
2	Factors determining relationship formation 2.1 Proximity, Similarity 2.2 Physical Attraction, Reciprocal Liking 2.3 Complementarity, Competence
3	Communication: Lifeblood of Relationships 3.1 Dimensions of Communication, How communication changes as our relationship develop 3.2 Model of Interaction Stages in Relationship 3.3 Maintaining Relationships through Dialogue: Disclosure, Lies and Fights
4	Evaluating and Developing Effective Communication in Relationship 4.1 Relativity and Perceptions of Effective Communication 4.2 Recipe for Effective Communication 4.3 Becoming an Effective Communicator 4.4 Savouring and Peak performance
5	The Dissolution of Relationships 5.1 Conflicts in relationships 5.2 Duck's Model Relationship- Dissolution 5.3 Rusbult and Zembrodt's model of responses to relationship dissatisfaction

BOOKS FOR STUDY

Jackson-Dwyer, Diana. *Interpersonal Relationships*. London ; New York, Routledge, Taylor & Francis, 2014.
Knapp, Mark L, and Anita L Vangelisti. *Interpersonal Communication and Human Relationships*. Boston, Allyn And Bacon, 2005.

BOOKS FOR REFERENCE

Berscheid, Ellen, and Pamela C Regan. *The Psychology of Interpersonal Relationships*. London, Psychology Press, 2005.
Duck, Steve. *Human Relationships*. Thousand Oaks, Sage, 2007.
Keyes, Corey L M, and Jonathan Haidt. *Flourishing : Positive Psychology and the Life Well-Lived*. Washington, Dc, American Psychological Association, 2003.

JOURNALS

Personal Relationships
Journal of Social and Personal Relationships
Journal of Family Communication
Journal of Non-Verbal Behaviour

WEB RESOURCES

<http://surl.li/lmmtg>
<http://surl.li/lmmto>
<http://surl.li/lmmtr>

End-Semester Examination: Total Marks: 100 Duration: 3 hours

Section A – 6x10 = 60 (6 out of 8 questions to be answered in 700 words each)
Section B – 2x 20 = 40 (2 out of 4 questions to be answered in 1200 words each)



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

M.Sc. Degree
INFORMATION TECHNOLOGY
(CHOICE BASED CREDIT SYSTEM)

OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF COMPUTER SCIENCE

PROGRAMME DESCRIPTION

Master of Science in Information Technology offers knowledge on the underlying concepts of computer technology, use of different programming languages as a tool for solving problems in different domains and the technology trends. This degree not only helps the students pursue career in IT industry or higher education in the discipline but also opens up avenues in different domains of their interest as computer technology plays a vital role in almost all disciplines.

The programme enables the students to master concepts, answers the questions on why, what and how of computer technology, introduces students to various programming tools and techniques and the design and development of solutions, enables students to understand the security issues involved, and apply the knowledge appropriately to solve different problems in business/research. It gives students understanding on discrete mathematics, formal languages and finite automata and helps them acquisition to analyse different problem solving techniques. The programme not only emphasises acquisition of knowledge in computer technology but also focusses on value education and ethics.

To give emphasis to research, a course on research methodology has been included. Students are also expected to do a summer internship which gives them a better understanding on the work environment and the technology.

VISION OF THE DEPARTMENT

To provide a wholesome educational environment, a platform for the students to reinvent themselves and launch into the technological and scientific arena together with human values.

MISSION OF THE DEPARTMENT

To impart learning as a process towards knowledge, research and productivity and provide education as a tool to excel in one's area of competence.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

DEPARTMENT OF COMPUTER SCIENCE

On successful completion of the M.Sc. Computer Science Programme, the students will be able to:

PSO1	Demonstrate the ability to define and analyze a problem, identify different strategies and approaches to solve the problem, design, implement, and evaluate the solutions for business/research needs.
PSO2	Show the ability to understand the professional, ethical, legal, security issues and responsibilities, and the societal impact of computing.
PSO3	Able to work in a collaborative environment leading to mutual knowledge sharing.
PSO4	Able to critically analyze problems to provide computer based solutions for issues with societal considerations and underprivileged.
PSO5	Apply domain knowledge and expertise for transforming innovative ideas into reality for the benefit of the environment and sustainable development.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
DISTRIBUTION OF CREDITS AND HOURS
M.Sc. Information Technology 2023-2024

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	6	5	6	4	6	4	5	17	23
	4	5	4	5	4	6	5	6	17	22
	4	5	4	5	4	6			12	16
	4	6			5	6			9	12
Project							8	10	8	10
PE-dept.	5	6	5	6			5	6	15	18
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PA	2	2							2	2
PN					2				2	0
Library				1		1		3	0	5
TOTAL	23	30	25	30	24	30	22	30	94	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: INFORMATION TECHNOLOGY

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
SEMESTER-I									
23CS/PC/PP14	Programming with Python	4	2	0	4	3	50	50	100
23CS/PC/DM14	Discrete Mathematics for Computer Science	4	4	1	0	3	50	50	100
23CS/PC/SE14	Software Engineering	4	4	1	0	3	50	50	100
23CS/PC/OC14	Operating Systems: Concepts and Applications	4	2	0	4	3	50	50	100
	PA/PL								
	Department Elective I								
SEMESTER-II									
23CS/PC/DB25	Database Management Systems	5	3	0	3	3	50	50	100
23CS/PC/AA24	Design and Analysis of Algorithms	4	4	1	0	3	50	50	100
23CS/PC/OO24	Object Oriented Programming: Concepts and Practice	4	3	0	2	3	50	50	100
23CS/PK/SS22	Soft Skills	2	2	0	0	0	50	-	100
CD / ET	Value Education								
	Department Elective II								
	Common Elective I								
SEMESTER-III									
23CS/PC/NA34	Network Management and Administration	4	3	1	2	3	50	50	100
23CS/PC/RM34	Research Methodology	4	3	1	2	-	50	50	100
23CS/PC/DA34	Data Analytics	4	3	1	2	1.5	50	50	100
23CS/PC/AI35	Artificial Intelligence	5	5	1	0	3	50	50	100
23CS/PN/SI32	Summer Internship	2	0	0	0	-	50	0	100
CD / ET	Value Education								
	Common Elective II								
SEMESTER-IV									
23CS/PC/FF44	Formal Languages and Finite Automata	4	4	1	0	3	50	50	100
23CS/PC/CT45	Cloud Computing: Theory and Practice	5	3	0	3	3	50	50	100
23CS/PC/DS48	Dissertation	8	0	0	10	-	50	50	100
	Department Elective III								
Postgraduate Elective Courses Offered to Parent Department									
23CS/PE/XI15	UI, UX and Design Thinking	5	3	0	3	1.5	50	50	100
23CS/PE/CS15	Cyber Security	5	5	1	0	3	50	50	100
23CS/PE/ST15	Software Testing	5	3	0	3	3	50	50	100
23CS/PE/MC15	Mobile Computing	5	5	1	0	3	50	50	100
23CS/PE/AT15	Advanced Technologies in Information Technology	5	5	1	0	3	50	50	100
23CS/PE/VP15	Visual Programming	5	3	0	3	1.5	50	50	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.Sc. DEGREE: INFORMATION TECHNOLOGY

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
23CS/PE/AD15	Advanced Database Systems	5	5	1	0	3	50	50	100
Postgraduate Elective Courses Offered to Other Departments									
23CS/PE/DP23	Documentation and Presentation	3	2	0	1	3	50	50	100
23CS/PE/ET23	Emerging Trends in Information Technology	3	3	0	0	3	50	50	100
23CS/PE/MM23	Multimedia	3	2	0	1	1.5	50	50	100
23CS/PE/EC23	E-Commerce and Content Management Systems	3	2	0	1	1.5	50	50	100
The Department will offer one Social Awareness / Service Learning Course									
Social Awareness									
23CS/PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100
23CS/PA/CR12	Child Rights	2	2	0	0	-	50	-	100
23CS/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100
23CSPA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100
23CS/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100
23CS/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100
23CS/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100
23CS/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100
23CS/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100
Service Learning (Specific to the Department)									
23CS/PL/CB12	Computer Basics	2	2	0	0	-	50	-	100
Independent Elective Courses									
23CS/PI/DF24	Digital Forensics	4	0	0	0	3	0	100	100
23CS/PI/IP24	Digital Image Processing	4	0	0	0	3	0	100	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023-2024)

PROGRAMMING WITH PYTHON

CODE: 23CS/PC/PP14

CREDITS: 4

L T P: 2 0 4

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To understand the elements of a program
- To structure simple Python programs for solving problems
- To understand modular and object-oriented programming
- To represent compound data using Python lists, tuples and dictionaries
- To read and write data from/to files

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the structure and concepts of python programming	K1
CO2	demonstrate the programming concepts using python	K2
CO3	apply the programming knowledge learnt using python and solve any given problem	K3
CO4	compare the different ways of solving a problem and find out an effective one	K4
CO5	evaluate the given problem and write an effective and efficient code to solve the same	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Introduction to Python Programming History of Python-Getting Started with Python- Programming Style and Documentation-Programming Errors	K1	15	1
	1.2 Elementary Programming Writing a Simple Program-Reading Input from Console- Identifiers-Variables-Assignment Statements and	K1-K5		1-5

UNIT	CONTENT	CL	Hrs	CO
4	4.1 List Processing GUI Programming Using Tkinter-List Basics-Case Study- Copying The Lists-Passing Lists to Function-Returning List from Function-Case Study-Searching Lists-Sorting Lists-Case Study-Multidimensional Lists-Processing Two Dimensional List- Passing Two Dimensional List to Function-Case Study	K1-K6	15	1-5
5	5.1 Tuples, Sets and Dictionaries Tuples- Sets-Comparing The Performances of Sets and Lists-Case Study-Dictionaries-Case Study 5.2 Files and Exceptional Handling Text Input/Output- File Dialogs-Case Study-Retrieving Data from Web-Exception Handling-Raising Exceptions- Custom Exception Classes	K1-K6	16	1-5

BOOK FOR STUDY

Y. Daniel Liang, Introduction to Programming Using Python, Prentice Hall, 2013.

Martin C. Brown. Python: The Complete Reference. McGraw Hill Education; Fourth edition, 2018

BOOKS FOR REFERENCE

Allen B. Downey. Think Python. How to Think Like a Computer Scientist, 2nd edition, O'Reilly Publishers, 2016.

David Beazley, Brian K. Jones. Python Cookbook: Recipes for Mastering Python 3, 3rd Edition, 2013

Harsh Bhasin. Python for Beginners. New Age International Publishers, 2018.

WEB RESOURCES

http://en.wikibooks.org/wiki/Python_Programming

<http://docs.python.org>

<http://diveintopython.org/>

<https://realpython.com/start-here/>

PATTERN OF ASSESSMENT**Continuous Assessment Test:****Theory :****Total Marks: 25****Duration: 45 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$3 \times 5 = 15$	1	2
	K2 (5)		1	2
	K4 (5)		1	2
B (Internal Choice)	K3 (10)	$1 \times 10 = 10$	1	2
	Total	25	4	8

Practical :**Total Marks: 25****Duration: 45 minutes**

Knowledge Level	Marks
K5	15
K6	10
Total	25

Other Components:**Total Marks: 50**

seminar, quiz, open book test, group discussion, Mini project

Two to three components will be prescribed**End Semester Examination:****Theory:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$6 \times 5 = 30$	1	2
	K2 (5)		1	2
	K3 (10)		2	4
	K4 (10)		2	4
B (Internal Choice)	K3 (10)	$2 \times 10 = 20$	1	2
	K4 (10)		1	2
	Total	50	8	16

Practical : Total Marks: 50

Duration: 90 minutes

Knowledge Level	Marks
K5	30
K6	20
Total	50

*Equal weightage to be given to all Units

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PC/PP14												
I	Course Title: PROGRAMMING WITH PYTHON												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	1	2	3	2	-	-	3	3	3	-	3
CO 2	3	1	1	2	3	2	-	-	3	3	3	-	3
CO 3	3	3	3	2	3	3	2	2	3	3	3	2	3
CO 4	3	3	3	2	3	3	2	2	3	3	3	2	3
CO 5	3	3	3	2	3	3	2	2	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023-2024)

DISCRETE MATHEMATICS FOR COMPUTER SCIENCE

CODE: 23CS/PC/DM14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To introduce concepts of mathematical logic for analyzing propositions and proving theorems.
- To enable the students to use sets for solving applied problems, and use the properties of set operations algebraically.
- To work with relations, functions as relations and analyse their properties
- To apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
- To define graphs, digraphs and trees, and identify their main properties

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand mathematical reasoning including induction, recursion and apply mathematical logic to solve problems	K1, K2
CO2	apply logic Sets, Predicates, Propositional logic. Model Graphs, trees and able to determine their properties	K3
CO3	analyze counting techniques to the representation and characterization of relational and functional concepts.	K4
CO4	evaluate counting problems and algorithms performances on finite and discrete Structures	K5
CO5	construct mathematical proofs using case analysis, and mathematical induction. Application of concepts in Discrete Mathematics.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	KL	Hrs	CO
1	1.1 Sets and Induction Lattices and Boolean Algebras – Principles of Inclusion – Exclusion – Mathematical Induction 1.2 Program Correctness Pseudocode Conventions - An Algorithm to Generate Perfect Squares - Two Algorithms for Computing Square Roots - Strong Form of Mathematical Induction - Application: Algorithm to Compute Powers - Application: Finding Factorizations - Application: Binary Search	K1- K3 K1-K5	12	1-2 1-4
2	2.1 Formal Logic Truth and Logical Truth - Tautologies - Substitutions into Tautologies - Logically Valid Inferences - Combinatorial Networks - Substituting Equivalent Sub formulas - Simplifying Negations 2.2 Normal Forms Disjunctive Normal Form - Application: DNF and Combinatorial Networks – Conjunctive Normal Form - Application: CNF and Combinatorial Networks - Testing Satisfiability and Validity - The Famous $P \neq NP$ Conjecture - Resolution Proofs: Automating Logic	K1-K6	10	1-5
3	3.1 Predicates and Quantification Predicates - Quantification - Restricted Quantification - Nested Quantifiers – Negation and Quantification - Quantification with Conjunction and Disjunction - Application: Loop Invariant Assertions 3.2 Relations Binary Relations - n-ary Relations - Special Types of Relations - Reflexive and Irreflexive Relations - Symmetric and Antisymmetric Relations - Transitive Relations - Reflexive, Symmetric, and Transitive Closures - Application: Finding a Minimal Element	K1-K4 K1-K6	14	1-3 1-5
4	4.1 The Pigeon-Hole Principle k to 1 Functions - Pigeon-Hole Principle - Application: Decimal Expansion of Rational Numbers - Problems with Divisors and Schedules - Two Combinatorial Results 4.2 Analysis of Algorithms* Algorithms - Complexity Analysis - Comparing Growth Rate of functions - Asymptotic notations - Complexity of Programs	K1-K6	15	1-5
5	5.1 Graph Theory Introduction to Graph Theory – Definitions - Subgraphs - Paths and Cycles – Euler Paths and Circuits - Hamiltonian Paths and Circuits- Applications of Hamiltonian Circuits - Graph Isomorphism - Representation of Graphs - Adjacency Matrix – Adjacency Lists - Connected Graphs - The Relation CONN - Finding Connected Components - Reachability matrix - Planar	K1-K6	14	1-5

UNIT	CONTENT	KL	Hrs	CO
	Graphs - Definitions - Applications - Euler Formula - Kuratowski's Theorem - Graph Coloring - Terminologies - The Four color Theorem - Applications of Graph Coloring 5.2 Trees Definition of Trees - Characterization of Trees - Application: Decision Trees – Directed Graphs - Basic Definitions - Directed Trails, Paths, Circuits, and Cycles - Directed Graph Isomorphism	K1-K3		1-2

***Unit 4.2** - Theorems and proofs not to be included

BOOKS FOR STUDY

Haggard, Gary, John Schlipf, and Sue Whitesides. Discrete mathematics for computer science, Brooks/Cole-Thomson Learning.

Kenneth H. Rosen, Discrete Mathematics and its Applications, Seventh Edition, Tata McGraw - Hill

BOOKS FOR REFERENCE

Epp, Susanna S. Discrete mathematics with applications, Cengage learning

Hunter, David J. Essentials of discrete mathematics, Jones & Bartlett Publishers

Liben-Nowell, David. Discrete Mathematics for Computer Science, Wiley Global Education, 2017

PATTERN OF ASSEMSSMENT

Continuous Assessment Test:

Theory :

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (4) K2 (6)	$5 \times 2 = 10$	2 3	2 3
B (Internal Choice)	K3 (5) K6 (5)	$2 \times 5 = 10$	1 1	2 2
C (Internal Choice)	K3 (10) K4 (10) K5 (10)	$3 \times 10 = 30$	1 1 1	2 2 2
	Total	50	10	15

Other Components: Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Examination:

Theory: Total Marks: 100

Duration: 3 Hours

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (10)	10X2 = 20	5	5
	K2 (10)		5	5
B (Internal Choice)	K3 (15)	4 X 5 = 20	3	6
	K4 (5)		1	2
C (Internal Choice)	K3 (10)	6 X 10 = 60	1	2
	K4 (20)		2	4
	K5 (20)		2	4
	K6 (10)		1	2
	Total	100	20	30

*Equal weightage to be given to all Units

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PC/DM14												
I	Course Title: Discrete Mathematics for Computer Science												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	2	2	1	2	2	1	3	2	2	1	2
CO 2	2	2	2	1	1	2	1	1	2	2	1	2	2
CO 3	2	1	2	1	1	1	-	-	3	1	1	3	1
CO 4	2	2	1	1	2	2	-	1	2	1	1	1	1
CO 5	2	3	2	2	2	3	2	1	1	3	2	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023 - 2024)

SOFTWARE ENGINEERING

CODE : 23CS/PC/SE14

CREDITS : 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To understand software engineering principles
- To introduce software development life cycle models
- To introduce software estimation techniques
- To understand the need for software quality and ways to ensure it
- To understand project management techniques such as Configuration Management, Scheduling, Training, Planning and Risk Management

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

On successful completion of the course, students will be able to:				
COs	DESCRIPTION	CL		
CO1	explain the software engineering principles and techniques	K1, K2		
CO2	choose an appropriate software lifecycle model for a given problem	K3		
CO3	analyse and design complex systems and Ability to develop, maintain and evaluate large-scale software systems	K4		
CO4	assess the efficiency, reliability, robustness and develop cost-effective software solutions	K5		
CO5	discuss about the new modelling, design, management techniques used for a future product	K6		
CL – Cognitive Level				
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create				
UNIT	CONTENT	CL	Hrs	CO
1	1.1 Software and Software Engineering Nature of Software - Defining Software Engineering - Software Process - Process, Activities, Work Product - Process Framework - Categories of Activities (Framework, Umbrella) 1.2 Process Models SDLC - Waterfall Model - Prototyping - Agile Philosophy - Agility, Agility and Cost Change, Agile Process - Agility Principles - Scrum -	K1-K4	18	1-3

UNIT	CONTENT	CL	Hrs	CO
	Test driven development - continuous integration - Impact of Process on End Product - Process Assessment and Improvement 1.3 Software Engineering Principles Planning - Separation of Concerns - Modularity - Modeling - Abstraction - Anticipation of change - Reusability - Incrementality - Measurement – Tools			
2	2.1 Requirements Gathering Requirements Engineering Tasks - Software Requirements Specification - Types of Requirements (Normal, Expected) - Traceability Matrix 2.2 Modeling Significance of requirement analysis - Arlow and Neustadt rules of thumb - application domain analysis - Writing Use Cases - Use Case Diagram - Activity Diagram - Swimlane Diagram - Identifying classes – Attributes – Operations - associations and dependencies - Class diagram - - packaging classes - State Diagram - Sequence Diagram - Agile Requirements Elicitation (User Stories) - Agile Requirements Engineering	K1-K6	14	1-5
3	3.1 Software Designing Design Concepts (Abstraction, Architecture, Patterns, Separation of Concerns, Modularity, Information Hiding, Functional Dependence, Refinement, Aspects, Refactoring) 3.2 Basic Design Principles Open Closed - Liskov Substitution - Dependency Inversion - Interface Segregation - Release Reuse Equivalency- Common Closure - Common Reuse 3.3 Software Quality and Assurance McCall's quality factors - ISO 9126 Quality factors -Cost of Quality - Defect - Defect Amplification and removal - Reviews – Informal, Formal Technical Reviews - Inspection - Walkthroughs - Audits – Testing	K1-K6	12	1-5

UNIT	CONTENT	CL	Hrs	CO
4	4.1 Software Testing Levels of Testing - Unit Testing, Integration Testing, Validation Testing, System Testing - Test Cases - Test Case Template -Types of Testing - White Box, Basis Path Testing , Control Structure Testing 4.2 Software Configuration Management Need - Baselines - Software Configuration Items - SCM Repository - SCM Process 4.3 Metrics Terms (Metrics, Measurement, Indicators) - Function Points - Deriving Function points - Metrics - CK Metrics - Defects per KLOC - FP per Person-Month - McCabe Cyclomatic Complexity - code coverage	K1-K6	11	1-5
5	5.1 Software Project Estimation Software sizing- LOC Based Estimation - FP based estimation - COCOMO Model II - Estimation for WebApp Projects 5.2 Project Management and Scheduling Training plan - Defect prevention meeting Root causes for delays - Principles (Compartmentalization, Interdependence, Effort Validation, Time Allocation, Responsibilities, Outcomes, Milestones) - Relationship between People and Effort - Effort Distribution (40-20-40 rule) - Scheduling Tools and Techniques (Time- Line charts, Tracking the schedule) 5.3 Risk Management Term - Proactive Vs Reactive Risk Strategies - Risk Identification - Risk Projection (Risk Table, Assessing Risk Impact) - Risk Mitigation, Monitoring, Management - RMMM Plan	K1-K6	10	1-5

***Demonstration of Software project management Tool – not for assessment**

BOOKS FOR STUDY

Ghezzi, Carlo, Mehdi Jazayeri, and Dino Mandrioli. *Fundamentals of software engineering*. Prentice-Hall, Inc., 1991. (Unit 3.1)

Pressman, Roger S. *Software engineering: a practitioner's approach*. Palgrave macmillan, 2005. (Unit 1,2,3.2 - 5)

BOOKS FOR REFERENCE

Berenbach, Brian, et al. *Software & systems requirements engineering: in practice*. McGrawHill, Inc., 2009.

Brooks Jr, Frederick P. *The Mythical Man-Month: Essays on Software Engineering*, Anniversary Edition, 2/E. Pearson Education India, 1995

Cha, Sungdeok, Taylor, Richard N., Kang, Kyo C. *Handbook of Software Engineering*. Springer 2019

Galorath, Daniel D., and Michael W. Evans. *Software sizing, estimation, and risk management: when performance is measured performance improves*. Auerbach Publications, 2006

Martin, Robert C. *Agile software development: principles, patterns, and practices*. Prentice Hall, 2002.

Schach, Stephen R. *Object-oriented software engineering*. McGraw-Hill, 2008.

Sommerville, Ian. *Software engineering*. 9th Edition. ISBN-10 137035152 (2011).

WEB RESOURCES

<https://www.d.umn.edu/~gshute/softeng/principles.html>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory :

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (4)	$5 \times 2 = 10$	2	2
	K2 (6)		3	3
B (Internal Choice)	K3 (5)	$2 \times 5 = 10$	1	2
	K6 (5)		1	2
C (Internal Choice)	K3 (10)	$3 \times 10 = 30$	1	2
	K4 (10)		1	2
	K5 (10)		1	2
	Total	50	10	15

Other Components: Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Examination:

Theory: Total Marks: 100

Duration: 3 Hours

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (10) K2 (10)	10X2 = 20	5 5	5 5
B (Internal Choice)	K3 (15) K4 (5)	4 X 5 = 20	3 1	6 2
C (Internal Choice)	K3 (10) K4 (20) K5 (20) K6 (10)	6 X 10 = 60	1 2 2 1	2 4 4 2
	Total	100	20	30

*Equal weightage to be given to all Units

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PC/SE14												
I	Course Title: SOFTWARE ENGINEERING												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	1	1	1	1	1	1	1	1	1	2	1	1
CO 2	2	2	1	1	1	1	1	1	1	1	2	1	1
CO 3	3	2	2	1	2	1	1	1	3	2	3	3	2
CO 4	3	2	2	2	3	3	2	1	3	2	3	3	2
CO 5	3	3	3	2	3	3	2	1	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086**MASTER OF SCIENCE (INFORMATION TECHNOLOGY)**

SYLLABUS

(Effective from the academic year 2023-2024)

OPERATING SYSTEMS: CONCEPTS AND APPLICATIONS

CODE: 23CS/PC/OC14

CREDITS: 4

LTP: 204

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To learn the fundamentals of Operating Systems
- To learn the mechanisms of OS to handle processes and scheduling algorithms
- To acquire the knowledge on the mechanisms involved in memory management
- To understand Mutual exclusion principles, deadlock detection algorithms, security and virtualization
- To programmatically learn and implement simple OS mechanisms

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explain the fundamental concepts and security of operating systems.	K1, K2
CO2	apply the various algorithms, methods and security measures to each OS components.	K3
CO3	analyse the algorithms, methods, security and the state of the system in various time periods.	K4
CO4	evaluate the performance of the algorithms, file and memory management techniques.	K5
CO5	create solutions to ensure synchronization for real time applications.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Introduction to Operating System Introduction to OS - Structure, Operations, Protection and Security, Kernel Data Structures, Computing Environments, Services, System Calls and its types, System Programs, OS Design and Implementation OS Debugging Operating, System Generation, System Boot 1.2 UNIX Operating System History of UNIX, Shell, UNIX File System Structure 1.3 Basic UNIX Commands* Commands for files and directories cd, cp, mv, rm, mkdir, more, less, creating and viewing files, using cat, date, who, pwd - filter commands –head tail, cut, paste, grep – regular expression - sort	K1, K2	16	1
		K1 -K4		1-3

2	2.1 Process Management Process - Concept, Process Control Block, Process operations, Scheduling Algorithms - Short term and long-term process scheduling policies – Scheduling Criteria - Multiple Processor Scheduling	K1, K2	15	1
	2.2 CPU Scheduling Scheduling Criteria – Scheduling Algorithms: FCFS, SJF, Priority and Round Robin Scheduling	K1-K5		1-4
	2.3 Process Synchronization and Deadlocks The Critical-section Problem – Petersons solution – Mutex locks - Semaphores – Monitors, Deadlock Prevention and Avoidance, Deadlock Detection and Deadlock Recovery	K1-K6		1-5
	2.4 Process Utilities* sh process, Parents and children, Process status, System process, Mechanism of process creation, Internal and external commands, running jobs in background, KILL, NICE, Job control, at and batch, cron - Case Study on Processes in LINUX	K1-K6		1-5
3	3.1 File Organisation File organisation and Access methods - Logical and Physical File structure – File Allocation methods, - Linked and Index Allocation - File Protection and Security - Directory structure - Single level, two level, Tree structure - Free Space Management - Allocation Methods - Efficiency and Performance – Recovery – FAT32 and NTFS	K1-K5	16	1-4
	3.2 File System* File Access Permission – chmod, chown, chgrp - File Comparisons - View Files – Listing files with attributes – Wildcards - Translating Characters - Links and its types - The File System – Partitions, File Systems, Kernel Accesses – Mounting – umask, ulimit - I/O redirection – Pipes - Case Study on LINUX File System	K1-K6		1-5
4	4.1 Memory Management Memory Management Techniques, Single Partition Allocation, Multiple Partition Allocation – Swapping - Paging and Segmentation - Segmented-Paged Memory Management Techniques - Logical and Physical Address space – Address Mapping - Demand paging - Virtual memory, protection and address mapping hardware, Page fault, Page replacement and Page removal algorithms	K1-K5	16	1-4
	4.2 Device Management Classification of device according to speed, Disk structure - Disk scheduling – FCFS scheduling, SSTF scheduling - Access method and storage capacity	K1-K5		1-4
	4.3 Disk Utilities* Disk usage, disk free, dd, Backups- cpio, tar, System calls for file management, directory management - Case Study on Memory Management in LINUX	K1-K6		1-5

5	5.1 Security The Security Environment – Operating System Security – Controlling Access to resources – Formal models of Secure systems - Basics of cryptography – Authentication – Exploiting Software – Insider Attacks – Malware - Defenses	K1-K4	15	1-3
	5.2 Virtualization and the Cloud History – Requirements for virtualization – Type 1 and Type 2 Hypervisors – Techniques for efficient virtualization – Memory virtualization – I/O Virtualization –Virtual Appliances – Virtual machines on multicore CPUs – Clouds: Clouds as service – Virtual machine migration – checkpointing - Case Study on Security in LINUX	K1-K4		1-3

***Only for Practicals**

Unit 1 1.3

Unit 2 2.4

Unit 3 3.2

Unit 4 4.3

BOOKS FOR STUDY

Silberschatz, Abraham, Peter Baer Galvin and Greg Gagne. Operating System Concepts. 10th ed. Addison Wesley. (Units 1 to 4 - Chapters 1-4, 6-13)

Sumitabha Das. UNIX – Concepts & Applications. 3rd ed. New Delhi: TataMcGraw Hill, 2000. (Chapters 4-13,15,16)

Tanenbaum S., Andrew, Herbert Bos. Modern Operating Systems. 4th ed. Pearson (Unit 5 - Chapter 7, 9, Case Studies – Chapter 10)

Yukun Liu, Yong Yue, Liwei Guo UNIX Operating System The Development Tutorial via UNIX Kernel Services. Beijing: Higher Education Press (Chapters 1,2, 6-10)

BOOKS FOR REFERENCE

Kanetkar Yashwant. UNIX Shell Programming. BPB.

Rosen Kenneth, Douglas Host, Rachel Klee and Richard Rosinski. UNIX: The Complete Reference. 2nd ed. McGraw Hill/Osborne, 2007.

Sobell M. G. A Practical Guide to Linux Commands, Editors, and Shell Programming. USA: Pearson Education

WEB RESOURCES

www.tutorialspoint.com/unix

www.unixtutorial.org/

www.guru99.com/unix-linux-tutorial.html

PATTERN OF ASSESSMENT**Continuous Assessment Test:****Theory :****Total Marks: 25****Duration: 45 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
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	K2 (5)		1	2
	K4 (5)		1	2
B (Internal Choice)	K3 (10)	$1 \times 10 = 10$	1	2
	Total	25	4	8

Practical :**Total Marks: 25****Duration: 45 minutes**

Knowledge Level	Marks
K5	15
K6	10
Total	25

Other Components:**Total Marks: 50**

seminar, quiz, open book test, group discussion, Mini project

Two to three components will be prescribed**End Semester Examination:****Theory:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$6 \times 5 = 30$	1	2
	K2 (5)		1	2
	K3 (10)		2	4
	K4 (10)		2	4
B (Internal Choice)	K3 (10)	$2 \times 10 = 20$	1	2
	K4 (10)		1	2
	Total	50	8	16

Practical :**Total Marks: 50****Duration: 90 minutes**

Knowledge Level	Marks
K5	30
K6	20
Total	50

*Equal weightage to be given to all Units

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PC/OC14												
I	Course Title: Operating Systems : Concepts and Applications												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	-	3	-	1	-	-	1	1	1	1	1
CO 2	3	1	-	3	-	1	-	-	2	2	2	2	1
CO 3	3	2	2	3	1	2	-	-	2	2	2	2	1
CO 4	3	3	2	3	2	2	-	-	3	3	3	3	1
CO 5	3	3	2	3	3	3	-	-	3	3	3	3	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023-2024)

DATABASE MANAGEMENT SYSTEMS

CODE: 23CS/PC/DB25

CREDITS: 5

L T P: 3 0 3

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To learn the fundamentals of data models, database storage and Querying
- To convert from ER diagram into normalized table
- To learn SQL, relational database design, PL/SQL Blocks, cursors and triggers
- To know the fundamental concepts of transaction and concurrency control techniques
- To study NoSQL and its applications

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the basic concepts of DBMS, RDBMS and NoSQL	K1
CO2	demonstrate the details of the schema, database design aspects and the concerns with transaction & concurrency processing.	K2
CO3	apply the normal forms, solve the problems by constructing queries with SQL commands and NoSQL	K3
CO4	compare the SQL and NoSQL commands, determine the use of SQL within PL/SQL blocks	K4
CO5	construct an effective and efficient SQL commands, PL/SQL and NoSQL to solve the given problem	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Database Basics Introduction - Database-System Applications- Purpose of Database Systems- View of Data - Database Languages - Relational Databases - Database Design - Data Storage and Querying - Transaction Management - Database Architecture - Data Mining and Information Retrieval - Specialty Databases - Database Users and Administrators - Database	K1, K2	16	1, 2

UNIT	CONTENT	CL	Hrs	CO
	<p>Users and Administrators - History of Database Systems</p> <p>1.2 Introduction to the Relational Model</p> <p>Structure of Relational Databases - Database Schema – Keys - Schema Diagrams - Relational Query Languages - Relational Operations</p>	K1, K2		1, 2
2	<p>2.1 Introduction to SQL</p> <p>Overview of the SQL Query Language- SQL Data Definition- Basic Structure of SQL Queries - Additional Basic Operations - Set Operations - Null Values – Aggregate Functions- Nested Subqueries - Modification of the Database</p> <p>2.2 Intermediate SQL</p> <p>Join Expressions- Views- Transactions- Integrity Constraints - SQL Data Types and Schemas- Authorization</p> <p>2.3 Advanced SQL</p> <p>Accessing SQL from a Programming Language - Functions and Procedures – Triggers - Recursive Queries- Advanced Aggregation Features – OLAP - Case study on Query processing and optimization for the Tool used</p> <p>2.4 Formal Relational Query Languages</p> <p>The Relational Algebra - Fundamental Operations - Formal Definition of the Relational Algebra - Additional Relational-Algebra Operations - Extended Relational-Algebra Operations</p>	<p>K1- K6</p> <p>K1- K6</p> <p>K1- K6</p> <p>K1, K2</p>	16	<p>1-5</p> <p>1-5</p> <p>1-5</p> <p>1, 2</p>
3	<p>3.1 Database Design and the E-R Model</p> <p>Overview of the Design Process - The Entity-Relationship Model – Constraints - Removing Redundant Attributes in Entity Sets - Entity-Relationship Diagrams - Reduction to Relational Schemas - Entity-Relationship Design Issues - Extended E-R Features - Alternative Notations for Modeling Data - Other Aspects of Database Design</p> <p>3.2 Relational Database Design</p> <p>Features of Good Relational Designs - Atomic Domains and First Normal Form - Decomposition Using Functional Dependencies - Functional-Dependency</p>	<p>K1-K5</p> <p>K1-K5</p>	16	<p>1-5</p> <p>1-5</p>

UNIT	CONTENT	CL	Hrs	CO
	Theory-Algorithms for Decomposition - Decomposition Using Multivalued Dependencies - More Normal Forms - Database-Design Process - Modeling Temporal Data			
4	4.1 PL/SQL Blocks PL/SQL- Predefined Exceptions- User Defined Exceptions 4.2 Cursors and triggers Cursors and Cursor Management- Implicit and Explicit Cursors- Advanced Cursors- Procedures and Functions- Database triggers- Parts of a Trigger- Types of Triggers	K1-K6	15	1-5
5	5.1 Transactions and Concurrency Control Transaction Concept - A Simple Transaction Model - Storage Structure – Transaction Atomicity and Durability - Transaction Isolation – Serializability - Transaction Isolation and Atomicity - Transaction Isolation Levels - Implementation of Isolation Levels - Transactions as SQL Statements – Lock-Based Protocols- Deadlock Handling -Multiple Granularity-Timestamp-Based Protocols - Validation-Based Protocols 5.2 NoSQL Definition and Introduction – Sorted Ordered Column – Oriented Stores –Key/Value Stores- Document Databases – Graph Databases – Working with Examples - Working with Language Bindings – Interfacing and Interacting with NoSQL: Storing and accessing Data – Querying Database - Language Bindings for NoSQL Data Stores - Case study using MongoDB	K1, K2 K1-K6	15	1, 2 1-5

BOOK FOR STUDY

Silberschatz, A., Henry F.Korth and Sudarshan S. Database System Concepts. 7th ed. McGraw Hill, 2019.

Korry Douglas, Susan P. Douglas. PostgreSQL: The Comprehensive Guide to Building, Programming, and Administering PostgreSQL Databases. 3rd edition. Sams Pub, 2006.

Tiwari, Shashank. Professional NoSQL. John Wiley & Sons, 2011. (Unit 5.2)

Rully Yulian MF. Learning SQL & PL/pgSQL Programming in PostgreSQL. 2020

BOOKS FOR REFERENCE

Date, C. J., Introduction to Database Systems. 8th ed. New Delhi: Pearson Education, 2009.
Elmasri, Navathe, Fundamentals of Database Systems, 7th edition, Pearson Education Ltd, 2017.
Ewald Geschwinde, Hans-Jürgen Schönig. PostgreSQL Developer's Handbook. Sams Pub 2002
Ramakrishna, Raghu and Johannes Gerhke. Database Management Systems. New Delhi: Tata McGraw Hill, 2003.

WEB RESOURCES

<https://www.db-book.com/db6/>
<https://www.postgresql.org/>
<https://learn.mongodb.com/>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory :

Total Marks: 25

Duration: 45 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$3 \times 5 = 15$	1	2
	K2 (5)		1	2
	K4 (5)		1	2
B (Internal Choice)	K3 (10)	$1 \times 10 = 10$	1	2
	Total	25	4	8

Practical :

Total Marks: 25

Duration: 45 minutes

Knowledge Level	Marks
K5	15
K6	10
Total	25

Other Components:

Total Marks: 50

seminar, quiz, open book test, group discussion, Mini project

Two to three components will be prescribed

End Semester Examination:**Theory:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$6 \times 5 = 30$	1	2
	K2 (5)		1	2
	K3 (10)		2	4
	K4 (10)		2	4
B (Internal Choice)	K3 (10)	$2 \times 10 = 20$	1	2
	K4 (10)		1	2
	Total	50	8	16

Practical :**Total Marks: 50****Duration: 90 minutes**

Knowledge Level	Marks
K5	30
K6	20
Total	50

*Equal weightage to be given to all Units

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PC/DB25												
II	Course Title: DATABASE MANAGEMENT SYSTEMS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	3	1	-	-	3	2	1	2	2
CO 2	3	3	3	2	3	1	-	-	3	3	1	2	2
CO 3	3	3	3	2	3	3	2	1	3	3	3	3	3
CO 4	3	3	3	2	3	3	2	1	3	3	3	3	2
CO 5	3	3	3	2	3	3	2	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023 - 2024)

DESIGN AND ANALYSIS OF ALGORITHMS

CODE: 23CS/PC/AA24

CREDITS : 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To learn the basic notations and review mathematically
- To know the basic data structures and analyse the time complexity for each operation
- To understand and design various solutions for the given problem
- To critically analyse the time complexity of the designed solutions for the same problem
- To apply design techniques for the algorithm that best fits

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the concepts and terminologies in non-linear data structures tree, graphs and their traversals	K1
CO2	explain the data structures, design of computer algorithms and their challenges	K2
CO3	experiment with the different strategies and apply them	K3
CO4	analyse the effectiveness of different algorithms and classify them	K4
CO5	choose appropriate strategies for solving a given problem	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Analysing Algorithms Methodologies for Analysis of Algorithms – Asymptotic Notations – Mathematical Review – Amortization – Experimental Setup – Data Visualization 1.2 Basic Data Structures Stack – Queue – List – Trees – Graphs	K1-K4	12	1-4
2	2.1 Brute force and Exhaustive Search Bubble sort – String matching – Closest- pair problem – Exhaustive Search: Knapsack problem – Assignment problem 2.2 Divide and Conquer Binary Search – Merge sort – Quick sort – Depth-First Search – Breadth-First Search Strassen's matrix multiplication	K1-K3 K1-K5	12	1-3 1-5

UNIT	CONTENT	CL	HRS	CO
3	3.1 Dynamic Programming Travelling Salesman Problem - Knapsack problem revised and memory function – Optimal Binary Search tree – Warshall's Algorithms – Floyd's Algorithm for All-pair Shortest path	K1-K6	14	1-5
4	4.1 Greedy Method Prim's Algorithm - Kruskal's Algorithm – Dijkstra's Algorithm – Huffman Trees and Codes	K1-K6	13	1-5
5	5.1 Backtracking and Branch and Bound Technique n-queen's problem – Assignment problem – Knapsack problem – bin packing algorithm 5.2 Limitations of Algorithmic power P and NP problems – NP-Complete problem – Challenges of Numerical Algorithms	K1-K6 K1, K2	14	1-5 1,2

BOOKS FOR STUDY

Anany Levitin Introduction to the Design and Analysis of Algorithms” 3rd Edition,
Pearson Publications, 2012. [Unit 2: Chapters 3.1 to 3.4, Chapters 4.4, 5.1, 5.2, 5.4, Unit
3: Chapter 8, Unit 4: Chapter 9, Unit 5: Chapter 12.1, 12.2, 11.3,11.4]

Goodrich, T. Micheal, Roberto Tamassia Algorithm Design Foundations, Analysis and
Internet Examples, John Wiley & Sons Inc., 2014. [Unit 1: Chapters 1 & 2]

BOOKS FOR REFERENCE

Aho, Hopcraft, Ullman, The Design and Analysis of Computer Algorithms, Pearson
Education, 2008.

E. Horowitz & S Sahni, Fundamentals of Computer Algorithms, Computer Science Press
Thomas H. Coreman, Charles E. Leiserson and Ronald L. Rivest, Introduction to
Algorithms, Prentice Hall of India.

S.K.Basu , Design methods and analysis of Algorithms , Prentice Hall India Learning
Private Limited, Second edition, 2013.

WEB RESOURCES

<https://www.geeksforgeeks.org/fundamentals-of-algorithms/#AnalysisofAlgorithms>

<https://www.javatpoint.com/daa-tutorial>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory :

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (4)	$5 \times 2 = 10$	2	2
	K2 (6)		3	3
B (Internal Choice)	K3 (5)	$2 \times 5 = 10$	1	2
	K6 (5)		1	2
C (Internal Choice)	K3 (10)	$3 \times 10 = 30$	1	2
	K4 (10)		1	2
	K5 (10)		1	2
	Total	50	10	15

Other Components:

Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Examination:

Theory:

Total Marks: 100

Duration: 3 Hours

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (10)	$10 \times 2 = 20$	5	5
	K2 (10)		5	5
B (Internal Choice)	K3 (15)	$4 \times 5 = 20$	3	6
	K4 (5)		1	2
C (Internal Choice)	K3 (10)	$6 \times 10 = 60$	1	2
	K4 (20)		2	4
	K5 (20)		2	4
	K6 (10)		1	2
	Total	100	20	30

*Equal weightage to be given to all Units

Mapping of Course Outcomes (COs) to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Semester	Subject Code: 23CS/PC/AA24												
	Course Title: DESIGN AND ANALYSIS OF ALGORITHMS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	1	1	1	2	2	2	-	-	1	1	1	2	-
CO 2	2	2	1	2	2	2	-	-	1	2	2	2	2
CO 3	2	2	2	2	3	3	1	-	2	2	2	3	3
CO 4	2	3	3	3	3	3	1	-	2	2	3	3	3
CO 5	2	3	3	3	3	3	2	-	2	2	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023-2024)

OBJECT ORIENTED PROGRAMMING: CONCEPTS AND PRACTICE

CODE: 23CS/PC/OO24

CREDITS: 4

L T P: 3 0 2

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To understand the object-oriented programming concepts
- To make use of the basic concepts of object-oriented programming to solve a problem
- To practice the object-oriented programming with real time problems
- To understand and analyze the inheritance, interface, packages, Generics
- To develop a simple application using the object-oriented programming concepts

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the object-oriented concepts	K1
CO2	explain the difference between procedural and object-oriented programming concepts	K2
CO3	apply the object-oriented concept using Java programming language and solve any given problem	K3
CO4	analyze the static and dynamic methods of solving problems	K4
CO5	develop a simple application using the object-oriented concepts learnt	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Introduction to Object-Oriented Concepts Procedural versus OO Programming- Moving from Procedural to Object-Oriented Development- Classes and Objects - Encapsulation and Data Hiding- Interfaces- A Real-World Example of the Interface/Implementation Paradigm	K1, K2	8	1,2
2	2.1 Thinking in Terms of Objects Using Abstract Thinking When Designing Interfaces - Giving the User the Minimal Interface Possible - Determining the Users - Object Behavior - Environmental Constraints -Identifying the Public Interfaces - Identifying the Implementation	K1- K3	15	1-3

UNIT	CONTENT	CL	Hrs	CO
	2.2 Advanced Object-Oriented Concepts Constructors- Error Handling- The Concept of Scope- Operator Overloading- Multiple Inheritance - Object Operations 2.3 The Anatomy of a Class The Name of the Class - Comments - Attributes - Constructors - Accessors - Public Interface Methods - Private Implementation Methods	K1-K4		1-4
3	3.1 Class Design Guidelines: Modeling Real World Systems - Identifying the Public Interfaces - The Minimum Public Interface -Hiding the Implementation -Designing Robust Constructors - Designing Error Handling into a Class - Documenting a Class and Using Comments	K1-K5	10	1-5
4	4.1 Designing with Objects Design Guidelines - Performing the Proper Analysis - Developing a Statement of Work -Gathering the Requirements - Developing a Prototype of the User Interface - Identifying the Classes - Determining the Responsibilities of Each Class - Determining How the Classes Collaborate with Each Other - Creating a Class Model to Describe the System 4.2 Mastering Inheritance and Composition Inheritance -Superclasses and Subclasses -Abstraction -Is-a Relationships - Has-a Relationships - Reusing Objects - Generalization and Specialization - Design Decisions - Composition - Types of Composition - Aggregations – Associations- Using Associations and Aggregations Together-Representing Composition with UML - Encapsulation - A Detailed Example of Polymorphism - Object Responsibility	K1-K6	18	1-5
5	5.1 Frameworks and Reuse: Designing with Interfaces and Abstract Classes Framework – Contract-Abstract Classes - Interfaces - An E-Business Example – Package-Generics – Simple Generics-Generic Interfaces-Generic methods	K1-K6	14	1-5

BOOK FOR STUDY

Matt Weisfeld, *The Object-Oriented Thought Process*. 3rd Ed., 2009
Eckel, Bruce. *Thinking in Java*. 4th ed. Pearson Education, 2006.

BOOKS FOR REFERENCE

Schildt, Herbert. *Java: The Complete Reference*, 11E, McGraw-Hill Education Group, 2020.

Deitel Paul, Harvey Deitel. *Java How to Program*, 11/E, Early Objects. 11th ed., Pearson Education Inc, 2018.

Liang, Y. Daniel. *Intro to Java Programming, Brief Version*. Pearson Higher Ed, 2017.

WEB RESOURCES

<http://docs.oracle.com/javase/tutorial/java/index.html/>

<https://archive.nptel.ac.in/courses/106/105/106105191/>

<https://netbeans.apache.org/>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory :

Total Marks: 25

Duration: 45 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$3 \times 5 = 15$	1	2
	K2 (5)		1	2
	K4 (5)		1	2
B (Internal Choice)	K3 (10)	$1 \times 10 = 10$	1	2
	Total	25	4	8

Practical :

Total Marks: 25

Duration: 45 minutes

Knowledge Level	Marks
K5	15
K6	10
Total	25

Other Components:

Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion, mini project.

Two to three components will be prescribed

End Semester Examination:**Theory: Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$6 \times 5 = 30$	1	2
	K2 (5)		1	2
	K3 (10)		2	4
	K4 (10)		2	4
B (Internal Choice)	K3 (10)	$2 \times 10 = 20$	1	2
	K4 (10)		1	2
	Total	50	8	16

Practical:**Total Marks: 50****Duration: 90 minutes**

Knowledge Level	Marks
K5	30
K6	20
Total	50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PC/OO24												
II	Course Title: OBJECT ORIENTED PROGRAMMING -CONCEPTS AND PRACTICE												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	1	2	3	2	-	-	3	3	1	1	1
CO 2	3	1	1	2	3	2	-	-	3	3	2	1	1
CO 3	3	3	3	2	3	3	-	-	3	3	2	1	2
CO 4	3	3	3	2	3	3	-	-	3	3	2	1	3
CO 5	3	3	3	2	3	3	-	-	3	3	3	1	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023 -2024)

SOFT SKILLS

CODE: 23CS/PK/SS22

CREDITS: 2

L T P: 2 0 0

TOTAL TEACHING HOURS: 26

OBJECTIVES OF THE COURSE

- To empower students and create opportunities for self-development
- To instill confidence in students to face challenges
- To manage emotions and resolve conflicts
- To organize activities and manage time
- To set goals and plan ahead

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- Communicate with confidence and poise
- Accept themselves and improve on their weaknesses
- Strengthen their relationships through confronting and solving problems
- Work more effectively and complete activities on time
- Plan their future with clarity and focus

Unit 1

Behavioural Traits

(6 Hours)

- 1.1 Self- Awareness
- 1.2 Communication Skills –Verbal and Non-Verbal
- 1.3 Leadership Qualities
- 1.4 Etiquette and Good Manners
- 1.5 Experiential Learning –based on activities

Unit 2

Team Work

(5 Hours)

- 2.1. Interpersonal Skills
- 2.2. People Management
- 2.3. Creative Thinking
- 2.4. Critical Thinking
- 2.5. Experiential Learning – based on activities

Unit

3

Time Management

(5 Hours)

- 3.1. Importance of time management
- 3.2. Planning and Prioritizing
- 3.3. Organizing skills
- 3.4. Action Plan
- 3.5. Experiential Learning – based on activities

Unit 4

Conflict Resolution

(5 Hours)

- 4.1. Reasons for conflict
- 4.2. Consequences of conflict
- 4.3. Managing emotions
- 4.4. Methods of resolving conflicts
- 4.5. Experiential Learning – based on activities

Unit 5

Career Mapping

(5 Hours)

- 5.1. Goal-setting and Decision-making
- 5.2. Career Planning
- 5.3. Resume Writing
- 5.4. Handling Interviews
- 5.5. Experiential Learning – based on activities

BOOKS FOR REFERENCE

Khera, Shiv. *You Can Win*. Macmillan India, 2002.

Mishra, Rajiv. K. *Personality Development: Transform Yourself*. Rupa, 2004.

Newstorm, John. W. and Scannell. Edward. E. *Games Trainers Play: Experiential Learning*. Tata McGraw Hill, 1980.

PATTERN OF EVALUATION

Internal Assessment:

Total Marks: 50

Quiz / Group Presentation /Assignment

No End Semester Examination.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023-2024)

NETWORK MANAGEMENT AND ADMINISTRATION

CODE: 23CS/PC/NA34

CREDITS: 4

L T P: 3 1 2

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To understand the purpose of basic system administration
- To install and administer a Linux machine
- To manage users and groups
- To provide remote access using FTP, SSH and Telnet
- To set up a TCP/IP based local area network and secure it using a firewall

COURSE LEARNING OUTCOMES (COs)

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the appropriate Linux commands and tools for administering a computing system, system services, the TCP/IP protocol and shell script constructs	K1
CO2	explain the procedure to install any Linux operating systems, create users, add a file system to a partition, configure dynamic IP addresses and firewalls	K2
CO3	solve issues in managing and administering a single-host and a network	K3
CO4	manage users and groups, file systems, remote access using FTP and SSH	K4
CO5	design a simple TCP/IP based local area network with and without DHCP, develop shell scripts	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Installation and User management 1.1 System Information hostname - uname - CPU information - physical memory size - hard disk size - shutting down 1.2 Linux Installation Installation Software Media - Methods of Installation - Keyboard type - Setting root password - Selecting Time Zone - Disk Partitioning - Choosing a file system - Host name and Network Configuration	K1- K5	18	1-5

UNIT	CONTENT	CL	Hrs	CO
	1.3 Basic Administration Setting system date - Editing text with nano - Searching for a file - man pages –directory structure 1.4 Managing Users and Groups Creating groups - /etc/group file - Creating Users - /etc/passwd and /etc/shadow files -Configuring a user - File access permissions - umask setting - setuid and setgid programs - setting sticky bit			
2	Single Host-Administration 2.1 Working with the shell shell basics - bash shell – environment variables - PATH, PS1 variables – Configuring shell prompt 2.2 Managing Software Red Hat Package Manager - Debian Package Management System - dpkg – Compile and Install Software 2.3 Managing file systems Partitioning - File systems - ext3, ext4, Reiserfs, FAT32 - Creating a filesystem using mkfs - Mounting and unmounting file systems- /etc/fstab file - fsck - noatime setting - Logical Volume Manager 2.4 Core System Services Init daemon - xinetd and inetd - Logging daemon - cron scheduler	K1- K6	18	1-5
3	Automating tasks and configuring TCP/IP network 3.1 Shell scripting echo - shell variables- comments - positional parameters - decision making -checking exit status code 3.2 TCP/IP TCP/IP Layers - Headers - TCP Connection - ARP - Hosts and Networks - Subnetting - Netmasks- Static routing - Dynamic routing 3.3 Network configuration /etc/hosts file - /etc/network/interfaces - /etc/resolv.conf - /etc/hostname - ifconfig - ping - route- netstat - Configuring static IP address - Setting up a local area network	K1-K6	19	1-5
4	Boot Loader and Remote access 4.1 Booting and shutting down Boot Loaders - Grub - MBR - grub configuration - init process - rc scripts – Running a program as an operating system service 4.2 Remote Access Telnet - FTP - Secure Shell - SSH - sshd Server, ssh client	K1-K6	13	1-5
5	DHCP and Firewall 5.1 Dynamic Host Configuration Protocol Dynamic IP address - DHCP - DHCP Server - DHCP Client 5.2 Linux Firewall Firewall basics - Setting Firewall rules	K1-K5	10	1-5

Self-Study: Basics of Networking

Computer Network – Workstation – Benefits of Networking –Sharing Information, Resources, Centralized Management – Classification of Networks by Geography– LAN, MAN, WAN – Classification of Networks by Component Roles – Peer-to-Peer networks, Server-Based networks – Client-Based networks – Addressing mechanisms – IP address, Ethernet address – Networking devices – Switch, Hub, Router, Gateway

BOOKS FOR STUDY

Ward, Brian. *How Linux works: What every superuser should know*. 3rd Ed. No starch Press, 2021.

Soyinka, Wale. *Linux Administration A Beginner's Guide*. Seventh Edition, McGraw Hill, 2016.

Helmke, Matthew et al. *The Official Ubuntu Book*. 9th Edition, Prentice Hall Press Upper Saddle River, NJ, USA, 2016

BOOKS FOR REFERENCE

Nemeth, Evi et al. *UNIX and Linux System Administration Handbook*, 5th Ed. Addison-Wesley, 2017.

Hunt, Craig. *TCP/IP network administration*. Vol. 2. " O'Reilly Media, Inc.", 2002.

Basta, Alfred, et al. *Linux Operations and Administration*. Cengage Learning, 2013.

WEB SOURCES

<https://tldp.org/LDP/Bash-Beginners-Guide/html/index.html>

<https://tldp.org/LDP/sag/sag.pdf>

<https://tldp.org/LDP/nag2/nag2.pdf>

<https://linux-training.be/linuxnet.pdf>

<https://linux-training.be/linuxsys.pdf>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory :

Total Marks: 25

Duration: 45 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$3 \times 5 = 15$	1	2
	K2 (5)		1	2
	K4 (5)		1	2
B (Internal Choice)	K3 (10)	$1 \times 10 = 10$	1	2
	Total	25	4	8

Practical : Total Marks: 25

Duration: 45 minutes

Knowledge Level	Marks
K5	15
K6	10
Total	25

Other Components: Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Examination:

Theory: Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$6 \times 5 = 30$	1	2
	K2 (5)		1	2
	K3 (10)		2	4
	K4 (10)		2	4
B (Internal Choice)	K3 (10)	$2 \times 10 = 20$	1	2
	K4 (10)		1	2
	Total	50	8	16

Practical : Total Marks: 50

Duration: 90 minutes

Knowledge Level	Marks
K5	30
K6	20
Total	50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PC/NA34												
III	Course Title: NETWORK MANAGEMENT AND ADMINISTRATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	3	2	1	-	3	3	3	3	1
CO 2	3	3	2	3	3	2	1	-	3	3	3	3	1
CO 3	3	3	2	3	3	2	1	-	3	3	3	3	1
CO 4	3	3	2	3	3	2	1	-	3	3	3	3	1
CO 5	3	3	2	3	3	2	1	-	3	3	3	3	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023-2024)

RESEARCH METHODOLOGY

CODE:23CS/PC/RM34

CREDITS: 4

L T P: 3 1 2

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To understand the research methods to effectively address a research problem
- To formulate the research problem.
- To analyze research related information
- To learn about data and its analysis in research
- To know the importance of writing skills and the method of documentation

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the objective and characteristics of research	K1
CO2	explain the hypothesis for the research problem	K2
CO3	choose the best research methodology for the problem	K3
CO4	analyze the types of research and Statistical Principles	K4
CO5	develop a proposal and write a report using LATEX.	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Introduction to Research Meaning, Objectives and Characteristics of research - Research Methods Vs. Methodology - Types of research- Research process - Criteria of good research 1.2 Research Project Shaping a Research Project-Research Planning-Students and Advisors – Checklist	K1-K3	16	1-3
2	2.1 Literature Review and Research Gaps Reading and Reviewing - Hypotheses, Questions, and Evidence – Identifying research gap – Problem Statement – Research Ethics - Plagiarism, Conflict of Interest, Selective Reporting, Misrepresentation, Unethical Practices in using and Analysing Data.	K1-K5	15	1-5
3	3.1 Experiments for Computing Experimentation-Statistical Principles 3.2 Writing a Paper Organization - Good Style - Style Specifics - Punctuation- Mathematics – Algorithms, Graphs, Figures, and Tables - Other Professional Writing.	K1-K4 K1-K6	16	1-4 1-5

4	4.1 Presentation Editing- Presentations-Slides-Posters-Ethics	K1- K6	16	1-5
5	5.1 Report writing Report writing using LATEX for a research problem	K1- K6	15	1-5

BOOKS FOR STUDY

Kothari, C.R. (2019) Research Methodology: Methods and Techniques. 4th Edition, New Age International Publishers, New Delhi.(Unit 1.1)

Justin Zobel. Writing for Computer Science. 3rd ed. Springer-Verlag,2014

BOOKS FOR REFERENCE

Kumar, Ranjit. Research Methodology: A Step-by-Step Guide for Beginners. United Kingdom, SAGE Publications, 2018.

Panneerselvam R. *Research Methodology*. 2nd ed. New Delhi: Prentice Hall, 2014

WEB RESOURCES

PAPER WRITING:

<https://researcheracademy.elsevier.com/>

<https://www.springer.com/gp/authors-editors/authorandreviewertutorials/writing-a-journal-manuscript/author-academy/10285484>

<https://www.springer.com/gp/authors-editors/journal-author/journal-author-academy>

POSTER CREATION:

<https://scientific-publishing.webshop.elsevier.com/manuscript-preparation/research-poster-presentation/>

<https://guides.nyu.edu/posters>

PATTERN OF ASSESSMENT:

Other Components: Total Marks: 50

Component 1: Slides preparation and Seminar of Research Paper

Component 2: Poster presentation

All K-levels will be evaluated

Research paper writing

Topic / Domain Selection

Abstract and Infographics

Introduction and Motivation

Literature Survey and Identifying Research Gaps

Results / Comparative Study

Inferences

Conclusion

End Semester Examination Total Marks: 50

Paper, Poster Presentation and LaTeX document submission

Document must be submitted at the end of the semester. The student must present the completed work. A viva-voce based on the work will also be conducted. Mark will be allotted based on the review paper / implementation.

Rubrics for Evaluation	Marks	Cognitive Level
Documentation	10	K1
Formulating topic statement	5	K2
Motivation and Background Study	10	K3
Documentation in LaTeX and Poster Presentation	20	K4
Results, Inferences and Conclusions	5	K5,K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PC/RM34												
III	Course Title: RESEARCH METHODOLOGY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	2	2	1	1	1	-	1	1	1	1	1
CO 2	3	2	2	2	2	1	1	-	1	1	2	1	1
CO 3	3	2	2	2	2	1	1	-	3	2	2	2	2
CO 4	3	3	2	2	3	3	2	-	3	3	2	3	2
CO 5	3	3	2	2	3	3	2	-	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023-2024)

DATA ANALYTICS

CODE : 23CS/PC/DA34

CREDITS: 4

L T P:3 1 2

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To enable the students to understand the types of data
- To enable a comprehensive and detailed understanding of the data formats and data analysis
- To explore different machine learning techniques
- To explore advanced analytic tools
- To understand and practice Data Analytics and Machine Learning approaches

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the steps and methods involved in the data analysis process	K1
CO2	illustrate the different methods involved in Machine Learning process	K2
CO3	identify Machine Learning techniques to extract actionable value from data	K3
CO4	analyze the given dataset and train them using appropriate Machine Learning techniques	K4
CO5	adapt a better Machine Learning technique on a preprocessed dataset, derive insight from results, and investigate the accuracy	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Fundamentals of Data Analysis Introduction - The Process of Data Analysis –Types of Analytics- Descriptive Analytics - Predictive Analytics - Prescriptive Analytics - Applications- Quantitative Messages - Techniques for Analyzing Quantitative Data – Barriers to Effective Analysis-Initial Data Analysis - Main Data Analysis	K1-K4	12	1-4
	1.2 Types of Data Different Types of Data- Quantitative and Qualitative Data - Numerical, Categorical Data - Loading, Storage and File Formats – Reading and Writing Data In Text Format, binary Data Formats - Interacting with Web API - Interacting with Databases - Getting Started with Pandas	K1-K3		1-3
2	2.1 Data Cleaning Data Cleaning and Preparation - Handling Missing Data - Data Transformation -String Manipulation 2.2 Data Wrangling Join, Combine and Reshape -Hierarchical Indexing – Combining and Merging Datasets - Reshaping and Pivoting - Data Aggregation and Group Functions-Group By Mechanics - Data Aggregation-General Split-Apply-Combine - Pivot Tables and Cross Tabulation - Numpy Basics	K1- K6	16	1-5
3	3.1 Plotting and Visualization Matplotlib - Figures – Subplots - Colors, Markers and Line Styles - Ticks, Labels and Legends, Annotations and Drawing On Subplot - Plotting with Pandas and Seaborn 3.2 Time Series Date and Time Data Types and Tools - Time Series Basics - Date Ranges, Frequencies, and Shifting - Time Zone Handling - Periods and Period Arithmetic resampling and Frequency Conversion 3.3 Data Analysis Examples	K1-K6	16	1-5

UNIT	CONTENT	CL	Hrs	CO
4	4.1 Machine Learning Introduction to Machine Learning - Need for Machine Learning – Supervised Learning – Unsupervised Learning - Classifications and Regression – Generalization – Overfitting - Underfitting 4.2 Supervised Machine Learning Algorithms K-Nearest Neighbor-Linear Models - Naive Bayes Classifiers - Decision Tree - Random Forest - Gradient Boosted Decision Tree 4.3 Unsupervised Learning Algorithms Types - Dimensionality Reduction, Feature Extraction – Clustering - K-Means Clustering, Agglomerative Clustering, Db Scan Clustering Techniques	K1-K6	18	1-5
5	5.1 Model Evaluation and Improvement Cross-Validation - Benefits of Cross-Validation - Stratified K-Fold Cross-Validation and Other Strategies - More Control Over Cross-Validation - Grid Search - Evaluation Metrics and Scoring - Using Evaluation Metrics In Model Selection 5.2 Working with Text Data Types of Data Represented as Strings - Rescaling the Data with TF/IDF - Topic Modeling and Document Clustering	K1-K6	16	1-5

BOOK FOR STUDY

Andreas C. Mueller, Sarah Guido. Introduction to Machine Learning with Python. O'Reilly Media, Inc., 2016. (Unit 4,5)

Wes McKinney. Python for Data Analysis. O'Reilly Media, Inc., 1005 Gravenstein Highway North, Sebastopol, second edition, 2018. (Unit 1,2,3,)

BOOKS FOR REFERENCE

Aurelien Geron. Hands-On Machine Learning with Scikit-Learn and Tensor Flow: Concepts, Tools, and Techniques to Build Intelligent Systems. USA: O'Reilly Media, 2019.

Brian K. Jones. David Beazley. Python Cookbook. USA: O'Reilly Media, Incorporated, 2013.

Sanjeev J. Wagh, Manisha S. Bhende, and Anuradha D. Thakare. Fundamentals of Data Science. CRC Press, 2022.

WEB RESOURCES

<https://www.coursera.org/learn/machine-learning>

<https://archive.nptel.ac.in/courses/106/106/106106139/>

<https://scikit-learn.org/stable/>

<http://docs.python.org>

PATTERN OF ASSESSMENT**Continuous Assessment Test:****Theory :****Total Marks: 25****Duration: 45 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$3 \times 5 = 15$	1	2
	K2 (5)		1	2
	K4 (5)		1	2
B (Internal Choice)	K3 (10)	$1 \times 10 = 10$	1	2
	Total	25	4	8

Practical :**Total Marks: 25****Duration: 45 minutes**

Knowledge Level	Marks
K5	15
K6	10
Total	25

Other Components: Total Marks: 50

Component 1 – 25 marks

Seminars/Group Discussion/Assignment/Case Study

Component 2 – 25 marks – Project

50 % of Project completion, Documentation, Presentation and Viva

End Semester Examination:**Theory:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$6 \times 5 = 30$	1	2
	K2 (5)		1	2
	K3 (10)		2	4
	K4 (10)		2	4
B (Internal Choice)	K3 (10)	$2 \times 10 = 20$	1	2
	K4 (10)		1	2
	Total	50	8	16

Project with Report Submission, Presentation and Viva : 50 marks

Suggested components for the Data Analytics Project Report

The given below components can be customized as per the requirement

Title Page:

Table of Contents:

Abstract:

- A concise overview of the project, including objectives, methods, key findings, and recommendations.

1. Introduction:

- Background information about the project.
- Statement of Problem/Objective.
- Scope and Limitations of the analysis.

2. Data Collection and Preprocessing:

- Description of the data sources.
- Data collection methods.
- Data cleaning and preprocessing steps.
- Data transformations if any.

3. Exploratory Data Analysis:

- Summary statistics and visualizations to understand the data.
- Identification of outliers or missing data.
- Initial insights gained from the data.

4. Methodology:

- Choosing an appropriate ML model
- Justification of the chosen model, Building and Testing

5. Results and its Interpretation:

- Presentation of the outcomes of the project including model evaluation metric results and accuracy scores.
- Tables, and other visualisation methods to illustrate key points.
- Interpretation of the results.
- Justification of how the findings address the project objectives.
- Any limitations or assumptions made during the analysis.

6. Recommendations:

- Specific actions or decisions that could be done based on the analysis.
- Suggestions for further analysis or data collection if applicable.

7. Conclusion:

- Summarizing the key takeaways from the project, findings and recommendations.

8. Appendices:

- Any additional information that supports the report (e.g., code, detailed data descriptions).
- Data dictionaries or variable descriptions.
- Additional visualisation methods that provide more detail.

9. References:

- Listing of all sources, including data sources, research papers, and any other references used.

10. Acknowledgments:

- Any acknowledgments for individuals or organization that contributed to the project.

11. Glossary:

- Definitions of technical terms or jargon used in the report.

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PC/DA34												
III	Course Title: DATA ANALYTICS												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	1	-	1	2	1	-	-	-	1	1	1	1	1
CO 2	2	2	2	2	1	1	-	-	1	1	1	1	1
CO 3	2	2	2	2	1	1	-	-	2	2	2	2	2
CO 4	3	3	3	2	2	2	1	-	3	2	2	3	3
CO 5	3	3	3	2	2	2	1	-	3	2	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023-2024)

ARTIFICIAL INTELLIGENCE

CODE: 23CS/PC/AI35

CREDITS: 5

L T P: 5 1 0

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To gain knowledge on AI related problems and techniques
- To understand and present AI as the study of the design of intelligent computational agents
- To learn how to represent knowledge
- To provide a coherent vision of the foundations of the field as it is today, in terms of a multidimensional design space
- To understand AI has a coherent, formal theory with a learning and planning concepts

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define and relate the fundamentals of Artificial Intelligence	K1
CO2	demonstrate techniques in solving Artificial Intelligence based problems	K2
CO3	identify appropriate methods to solve Artificial Intelligence based scenario	K3
CO4	examine the reasoning and decision making process in Artificial Intelligence	K4
CO5	adapt an effective strategy for research based problems	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction AI- The Foundations of Artificial Intelligence- The History of Artificial Intelligence- The State of the Art- Risks and Benefits of AI- Intelligent Agents- Agents and Environments- The Structure of Agents	K1-K2	13	1-2
2	Problem Solving Solving Problems by Searching - Problem-Solving Agents - Example Problems- Search Algorithms- Uninformed Search Strategies- Informed (Heuristic) Search Strategies- Heuristic Functions - Search in Complex Environments - Local Search and Optimization Problems- Local Search in Continuous Spaces- Search with Nondeterministic Actions	K1- K6	17	1-5

UNIT	CONTENT	CL	Hrs	CO
	Case study: Depth-First Search (DFS)- image processing, A- pathfinding, robotics, and route optimization.			
3	Knowledge Representation Knowledge-Based Agents- Logic- Propositional Logic: A Very Simple Logic - First-Order Logic- Syntax and Semantics of First-Order Logic- Inference in First-Order Logic- Knowledge Representation *Case study: Natural Language Processing (NLP): First-order logic- semantic parsing and understanding of natural language statements, Virtual Assistants.	K1-K6	17	1-5
4	Uncertain knowledge Acting under Uncertainty- Basic Probability Notation- Probabilistic Reasoning- Basic Probability Notation- Probabilistic Reasoning- Probabilistic Reasoning over Time- Time and Uncertainty- Inference in Temporal Models- Probabilistic Programming- Relational Probability Models *Case study: Bayesian Networks (BNs)- Bayes algorithm Fuzzy Logic	K1-K6	16	1-5
5	Decision Making Making Simple Decisions- The Basis of Utility Theory- Utility Functions- Decision Networks- Making Complex Decisions- Sequential Decision Problems- Algorithms for MDPs- Multiagent Decision Making- Properties of Multiagent Environments- Non-Cooperative Game Theory - Cooperative Game Theory- Philosophy, Ethics, and Safety of AI- The Future of AI *Case study: Multiagent Decision Making- Traffic Management, Markov Decision Processes- Reinforcement Learning	K1-K6	15	1-5

***Case Studies : Not for End Semester Assessment**

BOOK FOR STUDY

Stuart Russell and Peter Norvig, "Artificial Intelligence – A Modern Approach", Fourth Edition, Pearson Education, 2022.

Sutton, Richard S., and Andrew G. Barto. Reinforcement learning: An introduction. MIT press, 2018.(case study)

Kong, T. Yung, and Azriel Rosenfeld, eds. Topological algorithms for digital image processing. Elsevier, 1996.(case study)

Hackeling, Gavin. Mastering Machine Learning with scikit-learn. Packt Publishing Ltd, 2017.(case study)

Bird, Steven, Ewan Klein, and Edward Loper. Natural language processing with Python: analyzing text with the natural language toolkit. " O'Reilly Media, Inc.", 2009. (case study)

Azar, Ahmad Taher, and Anis Koubaa, eds. Artificial Intelligence for Robotics and Autonomous Systems Applications. Springer International Publishing AG, 2023. (case study)

BOOKS FOR REFERENCE

Deepak Khemani, "Artificial Intelligence", Tata McGraw Hill Education, 2013

Kevin Night, Elaine Rich, and Nair B., "Artificial Intelligence", McGraw Hill, 2008

Patrick H. Winston, "Artificial Intelligence", Third Edition, Pearson Education, 2006

WEB RESOURCES

<https://nptel.ac.in/courses/106106126>

<https://www.ibm.com/topics/artificial-intelligence>

<https://www.udemy.com/topic/artificial-intelligence/free/>

<https://cse.iitk.ac.in/users/cs365/2013/materials.html>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (4)	$5 \times 2 = 10$	2	2
	K2 (6)		3	3
B (Internal Choice)	K3 (5)	$2 \times 5 = 10$	1	2
	K6 (5)		1	2
C (Internal Choice)	K3 (10)	$3 \times 10 = 30$	1	2
	K4 (10)		1	2
	K5 (10)		1	2
	Total	50	10	15

Other Components:

Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion.

Two to three components will be prescribed

End Semester Examination:**Theory:****Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (10)	10X2 = 20	5	5
	K2 (10)		5	5
B (Internal Choice)	K3 (15)	4 X 5 = 20	3	6
	K4 (5)		1	2
C (Internal Choice)	K3 (10)	6 X 10 = 60	1	2
	K4 (20)		2	4
	K5 (20)		2	4
	K6 (10)		1	2
	Total	100	20	30

*Equal weightage to be given to all Units

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PC/AI35												
III	Course Title: ARTIFICIAL INTELLIGENCE												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	1	-	1	2	1	-	-	-	1	1	1	1	1
CO 2	2	2	2	2	1	1	-	-	1	1	1	1	1
CO 3	2	2	2	2	1	1	-	-	2	2	2	2	2
CO 4	3	3	3	2	2	2	1	-	3	2	2	3	3
CO 5	3	3	3	2	2	2	1	-	3	2	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023 - 2024)

SUMMER INTERNSHIP

CODE:23CS/PN/SI32

CREDITS:2

OBJECTIVES OF THE COURSE

- To enable students to gain experiential learning in the field of Computer Science
- To acquire work experience in IT / IT related domains

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define and relate theory and practice	K1
CO2	demonstrate content knowledge appropriate to job assignment.	K2
CO3	identify, write down, and carry out performance objectives related to their job assignment	K3
CO4	assess interests and abilities in their field of study	K4
CO5	develop communication, interpersonal and other critical skills in the job interview process and build a record of work experience	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

The Summer Internship program is for a minimum period of three weeks. The students are expected to work in a real time environment and gain professional experience. Further, the student is expected to submit a report and present their work in the third semester.

Guidelines for Evaluation

The maximum marks for the Summer Internship is 50.

Rubrics for Evaluation	Marks	Cognitive Level
Report	20	K1, K2
Presentation	15	K3-K6
Viva-Voce	15	K1-K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PN/SI32												
III	Course Title: Summer Internship												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	2	3	1	3	1	2	1	3	3	1	1
CO 2	3	2	2	3	2	3	1	2	1	3	3	1	1
CO 3	3	2	2	3	2	3	1	2	3	3	3	2	2
CO 4	3	3	2	3	3	3	2	2	3	3	3	3	2
CO 5	3	3	2	3	3	3	2	2	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023-2024)

FORMAL LANGUAGES AND FINITE AUTOMATA

CODE: 23CS/PC/FF44

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To understand the theoretical foundations of computer science through study of mathematical and abstract models of computers and the theory of formal languages and finite automata
- To be able to identify different formal language classes and their relationships
- To evaluate theorems in automata theory using its properties
- To design grammars and recognizers for different formal languages
- To analyse and apply the automata concepts in real time applications

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define and explain the fundamental concepts of Formal Languages and Automata Theory	K1, K2
CO2	apply the knowledge of automata theory, regular expressions and grammars to solve various language class problems	K3
CO3	identify formal language classes and prove language membership properties	K4
CO4	determine concepts relating to the theory of computation and computational models including decidability and intractability	K5
CO5	construct automata applications and Finite state machines	K6

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Fundamentals and Finite Automata Basic concepts - Strings, Alphabets, Languages, Finite State Machine, Definitions, Finite Automaton model, Acceptance of Strings and Languages, Deterministic Finite Automaton (DFA) and Non-deterministic Finite automaton (NFA) – Transition diagrams and Language recognisers, Extended transition function, Acceptance of languages, Subset construction, Equivalence of NFA and DFA (Proof needed), NFA with ϵ - transitions, Eliminating ϵ - transitions	K1-K5	13	1-4

UNIT	CONTENT	CL	Hrs	CO
	5.2 Applications Applications of Finite Automata – NFA for Text Search, DFA to recognise a set of Keywords - Applications of Regular Expressions - Regular Expressions in UNIX, Lexical Analysis, Finding Patterns in Text - Applications of Context Free Grammars – Parsers, the YACC parser - Generator, Markup Languages, XML and Document –Type Definitions	K1-K6		1-5

BOOKS FOR STUDY

Martin, John C. Introduction to languages and the Theory of Computation. 4th ed. New Delhi: TMH, 2011.

Hopcroft, H.E., Rajeev Motwani and Ullman J. D. Introduction to Automata Theory Languages and Computation. 3rd ed. Pearson, 2014.

BOOKS FOR REFERENCE

Cohen, Daniel I.A. Introduction to Computer Theory. 2nd ed. USA: John Wiley, 2007.

Linz, Peter. An Introduction to formal languages and Automata theory. 6th Ed. Jones and Bartlett Learning, 2017.

Mishra and Chandrashekaran. Theory of Computer Science –Automata Languages and Computation. 3rd ed. India: PHI, 2012.

WEB RESOURCES

<https://archive.nptel.ac.in/courses/111/103/111103016/>

<https://www.iitg.ac.in/dgoswami/Flat-Notes.pdf>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory :

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (4)	$5 \times 2 = 10$	2	2
	K2 (6)		3	3
B (Internal Choice)	K3 (5)	$2 \times 5 = 10$	1	2
	K6 (5)		1	2
C (Internal Choice)	K3 (10)	$3 \times 10 = 30$	1	2
	K4 (10)		1	2
	K5 (10)		1	2
	Total	50	10	15

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

Two to three components will be prescribed**End Semester Examination:****Theory: Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (10)	10X2 = 20	5	5
	K2 (10)		5	5
B (Internal Choice)	K3 (15)	4 X 5 = 20	3	6
	K4 (5)		1	2
C (Internal Choice)	K3 (10)	6 X 10 = 60	1	2
	K4 (20)		2	4
	K5 (20)		2	4
	K6 (10)		1	2
Total		100	20	30

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PC/FF44												
IV	Course Title: Formal Languages and Finite Automata												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	1	1	1	1	1	1	2	1	1	2	1
CO 2	2	3	2	1	2	2	1	1	2	3	2	3	1
CO 3	3	2	1	2	1	1	1	2	1	1	-	3	2
CO 4	2	1	2	1	1	1	1	1	2	2	-	2	1
CO 5	1	3	2	1	2	1	2	1	2	3	2	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023-2024)

CLOUD COMPUTING: THEORY AND PRACTICE

CODE: 23CS/PC/CT45

CREDITS: 5

L T P: 3 0 3

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To introduce the concepts of cloud computing and its essential terminology associated with case studies.
- To enable the students to understand the need of cloud models and the working framework of cloud architectures.
- To equip the students in understanding the concepts of virtualization, load balancing and resource pooling with scaling principles of cloud computing.
- To familiarize advanced concepts in cloud Computing with exposure of open-source tools in cloud.
- To develop an active interpretation of associating modern application environments and understanding various customer service providers (CSPs)

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define the core foundational concepts and terminologies of cloud computing paradigm	K1
CO2	outline the various working frameworks of cloud anatomy and architecture	K2
CO3	identify various storage and resource utilization methods in cloud computing	K3
CO4	analyze cloud software programming models to implement on working cloud environments	K4
CO5	adapt the demonstrations of cloud storage systems through cloud	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Cloud computing foundations 1.1 Motivation for Cloud Computing - Defining Cloud Computing - NIST Definition of Cloud Computing - Cloud Computing is a Service - Cloud Computing is a Platform - Principles of Cloud computing - Essential Characteristics - Cloud Deployment Models- Cloud Service Models	K1-K3	12	1-3

UNIT	CONTENT	CL	Hrs	CO
	1.2 Cloud Ecosystem - Requirements for Cloud Services - Cloud Application - Cloud Vulnerabilities - Cloud Architecture - Anatomy of the Cloud - Applications on the Cloud - Managing the Cloud - Migrating Application to Cloud - Responsibility Sharing between User and Cloud Service Provider - User Experience - Software Licensing			
2	Paradigms and Technological Drivers for Cloud Computing 2.1 SOA and Cloud - Existing Cloud Applications and New Application Opportunities - Architectural Styles for Cloud Applications - Coordination Based on a State Machine Model: The ZooKeeper - The MapReduce Programming Model - Case Study: The GrepTheWeb Application 2.2 High Performance Computing on a Cloud- Cloud Computing Interoperability: The Intercloud - Web standards: Web 2.0 - Characteristics of Web 2.0 –Web 2.0 and Cloud Computing - Web 3.0 - Components of Web 3.0	K1 – K6	17	1-5
3	Virtualization and Load balancing Layering and Virtualization – Virtual Machine Monitors- Virtual Machines- Types of virtualizations – Approaches to virtualization – Hypervisors – Types of hypervisors - Resource Pooling, Sharing and Provisioning - Scaling in the Cloud – Load balancing – Goals of Load balancing - Load Balancing in Cloud – Load balancing algorithm - Multicore Technology: Multicore Processors and VM Scalability - Multicore Technology and the Parallelism	K1-K6	16	1-5
4	Cloud Application Development Amazon Web Services understanding and requirements – Working with the Elastic Compute Cloud (EC2) - Working with Amazon Storage Systems (S3) - Amazon Elastic Block Store (EBS) – Understanding CloudFront - Amazon SimpleDB - Amazon Relational Database Service (RDS)- Cloud simulation tools: Cloud analyst and CloudSim - Google Web Services: Working with the Google App Engine	K1-K6	15	1-5

UNIT	CONTENT	CL	Hrs	CO
5	Cloud Storage, SLA and Security The Evolution of Storage Technology - Memory and Storage Technologies - Cloud Storage Requirements - Storage as a Service (STaaS) - Emerging Trends and Technologies in Cloud Storage - Google File System - Apache Hadoop - Transaction Processing and NoSQL Databases – Service Level Agreement (SLA)– Types of SLA - Life Cycle of SLA - SLA Management in Cloud - Virtualization Security - Network Security - Data Security	K1-K6	18	1-5

BOOKS FOR STUDY

Cloud Computing Bible. John Wiley & Sons, 2011. Dan C Marinescu, “*Cloud Computing: Theory and Practice*”.

K Chandrasekaran. (2015). “*Essentials of Cloud Computing*” [English]. CRC Press Taylor & Francis Group.

Bhowmik, Sandeep. “*Cloud Computing*”. Cambridge University Press, 2017

BOOKS FOR REFERENCE

Buyya, Rajkumar, Christian Vecchiola, and S. Thamarai Selvi. “*Mastering cloud computing: foundations and applications programming* “. Elsevier, 2013. Sosinsky, Barrie.

Dan C Marinescu, “*Cloud Computing: Theory and Practice*”. Morgan Kaufmann, Elsevier, 2017

Michael J. Kavis, “*Architecting the Cloud: Design Decisions for Cloud Computing Service Models (SaaS, PaaS, and IaaS)*”. John Wiley & Sons, 2014.

WEB RESOURCES

https://docs.aws.amazon.com/ec2/?nc2=h_ql_doc_ec2

<https://www.ibm.com/automation?lnk=flathl>

<https://www.ibm.com/docs/en/products>

https://download.microsoft.com/download/6/6/2/662DD05E-BAD7-46EF-9431-135F9BAE6332/9781509302963_Microsoft%20Azure%20Essentials%20Fundamentals%20of%20Azure%202nd%20ed%20mobile.pdf

PATTERN OF ASSESSMENT**Continuous Assessment Test:****Theory :****Total Marks: 25****Duration: 45 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$3 \times 5 = 15$	1	2
	K2 (5)		1	2
	K4 (5)		1	2
B (Internal Choice)	K3 (10)	$1 \times 10 = 10$	1	2
	Total	25	4	8

Practical :**Total Marks: 25****Duration: 45 minutes**

Knowledge Level	Marks
K5	15
K6	10
Total	25

Other Components:**Total Marks: 50**

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed**End Semester Examination:****Theory:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$6 \times 5 = 30$	1	2
	K2 (5)		1	2
	K3 (10)		2	4
	K4 (10)		2	4
B (Internal Choice)	K3 (10)	$2 \times 10 = 20$	1	2
	K4 (10)		1	2
	Total	50	8	16

Practical :**Total Marks: 50****Duration: 90 minutes**

Knowledge Level	Marks
K5	30
K6	20
Total	50

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PC/CT45												
IV	Course Title: CLOUD COMPUTING: THEORY AND PRACTICE												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	1	-	1	2	1	-	-	-	1	1	1	1	1
CO 2	2	2	2	2	1	1	-	-	1	1	1	1	1
CO 3	2	2	2	2	1	1	-	-	2	2	2	2	2
CO 4	3	3	3	2	2	2	1	-	3	2	2	3	3
CO 5	3	3	3	2	2	2	1	-	3	2	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023 – 2024)

DISSERTATION

CODE: 23CS/PC/DS48

CREDITS : 8

OBJECTIVES OF THE COURSE

- To enable the students to understand and analyse a problem
- To understand the need of literature reviews formulating a problem and in problem solving
- To enable students to select an appropriate tool to solve the problem
- To help students to develop an application to suit the business needs/implement a research problem
- To enable the students to test the accuracy
- To enable students to document the process and the implementation

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	define a problem statement	K1
CO2	summarize necessary literatures to understand the problem	K2
CO3	choose an appropriate development environment for the chosen problem	K3
CO4	analyse an application/research problem effectively	K4
CO5	estimate and evaluate the accuracy of the result	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

CONTENT	CL	CO
Topic / domain selection / problem statement for application Abstract Introduction and Motivation Literature Survey/Implementation Results and Inferences Conclusion	K1-K6	1-5

PATTERN OF ASSESSMENT:

Component I - Presentation / Review (Includes continuous evaluation of 3 presentations)

Component II – Final Paper /Final Project

End Semester Examination – 100 marks

Dissertation Document must be submitted at the end of the semester. The student must present the completed work. A viva–voce based on the work will also be conducted. Mark will be allotted based on the application developed / research problem implementation.

Rubrics for Evaluation	Marks	Cognitive Level
Documentation	15	K1
Formulating topic statement	10	K2
Motivation and Background Study	15	K3
Research Implementation	30	K4
Results and Inferences	20	K5
Research conclusions	10	K6

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PC/DS48												
IV	Course Title: DISSERTATION												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	1	2	2	1	1	1	-	1	1	1	1	1
CO 2	3	2	2	2	2	1	1	-	1	1	2	1	1
CO 3	3	2	2	2	2	1	1	-	3	2	2	2	2
CO 4	3	3	2	2	3	3	2	-	3	3	2	3	2
CO 5	3	3	2	2	3	3	2	-	3	3	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023-2024)

UI, UX AND DESIGN THINKING

CODE:23CS/PE/XI15

CREDITS: 5

L T P: 3 0 3

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To understand the User Interface (UI) and User Experience (UX) design
- To know user design behaviours and principles
- To identify and apply the UI, UX concepts in wireframing and prototyping the front-end of a web application
- To analyse the aspects of user behavior and build better applications for the user
- To design and create a front-end web application with the learnt concepts using HTML5, CSS, JavaScript, and Bootstrap

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the core concepts of UI, UX and demonstrate their need in designing a web application using front-end development technologies	K1, K2
CO2	apply the knowledge and build web applications using HTML5, CSS, JavaScript, Bootstrap	K3
CO3	analyse between different users, user behaviours and their role in front-end application design	K4
CO4	evaluate the design using wireframing and prototyping to build user centric front-end applications	K5
CO5	design and develop the front-end of a web application with all the learnt concepts	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 UX and Design Process UX - UX Design Process - Discovery and Planning, The UX Strategy, UX research Stages - UX analysis, Design, Production -	K1-K4	15	1-3

UNIT	CONTENT	CL	HRS	CO
	1.2 User Behavior and User Research Basics, Gestalt theory, Psychology in UX, User Research, Benefits of User Research - Getting to know Your Users - User Personas			
2	2.1 Designing Behavior Five factors/preconditions for Users to take actions - Models of behavior change - Behavioral approach for Product Design 2.2 Visual Design Principles and Processes Basics of Visual Design - Design Principles - Visual Design Tools	K1-K4	15	1-3
3	3.1 Wireframes and Prototyping Wireframe - Creating Wireframes, Types, Tools - Prototyping - Methods, Creating Prototypes, Tools 3.2 UI Design and Implementation User Interface Design - UI design Tools - Design System - UI Design Handover - Tools - Post-launching UX Activities - User Feedback - Testing - Tracking and Recording - Creating and Analyzing Conversion funnels	K1-K6	15	1-5
4	4.1 HTML5 and CSS3 HTML Elements – Structural/Semantic, Phrasing, Table, Embedded, Form - CSS Selectors – Positioning content – Text Styles – Borders and Backgrounds – Styling Tables – Flexbox – Animation and Transforms	K1-K6	15	1-5
5	5.1 JavaScript Javascript Essentials - Browser Environment – Window Object – DOM Elements – Constraint Validation API - JQuery – Dynamic styling - Events - TypeScript – Installing TypeScript, Benefits, Building a TypeScript file 5.2 Bootstrap Framework Installation - Responsive Grid System - Bootstrap's Style Standard - Responsive CSS - Responsive Development with Browser devTools - Z dimension - Transform - Transition - Animation - Flexbox - Responsive Website Clone	K1-K6	18	1-5

BOOKS FOR STUDY

Canziba, Elvis. *Hands-On UX Design for Developers: Design, prototype, and implement compelling user experiences from scratch*. Packt Publishing Ltd, 2018. (Unit 1, 2, 3)

Collins, Mark J. *Pro HTML5 with CSS, JavaScript, and Multimedia*. Apress, 2017. (Unit 4, 5.1)

Rahman, Syed Fazle. *Jump Start Bootstrap*. sitepoint, 2014. (Unit 5.2)

BOOKS FOR REFERENCE

Clark, Nathan. *UI/UX Design for Designers & Developers Paperback*. 2018.

Clark, Nathan. *UI/UX Design Basics and Fundamentals Paperback*. 2018.

Basarat Ali Syed. *TypeScript Deep Dive*. Samurai Media Limited, 2017

J. Hamm, Matthew. *Wireframing Essentials*. Packt Publishing. ISBN: 978184969854

Yayici, Emrah. *UX Design and Usability Mentor Book: With Best Practice Business Analysis and User Interface Design Tips and Techniques*. Emrah Yayici, 2014.

WEB RESOURCES

<https://getbootstrap.com/docs/4.2/getting-started/introduction/>

<https://git-scm.com/book/en/v2>

<https://www.typescriptlang.org/docs/handbook/typescript-in-5-minutes.html>

<https://developer.mozilla.org/en-US/docs/Web/JavaScript>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory : **Total Marks: 25** **Duration: 45 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$3 \times 5 = 15$	1	2
	K2 (5)		1	2
	K4 (5)		1	2
B (Internal Choice)	K3 (10)	$1 \times 10 = 10$	1	2
	Total	25	4	8

Practical : **Total Marks: 25** **Duration: 45 minutes**

Knowledge Level	Marks
K5	15
K6	10
Total	25

Other Components: **Total Marks: 50**

seminar, quiz, open book test, group discussion, Mini project

Two to three components will be prescribed

End Semester Examination:**Theory: Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	6 x 5 = 30	1	2
	K2 (5)		1	2
	K3 (10)		2	4
	K4 (10)		2	4
B (Internal Choice)	K3 (10)	2 x 10 = 20	1	2
	K4 (10)		1	2
	Total	50	8	16

Project : Total Marks: 50

Knowledge Level	Marks
K5	30
K6	20
Total	50

*Equal weightage to be given to all Units

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PE/XI15												
I/II/IV	Course Title: UI, UX and Design Thinking												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	3	3	3	3	3	3	3	3	3
CO 2	3	3	3	2	3	3	2	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO 4	3	3	3	2	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	2	3	3	3	3	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023 - 2024)

CYBER SECURITY

CODE :23CS/PE/CS15

CREDITS: 5

L T P: 5 1 0

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To understand the cybercrime, cyber offenses and cyber forensics
- To understand the security challenges in mobile devices
- To analyse the tools and methods used in cybercrime
- To have an understanding on cyber law and cyber security
- To understand the Indian IT Act and its strengths and weaknesses

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the fundamentals of cybercrimes and computer forensics	K1
CO2	understand the preventive measures to safeguard from cyber crimes	K2
CO3	apply the various methodologies involved in attacks	K3
CO4	analyse the strategies used in cybercrime and cyber forensics	K4
CO5	evaluate policies to secure data	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Introduction to Cybercrime Cybercrime: Definition and Origins of the Word, Cybercrime and Information Security, Cybercriminals, Classifications of Cybercrimes, Cybercrime The Legal Perspectives, Cybercrimes: An Indian Perspective, Cybercrime and the Indian ITA 2000, A Global Perspective on Cybercrimes	K1-K4	14	1-3

UNIT	CONTENT	CL	HRS	CO
	1.2 Cyber Offenses: Attack Planning Planning Attacks, Social Engineering Cyber stalking, Cyber cafe and Cybercrime, Botnets, the Fuel for Cybercrime, Attack Vector, Security in Cloud			
2	2.1 Cybercrime: Mobile and Wireless Devices Proliferation of Mobile and Wireless Devices, Trends in Mobility, Credit Card Frauds in Mobile and Wireless Computing Era, Security Challenges Posed by Mobile Device Registry, Settings for Mobile Devices, Authentication Service Security, Attacks on Mobile/Cell Phones, Mobile Devices: Security Implications for Organizations, Organizational Measures for Handling Mobile, Organizational Security Policies and Measures in Mobile Computing Era, Laptops	K1-K4	14	1-3
3	3.1 Tools and Methods Used in Cybercrime Proxy Servers and Anonymizers, Phishing, Identity Theft (ID Theft), Password Cracking, Keyloggers and Spywares, Virus and Worms, Trojan Horses and Backdoors, Steganography, DoS and DDoS Attacks, SQL Injection, Buffer Overflow, Attacks on Wireless Networks	K1-K5	14	1-4
4	4.1 Cybercrimes and Cyber security: The Legal Perspectives Cybercrime and the Legal Landscape around the World, Need for Cyber laws - The Indian Context, The Indian IT Act, Challenges to Indian Law and Cybercrime Scenario in India, Consequences of Not Addressing the Weakness in Information Technology Act, Digital Signatures and the Indian IT Act, Amendments to the Indian IT Act, Cybercrime and Punishment, Cyber law, Technology and Students with respect to Indian Scenario	K1-K5	19	1-4

UNIT	CONTENT	CL	HRS	CO
5	5.1 Computer Forensics Understanding Computer Forensics · Historical Background of Cyber forensics, Digital Forensics Science, The Need for Computer Forensics, Cyber forensics and Digital Evidence, Forensics Analysis of E-Mail Digital Forensics Life Cycle, Chain of Custody Concept, Network Forensics, Approaching a Computer Forensics Investigation, Computer Forensics and Steganography, Relevance of the OSI 7 Layer Model to Computer Forensics. Forensics and Social Networking Sites: The Security/Privacy Threats, Computer Forensics from Compliance Perspective, Challenges in Computer Forensics · Special Tools and Techniques, Forensics Auditing · Antiforensics	K1-K4	17	1-3

BOOKS FOR STUDY

Godbole Nina, Belasure Sunit. Cyber Security Understanding Cyber Crimes, Computer Forensics and Legal Perspectives Wiley: April 2011 India Publications Released

BOOKS FOR REFERENCE

Diogenes Yuri , Ozkaya Erdal Cybersecurity – Attack and Defense Strategies: Infrastructure security with Red Team and Blue Team tactics Paperback – January 30, 2018

Nelson Bill, Phillips Amelia, Steuart Christopher. Guide to Computer Forensics and Investigations. Cengage Learning, 2013.

T. Britz Marjie. Computer Forensics and Cyber Crime: An Introduction. Pearson, 2013.

Wu Chwan-Hwa (John), Irwin J. David. Introduction to Computer Networks and Cyber security. CRC Press, 2013

WEB RESOURCES

<https://www.javatpoint.com/cyber-security-introduction>
<https://www.sophia.org/tutorials/cyber-security>
<https://www.simplilearn.com/tutorials/cyber-security>
<https://intellipaat.com/tutorial/ethical-hacking-cyber-security-tutorial/>
<https://www.nersc.gov/users/training/online-tutorials/cybersecurity-tutorial/>
<https://www.geeksforgeeks.org/what-is-information-security/>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory :

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (4)	$5 \times 2 = 10$	2	2
	K2 (6)		3	3
B (Internal Choice)	K3 (5)	$2 \times 5 = 10$	1	2
	K4 (5)		1	2
C (Internal Choice)	K3 (10)	$3 \times 10 = 30$	1	2
	K4 (10)		1	2
	K5 (10)		1	2
	Total	50	10	15

Other Components: Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Examination:

Theory:

Total Marks: 100

Duration: 3 Hours

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (10)	$10 \times 2 = 20$	5	5
	K2 (10)		5	5
B (Internal Choice)	K3 (10)	$4 \times 5 = 20$	3	6
	K4 (10)		1	2
C (Internal Choice)	K3 (20)	$6 \times 10 = 60$	1	2
	K4 (20)		2	4
	K5 (20)		2	4
			1	2
	Total	100	20	30

*Equal weightage to be given to all Units

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PE/CS15												
	Course Title: CYBER SECURITY												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	1	1	2	1	1	1	-	1	2	1	1	1
CO 2	2	2	2	2	1	1	1	-	2	2	1	1	1
CO 3	3	2	2	2	1	1	2	-	3	2	1	3	3
CO 4	3	2	3	2	2	1	2	-	3	2	2	3	3
CO 5	3	2	3	2	2	1	2	-	3	2	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023-2024)

SOFTWARE TESTING

CODE: 23CS/PE/ST15

CREDITS: 5

L T P: 3 0 3

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To understand the software testing core concepts
- To relate with the different software testing paradigms
- To choose an appropriate testing strategy for any given scenario
- To explain the different phases of testing
- To be able to test different applications

COURSE LEARNING OUTCOME

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the concepts of software testing	K1
CO2	explain the different testing techniques and the testing process	K2
CO3	identify the requirements and apply the knowledge in writing test cases	K3
CO4	distinguish between the different testing paradigms	K4
CO5	choose an appropriate testing strategy and develop a test suite	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Introduction to Software Testing Need for Testing Software - Fault, Error and Failures - Verification and Validation - Testing, Test Failure and Debugging - RIPR Model - Software Testing Activities - SDLC and Testing Activities (V-Model) - Software Testing Types and Techniques - Functional Testing - Non Functional Testing - Static Testing - Role of Testing in SDLC	K1, K2	15	1,2
2	2.1 Test Planning Test Objectives - Scope of Testing - Selecting the Testing Approach - Identifying Testing Resources - Developing the Test Schedule - Defining Test Cases - Identifying Test Data - Defect Management Process - Stop Testing Criteria - Reviewing and Approving the Test Plan - Benefits of Test Planning - Test Plan Document - Test Planning Tools and Techniques - Requirement Identification - Traceability Matrix 2.2 Unit Testing Concept of Unit Testing - Static Unit Testing - Defect Prevention - Dynamic Unit Testing - Mutation Testing - Debugging - McCabe Cyclomatic Complexity	K1-K6	15	1-5
3	3.1 Black-Box Testing Equivalence Partitioning - Boundary Value Analysis - Decision Table Testing - State Transition Testing - Use-case Testing - Pairwise Testing - Error Guessing - Exploratory Testing - Random Testing - AdHoc Testing 3.2 White-Box Testing Statement Coverage - Branch Coverage - Path Coverage - Condition Coverage - Decision Coverage - Multiple Condition Coverage - Modified Condition / Decision Coverage - Loop Testing - Data Flow Testing - Static Testing	K1-K6	18	1-5

UNIT	CONTENT	CL	HRS	CO
4	4.1 Test Execution and Test Automation Test Execution Process - Test Environment Process - Defect Reporting and Retesting - Regression Testing - Test Case Status Reporting - Test Case Completion - Quality Metrics - McCall's Quality Factors - Benefits of Test Automation – Frameworks 4.2 Testing in Agile Environment Agile Testing Principles - Agile Testing Quadrants - Test-Driven Development - Behaviour- Driven Development - Acceptance Test-Driven Development - Continuous Integration and Continuous Delivery - Agile Testing Best Practices	K1-K6	15	1-5
5	5.1 Full Stack Testing Full Stack Testing for High Quality - Shift-left Testing - Ten Full Stack Testing Skills 5.2 Security Testing Security Testing - Penetration Testing - Types of Penetration Tests - Penetration Testing Process - Reconnaissance, Scanning, Vulnerability Assessment, Exploitation, Reporting 5.3 Case Study on Different Software Testing Tools*	K1-K4	15	1-4

***Unit 5.3 Only for Component Assessment. Not for End Semester Examination.**

Practicals

Manual Test Cases - JUnit - JUnit Test Case - Annotations - Assertions - Parameterized Test - Test Driven Development using JUnit - Integration Testing - Code Coverage

BOOKS FOR STUDY

Panagiotis Leloudas, *Introduction to Software Testing: A Practical Guide to Testing, Design, Automation, and Execution*, Apress, 2023 (Units 1, 2.1, 3, 4)

Ammann, Paul, and Jeff Offutt. *Introduction to Software Testing*. Cambridge University Press, 2016. (Unit 1)

Naik, Sagar and Piyu Tripathy. *Software Testing and Quality Assurance: Theory and Practice*. Wiley., 2010 (Unit 2)

Cătălin Tudose, *JUnit in Action*, Third Edition, Manning Publications Co., 2020 (Unit 5.1)

BOOKS FOR REFERENCE

Gayathri Mohan, *Full Stack Testing: A Practical Guide for Delivering High Quality Software*, O'Reilly Media Inc., 2022

Tomek Kaczanowski , *Practical Unit Testing with JUnit and Mockito*, 2019

WEB RESOURCES

<https://www.oreilly.com/library/view/full-stack-testing/9781098108120/ch01.html>

<https://www.ibm.com/topics/penetration-testing>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory :

Total Marks: 25

Duration: 45 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$3 \times 5 = 15$	1	2
	K2 (5)		1	2
	K4 (5)		1	2
B (Internal Choice)	K3 (10)	$1 \times 10 = 10$	1	2
	Total	25	4	8

Practical :

Total Marks: 25

Duration: 45 minutes

Knowledge Level	Marks
K5	15
K6	10
Total	25

Other Components:

Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Examination:**Theory: Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$6 \times 5 = 30$	1	2
	K2 (5)		1	2
	K3 (10)		2	4
	K4 (10)		2	4
B (Internal Choice)	K3 (10)	$2 \times 10 = 20$	1	2
	K4 (10)		1	2
	Total	50	8	16

Practical : Total Marks: 50**Duration: 90 minutes**

Knowledge Level	Marks
K5	30
K6	20
Total	50

*Equal weightage to be given to all Units

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PE/ST15												
I/II/IV	Course Title: Software Testing												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	3	3	3	2	2	3	3	2	3	2
CO 2	3	2	2	2	3	3	2	2	3	3	3	3	2
CO 3	3	3	2	3	3	3	2	2	3	3	3	3	3
CO 4	3	3	2	2	3	3	2	2	3	3	3	3	2
CO 5	3	3	2	2	3	3	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023-2024)

MOBILE COMPUTING

CODE: 23CS/PE/MC15

CREDITS: 5

L T P: 5 1 0

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To understand the basic concepts of mobile computing
- To be familiar with the mobile network layers
- To learn the basics of mobile telecommunication system
- To understand the functionality of Wireless networks
- To gain conceptual knowledge on Ad-Hoc networks

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the basics of mobile communication technologies and networks	K1
CO2	explain the concepts in mobile communication technologies	K2
CO3	identify various protocols and networks used in mobile computing	K3
CO4	compare diverse architectures and data transmission schemes	K4
CO5	evaluate the strengths and weakness of different mobile communication technologies	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Basics of Communication Technologies Cell Phone System – Types of Telecommunication networks – Computer Networks – Traditional LAN – Components of Wireless Communication System – Architecture of Mobile Telecommunication System – Wireless Networking Standards* – WLANs – Bluetooth Technology 1.2 Mobile Computing and Wireless Networking Mobile Computing - Mobile Computing vs Wireless Networking – Applications – Characteristics – Structure – Generations of Mobile Communication: 1G, 2G, 3G, 4G, 5G – Terminologies: GSM, GPRS, LTE 1.3 MAC Protocols Properties – Taxonomy: Fixed Assignment Schemes (FDMA, TDMA, CDMA), Random Assignment Schemes (ALOHA, CSMA), Reservation-based Schemes (MACA) – The 802.11 MAC standard – MAC protocols for Ad Hoc Networks	K1-K4	18	1-4

UNIT	CONTENT	CL	Hrs	CO
2	2.1 Mobile Internet Protocol Mobile IP – Packet delivery – Overview of Mobile IP – Desirable features – Key Mechanisms – Route Optimization – Dynamic Host Configuration Protocol (DHCP)	K1- K5	18	1-5
	2.2 Mobile Transport Layer Overview of TCP/IP – Terminologies – Architecture – Overview of the operation of TCP – Application layer protocols of TCP – Improvement in TCP Performance	K1-K2		1-2
3	3.1 Mobile Databases Issues in Transaction Processing – Transaction Processing Environment: Centralized, Client-server, Distributed Environment, Mobile Environment – Data Dissemination – Transaction processing in Mobile Environment: Atomicity, Consistency, Isolation, Durability – Data replication – Mobile Transaction Models – Roll back process – Query processing – Recovery	K1-K2	15	1-2
	3.2 Mobile Ad Hoc Networks Basic Concepts – Characteristics – Applications – MANET Design Issues – Routing – Essentials of Traditional Routing Protocols: Link state, Distance vector – Routing in MANETs – Popular MANET protocols: DSR, AODV protocol, Multicast Routing protocols – Vehicular Ad Hoc networks – MANET vs VANET – Security issues in MANET – Attacks – Counter measures	K1-K5		1-5
4	4.1 Wireless Sensor Networks WSN vs. MANET – Applications – Architecture – Challenges – Characteristics – WSN Routing protocols – Target Coverage – Internet of Things	K1-K4	15	1-4
	4.2 Operating Systems for Mobile Computing OS responsibilities in mobile devices – Basic concepts of mobile OS – Constraints and Requirements of mobile OS – Survey of commercial Mobile OS: Windows, iOS, Android – Comparative study of mobile OS – OS for sensor Networks	K1-K5		1-5
5	5.1 Support for Mobility File systems – WWW – Wireless application protocol: Architecture – Push architecture – Push/Pull services - Introduction to LiFi	K1-K4	12	1-4
	5.2 Applications and Case Studies Applications of M-Commerce – Business to Business Applications – Mobile payment Systems – Security Issues – Case Studies: Health Service Model, Context-Aware Navigation System	K1-K5		1-5

* Not included for evaluation

BOOK FOR STUDY

Pattnaik, Prasant Kumar, and Rajib Mall. “Fundamentals of Mobile Computing”. PHI Learning Pvt. Ltd., 2015.

Jochen H. Schller, “Mobile Communications”, Third Edition, Pearson Education, New Delhi, 2008.

De, Debashis. “Mobile cloud computing: architectures, algorithms and applications”. CRC Press, 2016.

BOOKS FOR REFERENCE

Kamal, Devi. "Mobile computing". Oxford University Press, Inc., 2012.

Stallings, William. "Wireless Communications and Networks". United Kingdom, Pearson Education Limited, 2013.

WEB RESOURCES

<https://www.bluetooth.com/bluetooth-resources/>

PATTERN OF ASSESSMENT**Continuous Assessment Test:**

Theory :

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (4)	$5 \times 2 = 10$	2	2
	K2 (6)		3	3
B (Internal Choice)	K3 (5)	$2 \times 5 = 10$	1	2
	K4 (5)		1	2
C (Internal Choice)	K3 (10)	$3 \times 10 = 30$	1	2
	K4 (10)		1	2
	K5 (10)		1	2
	Total	50	10	15

Other Components:

Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Examination:

Theory:

Total Marks:100

Duration: 3 Hours

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (10)	$10 \times 2 = 20$	5	5
	K2 (10)		5	5
B (Internal Choice)	K3 (10)	$4 \times 5 = 20$	3	6
	K4 (10)		1	2
C (Internal Choice)	K3 (20)	$6 \times 10 = 60$	1	2
	K4 (20)		2	4
	K5 (20)		2	4
			1	2
	Total	100	20	30

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PE/MC15												
I/II/IV	Course Title: MOBILE COMPUTING												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	1	-	1	3	2	-	-	-	1	1	2	1	1
CO 2	2	-	2	3	2	1	-	-	1	1	2	1	1
CO 3	2	1	2	3	2	1	-	-	2	2	2	2	1
CO 4	3	2	3	3	2	2	1	-	3	2	3	3	2
CO 5	3	3	3	3	2	2	1	-	3	2	3	3	2
High Correlation: 3				Moderate Correlation: 2				Low Correlation: 1					

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023–2024)

ADVANCED TECHNOLOGIES IN INFORMATION TECHNOLOGY

CODE:23CS/PE/AT15

CREDITS: 5

L T P: 5 1 0

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To introduce the fundamentals of neural network and deep learning
- To understand the basic concepts of Bitcoin and Blockchain
- To explore architectures and applications of deep learning
- To demonstrate the bitcoin network and security
- To define the blockchain with Merkle Tree

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the concepts in neural network, deep learning, bitcoin and blockchain	K1
CO2	explain the architecture of deep learning and bitcoin	K2
CO3	apply the knowledge gained in bitcoin mining and Natural Language Processing	K3
CO4	analyze deep networks, bitcoin transactions and blockchain features	K4
CO5	determine the neural network architecture, merkle trees and transaction aggregates	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Neural Networks and Deep Learning Neural Networks - Training NN - Activation Functions - Loss Functions – Hyper Parameters	K1, K2	13	1,2
2	2.1 Deep Networks Defining Deep Learning - Architectural Principles of Deep Networks - Building Blocks of Deep Networks - Unsupervised Pretrained Networks – Convolution Neural Networks - Recurrent NNs - Recursive NNs – Transfer Learning - Applications of Deep Learning in Natural Language Processing	K1-K5	17	1-5

3	3.1 BitCoin BitCoin – History of BitCoin- Bitcoin Uses, Users- Transactions, Blocks, Mining, and the Blockchain- Bitcoin Transactions- Constructing a Transaction- Adding the Transaction to the Ledger-Propagation- Receiver’s view- Bitcoin Mining- Mining transactions in blocks- Spending the transaction- Cryptography- Digital Signatures-Elliptic Curve Cryptography- Keys, Addresses-Wallets	K1-K4	14	1-4
4	4.1 Bitcoin Network Introduction- Bitcoin Addresses-Cryptographic Hashing- Hashing Algorithms –Encoding-Key Formats - Wallets- The Bitcoin Network- Peer-to-Peer Network Architecture- Nodes Types and Roles- The Extended Bitcoin Network- Network Discovery-Full Nodes - Exchanging “Inventory”- Simplified Payment Verification (SPV) Nodes- Bloom Filters- Transaction Pools	K1-K5	14	1-5
5	5.1 Blockchain The Blockchain- Structure of a Block- Block Header- Block Identifiers - Block Header Hash and Block Height - The Genesis Block- Linking Blocks in the Blockchain 5.2 Merkle Tree Merkle Trees- Merkle Trees and Simplified Payment Verification (SPV) - Mining and Consensus- De-Centralized Consensus- Independent Verification of Transactions- Mining Nodes- Aggregating Transactions into Blocks- Mining the Block- Assembling and Selecting Chains of Blocks- Mining and the Hashing Race- Consensus Attacks- Bitcoin Security- Security principles- User Security Best Practices	K1-K5	20	1-5

BOOKS FOR STUDY

Patterson, Josh, and Adam Gibson. Deep Learning: A Practitioner's Approach. O'Reilly Media, Inc., 2017. (Unit 1 & 2)

Andreas M. Antonopoulos. Mastering Bitcoin: Programming the Open Block chain. O'Reilly Media, Inc.,2017. (Unit 3, 4 & 5)

BOOKS FOR REFERENCE

Deng & Yu. Deep Learning: Methods and Applications, Now Publishers, 2013.
Ian Goodfellow, Yoshua Bengio, and Aaron Courville. Deep Learning, MIT Press, 2016.
Karim, Md Rezaul. Java Deep Learning Projects: Implement 10 real-world deep learning applications using Deeplearning4j and open source APIs. Packt Publishing Ltd, 2018.
Melanie Swan. Blockchain. O'Reilly Media, 2015.

WEB RESOURCES

<https://www.coursera.org/specializations/deep-learning>
<https://www.pyimagesearch.com/deep-learning-computer-vision-python-book/>
<https://www.ibm.com/topics/blockchain>
<https://www.oreilly.com/library/view/hands-on-transfer-learning/9781788831307/>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory : **Total Marks: 50** **Duration: 90 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (4)	$5 \times 2 = 10$	2	2
	K2 (6)		3	3
B (Internal Choice)	K3 (5)	$2 \times 5 = 10$	1	2
	K4 (5)		1	2
C (Internal Choice)	K3 (10)	$3 \times 10 = 30$	1	2
	K4 (10)		1	2
	K5 (10)		1	2
	Total	50	10	15

Other Components: Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Examination:**Theory: Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (10)	10X2 = 20	5	5
	K2 (10)		5	5
B (Internal Choice)	K3 (10)	4 X 5 = 20	3	6
	K4 (10)		1	2
C (Internal Choice)	K3 (20)	6 X 10 = 60	1	2
	K4 (20)		2	4
	K5 (20)		2	4
			1	2
	Total	100	20	30

*Equal weightage to be given to all Units

Mapping of Course Outcomes (COs)**to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PE/AT15												
I/II/IV	Course Title: ADVANCED TECHNOLOGIES												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	1	-	1	2	1	-	-	-	1	1	1	1	1
CO 2	2	2	2	2	1	1	-	-	1	1	1	1	1
CO 3	2	2	2	2	1	1	-	-	2	2	2	2	2
CO 4	3	3	3	2	2	2	1	-	3	2	2	3	3
CO 5	3	3	3	2	2	2	1	-	3	2	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023 - 2024)

VISUAL PROGRAMMING

CODE: 23CS/PE/VP15

CREDITS: 5

L T P: 3 0 3

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To learn basics of C# programming
- To introduce the concepts of Web Programming using ASP.NET
- To understand state management
- To introduce advanced concepts of Web Technology and LINQ using C# and ASP.NET
- To generate reports using Crystal reports

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall the fundamental concepts of C#	K1, K2
CO2	identify the various concepts for Console, Web Applications and connecting LINQ	K3
CO3	select the web controls, navigation, state management techniques and databinding controls for a Web Application	K4
CO4	evaluate the Web Application and AJAX techniques	K5
CO5	develop an Application and generate reports	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	1.1 C# Fundamentals Overview of .NET Framework - C# Fundamentals- Variables and Constants, Value Types, Reference Types, Type Conversions, Boxing and Unboxing, Expressions and Operators, Flow Control and Exception Handling - Control Flow Statements: Selection Statements, Iteration Statements or Loops, Jump Statements – Exception Handling - try...catch...finally Statement, throw Statement - Exploring Namespaces, Classes and Objects - Syntax of a Class, Method as Class Member, Access Modifiers, Objects, Constructors and Destructors, Static Classes and Static Class Members - Properties	K1-K6	16	1 – 5

UNIT	CONTENT	CL	HRS	CO
2	2.1 ASP.NET Life cycle- Specifying a Location for a Web Application -Single-File Page Model - Code-Behind Page Model - Adding controls to web form – History of MVC – Understanding the MVC pattern 2.2 Web Server Controls The Control Class - The WebControl Class - The Button Control - The TextBox Control -The Label Control - The HyperLink Control -The LinkButton Control –The Placeholder Control - The HiddenField Control - The CheckBox Control –The RadioButton Control - The ListBox Control -The DropDownList Control -The Image Control -The ImageButton Control - The Table Control - Menus - Validation Server Controls - Master page - Web.Config	K1-K4	17	1-3
3	3.1 State Management Understanding the session object - Sessions and the Event Model, Configuring, In- Process Session State, Out-of-Process Session state - Application Object – Query strings - Cookies, -ViewState - Global.asax 3.2 XML and .NET Basics of XML - Create XML Document - Reading XML with XmlReader – Reading XML with XmlDocument - Writing XML with XmlWriter - Writing XML with XmlDocument	K1-K6	15	1-5
4	4.1 LINQ Introducing LINQ Queries - Standard Query Operators - Introducing LINQ to Dataset, The LinqDataSource Control - Data Binding – Grid View, Details view, Forms view	K1-K6	16	1 – 5
5	5.1 ASP. NET AJAX Understanding the need for AJAX - Building a simple ASP.NET page without AJAX - Building a simple ASP.NET page with AJAX 5.2 Crystal Reports Overview to Crystal Reports - Creating Crystal Reports with wizards – Integrating with Web Applications	K1-K6	14	1 – 5

BOOKS FOR STUDY

Deitel, Paul and Harvey M. Deitel. C# 2012 for Programmers. Pearson Education, 5th ed.
Kogent Learning Solutions. C# 2012 Programming Covers .NET 4.5 Black Book. Dreamtech press, 2013.

BOOKS FOR REFERENCE

Freeman, Adam Pro ASP.NET Core MVC Develop cloud-ready web applications using Microsoft's latest frame. 6th ed. Apress 2016.

Liberty, Jesse. Programming C#. 4th ed. O'Reilly Media, 2009.

Schildt, Herbert. Complete Reference C#. New Delhi: TMH Publication, 2009.

WEB RESOURCES

<https://msdn.microsoft.com/en-us/library/aa288436%28v=vs.71%29.aspx>

<http://csharp.net-tutorials.com/xml/introduction/>

<http://ajax.net-tutorials.com/basics/introduction/>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory :

Total Marks: 25

Duration: 45 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$3 \times 5 = 15$	1	2
	K2 (5)		1	2
	K4 (5)		1	2
B (Internal Choice)	K3 (10)	$1 \times 10 = 10$	1	2
	Total	25	4	8

Practical :

Total Marks: 25

Duration: 45 minutes

Knowledge Level	Marks
K5	15
K6	10
Total	25

Other Components:

Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Examination:

Theory:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$6 \times 5 = 30$	1	2
	K2 (5)		1	2
	K3 (10)		2	4
	K4 (10)		2	4
B (Internal Choice)	K3 (10)	$2 \times 10 = 20$	1	2
	K4 (10)		1	2
	Total	50	8	16

Project - 50 marks (Demonstration and Viva)

*Equal weightage to be given to all Units

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PE/VP15												
I/II/IV	Course Title: VISUAL PROGRAMMING												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	1	-	1	2	1	-	-	-	1	1	1	1	1
CO 2	2	2	2	2	1	1	-	-	1	1	1	1	1
CO 3	2	2	2	2	1	1	-	-	2	2	2	2	2
CO 4	3	3	3	2	2	2	1	-	3	2	2	3	3
CO 5	3	3	3	2	2	2	1	-	3	2	2	3	3
High Correlation: 3				Moderate Correlation: 2				Low Correlation: 1					

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023 - 2024)

ADVANCED DATABASE SYSTEMS

CODE: 23CS/PE/AD15

CREDITS : 5

L T P: 5 1 0

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To build on the previous background of database systems and enhancing the understanding of different data models and database technologies
- To enable a comprehensive and better understanding of XML
- To understand the various security issues in Database
- To demonstrate an understanding of distributed databases and the trends
- To have an overview of data mining and data warehousing concepts

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and relate non-relational database systems, structures, XML, data mining and data warehousing	K1
CO2	explain the roles that databases play in organizations and familiarize with database security, data models and information retrieval	K2
CO3	apply acquired knowledge for developing solutions based on database concepts and techniques	K3
CO4	analyze and infer the different query processing techniques	K4
CO5	explain query processing, security, distributed databases	K5
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate		

UNIT	CONTENT	CL	HRS	CO
1	1.1 XML: Extensible Markup Language Types of Data - Structured, Semi-structured, and Unstructured Data - XML Hierarchical (Tree) Data Model - XML Documents, DTD, and XML Schema - Storing and Extracting XML Documents from Databases - XML Languages - Extracting XML Documents from Relational Databases	K1-K5	15	1-5

UNIT	CONTENT	CL	HRS	CO
	1.2 Query Processing and Optimization and Database Tuning Algorithms for Query Processing and Optimization - Translating SQL Queries into Relational Algebra - Algorithms for External Sorting - Algorithms for SELECT and JOIN Operations -Algorithms for PROJECT and Set Operations- Implementing Aggregate Operations and OUTER JOINS - Combining Operations Using Pipelining - Using Heuristics in Query Optimization - Using Selectivity and Cost Estimates in Query Optimization - Semantic Query Optimization			
2	2.1 Database Security Introduction to Database Security Issues - Discretionary Access Control Based on Granting and Revoking Privileges - Mandatory Access Control and Role-Based Access Control for Multilevel Security - SQL Injection - Introduction to Statistical Database Security - Introduction to Flow Control - Encryption and Public Key Infrastructures - Privacy Issues and Preservation – Challenges of Database Security	K1-K5	15	1-5
3	3.1 Distributed Databases Distributed Database Concepts - Types of Distributed Database Systems - Distributed Database Architectures - Data Fragmentation, Replication, and Allocation Techniques for Distributed Database Design - Query Processing and Optimization in Distributed Databases - Overview of Transaction Management in Distributed Databases - Overview of Concurrency Control and Recovery in Distributed Databases - Distributed Catalog Management - Current Trends in Distributed Databases 3.2 Introduction to Information Retrieval and Web Search Information Retrieval (IR) Concepts - Retrieval Models - Types of Queries in IR Systems – Text Preprocessing - Inverted Indexing - Evaluation Measures of Search Relevance - Web Search and Analysis - Trends in Information Retrieval	K1-K5	17	1-5
4	4.1 Enhanced Data Models for Advanced Applications Active Database Concepts - Temporal Database Concepts - Spatial Database Concept- Multimedia Database Concepts - Introduction to Deductive Databases – Parallel Databases	K1, K2	15	1-2

UNIT	CONTENT	CL	HRS	CO
5	5.1 Data Mining Concepts Overview of Data Mining Technology - Association Rules - Classification Clustering – Approaches to Other Data Mining Problems - Applications of Data Mining - Commercial Data Mining Tools 5.2 Overview of Data Warehousing and OLAP Introduction, Definitions, and Terminology - Characteristics of Data Warehouses - Data Modeling for Data Warehouses - Building a Data Warehouse - Typical Functionality of a Data Warehouse - Data Warehouse versus Views - Difficulties of Implementing Data Warehouses	K1, K2	16	1-2

BOOKS FOR STUDY

Elmasri, Ramez, and Shamkant Navathe. Fundamentals of database systems. Addison-Wesley Publishing Company, 2010.

BOOKS FOR REFERENCE

Date C. J. Introduction to Database Systems. USA: Pearson Education, 2003. Ramakrishna, Raghu and Johannes Gerhke. Database Management Systems. McGraw Hill, 2002.

Silberschatz, Abraham, Henry F. Korth, and S. Sudarshan. Database System Concepts. McGraw Hill, 2008.

Michael McLaughlin. Oracle Database 11g PL/SQL Programming. Oracle Press. McGraw Hill, 2008

WEB RESOURCES

<https://nptel.ac.in/courses/106106095>

<https://archive.nptel.ac.in/courses/106/105/106105175/>

<https://nptel.ac.in/courses/106106220>

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory :

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (4) K2 (6)	$5 \times 2 = 10$	2 3	2 3
B (Internal Choice)	K3 (5) K4 (5)	$2 \times 5 = 10$	1 1	2 2
C (Internal Choice)	K3 (10) K4 (10) K5 (10)	$3 \times 10 = 30$	1 1 1	2 2 2
	Total	50	10	15

Other Components: **Total Marks: 50**
 Quiz /Assignment/Seminar/Group Discussion/Problem solving/Open book test

End Semester Examination:

Theory: **Total Marks: 100** **Duration: 3 Hours**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (10)	10X2 = 20	5	5
	K2 (10)		5	5
B (Internal Choice)	K3 (10)	4 X 5 = 20	3	6
	K4 (10)		1	2
C (Internal Choice)	K3 (20)	6 X 10 = 60	1	2
	K4 (20)		2	4
	K5 (20)		2	4
			1	2
	Total	100	20	30

*Equal weightage to be given to all Units

**Mapping of Course Outcomes (COs)
 to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23CS/PE/AD15												
I/II/IV	Course Title: Advanced Database Systems												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	2	3	2	1	1	2	2	2	1	1
CO 2	2	1	3	1	3	2	1	1	3	2	2	3	2
CO 3	3	3	3	2	3	3	2	1	3	2	2	2	3
CO 4	3	3	3	2	3	3	2	1	3	3	3	2	2
CO 5	2	2	2	2	3	2	2	1	3	2	2	1	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

**Post Graduate Elective Course offered by the Department of Computer Science
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SYLLABUS

(Effective from the academic year 2023-2024)

DOCUMENTATION AND PRESENTATION

CODE: 23CS/PE/DP23

CREDITS: 3

L T P: 2 0 1

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- To give students the knowledge and understanding to prepare formatted documents and powerful presentations
- To provide hands-on use of Microsoft Office applications
- To learn the features of Latex to prepare for a writing of journals, Paper Publications

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	use Word, Powerpoint to create personal, academic and business documents following current industry standards	K1,K2
CO2	create an effective presentation in Microsoft PowerPoint / document using word or LATEX that is interactive and legible	K3
CO3	write a proper journal paper or Publish a book with proper formatting using Latex	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Word Processing Introduction – The Style Advantage, Outlining, - Autocorrect – Compatibility with previous versions of word– Styles and Character/Font Formatting – Bullets and Numbering – Character Formatting – Paragraph Formatting – Styles and paragraph Formatting, Structural Formatting, paragraph Decoration – Find, Replace and GO To – Language Tools – Auto Correct – Auto Format – Tables – Pictures and SmartArt – Headers and Footers - Symbols and Equations -	K1-K4	10	1-3

UNIT	CONTENT	CL	HRS	CO
	Charts – Inserting Objects and Files - Bookmarks –Tables of Contents –Footnotes and Endnotes - Citations and Bibliography – Indexing – Table of Authorities – Hyperlinks and Cross-References - Envelopes and Labels - Data Documents and Mail Merge- Protection Type - Integration with other office Applications – Excel, PowerPoint			
2	2.1 Presentation Tool Introduction to PowerPoint – Changing the view – Creating a good presentation - Creating and saving Presentation Files –Creating New Slides and Text Boxes –Working with Layout, Themes and Masters –Formatting Text – Formatting Paragraphs –Correcting and Improving Text –Creating and Formatting Tables- Creating SmartArt Diagrams– Importing Image Files into PowerPoint – Compressing Images –Creating a Photo Album Layout- Working with Charts – Working with External Content- Copying Content from Other Programs - Adding Sound Effects, Music and Soundtracks –Creating Animation Effects and Transitions –Creating Support Materials – Preparing for a Live Presentation – Limiting User Access to a Presentation 2.2 CANVA- Presentation Template –Tools and Features – Downloading and Sharing	K1-K4	10	1-3
3	3.1 LATEX Introduction – Installation of LATEX – Creating a simple Document -Using Simple Commands - Packages-Special characters and symbols – Lists - Fonts - Aligning material in Rows and Columns 3.2 Structuring your Document Author and title information - Abstract - Chapters, Sections, Subsections - Creating a Table of contents - Cross-Referencing – Creating a Bibliography - Page Styles and Page Numbering – Multi Lingual Support: Using the babel package	K1-K4	7	1-3

UNIT	CONTENT	CL	HRS	CO
4	4.1 Graphicx Package Graphical Transformations -Package Options – Floats – Figures -Side-By-Side Figures - Tables - Side-by-Side Tables - Sideways Floats - Sub-Floats -Defining Commands 4.2 Mathematics In-Line Mathematics - Displayed Mathematics - Multiple Lines of Displayed Maths – Mathematical commands	K1-K4	6	1-3
5	5.1 Other tools Working with Working with Cloud-based documents, presentations, forms and reports - Creating surveys with google forms and generating reports.	K1-K4	6	1-3

BOOKS FOR STUDY

Faithe Wempen. PowerPoint 2013 Bible. Wiley Publishing, Inc.

Herb Tyson. Microsoft® Word 2010 Bible. Wiley Publishing, Inc.

Lisa A. Bucki. Word 2013 Bible. Wiley Publishing, Inc.

Nicola L. C. Talbot. LATEX for Complete Novices,2012 Dickimaw Books

BOOKS FOR REFERENCE

Echo Swinford. My PowerPoint 2016.Pearson education

Freedman J. Microsoft Word 2013 Plain & Simple 2013. Microsoft Press

Helmut Kopka, Patrick W.Daly. LATEX and Electronic Publishing. Fourth Edition. Addison - Wesley 2004.

Lambert Joan. Microsoft Word 2016 Step by Step 1st ed. Microsoft Press.2016.

Lambert Joan. Microsoft Power point 2016 Step by Step 1st ed. Microsoft Press.2016.

Price Michael. McGrath Mike Office 2016 Step by Step 1st ed. Microsoft Press 2016.

Leslie Lamport. LATEX -A Document Preparation System -User's Guide and Reference Manual. Addison -Wesley Publishing Company.1994

Stefan Kottwitz. LaTeX Beginner's Guide. PacKt Publishing 2011

WEB RESOURCES

<https://www.microsoft.com/learning/en-us/book.aspx?ID=9600&locale=en-us>

<http://www.onlineprogrammingbooks.com/free-ebook-microsoft-office-powerpoint/>

<http://bookboon.com/en/microsoft-office-powerpoint-ebook#download>

PATTERN OF ASSESSMENT

CONTINUOUS ASSESMENT – Practical - 50 marks

Component 1 - 25 marks

Mini Project Phase 1: Preparing a document using a documentation tool.

Component 2 – 25 marks

Mini Project Phase 2: Presenting a Report using a tool.

End Semester Examination:

Practical

Total Marks: 100

Duration: 3 Hours

CRITERION	Knowledge Level	Marks
Recall the steps involved in creating PPT/Documents	K1	20
Understand the usage of appropriate tools	K2	30
Apply the appropriate tools and creativity	K3, K4	50
	Total	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

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SYLLABUS

(Effective from the academic year 2023-2024)

EMERGING TRENDS IN INFORMATION TECHNOLOGY

CODE: 23CS/PE/ET23

CREDITS: 3

L T P: 3 0 0

TOTAL TEACHING HOURS: 39

OBJECTIVES OF THE COURSE

- To familiarize students with emerging trends in the IT industry
- To encourage exploration of diverse interests
- To analyze case studies and real-world examples to illustrate the practical application of these technologies in various fields

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	list the emerging technologies that are currently relevant in the IT industry	K1
CO2	demonstrate the potential application areas for these emerging technologies	K2
CO3	categorize emerging technologies in the IT industry based on their relevance and potential impact	K3
CO4	examine the various aspects of integrating different technologies for effective solutions	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	Hrs	CO
1	1.1 Introduction to Augmented and Virtual Reality Computer-Generated Worlds-Augmented Reality - Virtual Reality 1.2 Applications Gaming and Entertainment, Architecture and Construction-Science and Engineering - Health and Medicine-Aerospace and Defense -Education-Tele robotic and Telepresence	K1-K4	9	1-4
2	2.1 Artificial Intelligence Artificial Intelligence and Agents - Artificial Intelligence - A Brief History of AI-Agents Situated in Environments-Knowledge Representation-Dimensions of Complexity-Applications of AI	K1-K4	8	1-4

UNIT	CONTENT	CL	Hrs	CO
3	3.1 3D Printing Basics of 3D printing -3D Print Methods and Materials- Material Extrusion - Fused Filament Fabrication -General design considerations for 3D Printing – Applications of FFF 3.2 Applications Industrial Applications-3D Printing in space, Housing, Clothing, Medical Applications	K1-K4	9	1-4
4	4.1 Cloud Computing Cloud Computing -Building cloud computing Environments-Cloud Computing Architecture-Introduction -The cloud reference model -Types of clouds	K1-K4	7	1-4
5	5.1 Applications Cloud Applications -Scientific applications -Business and consumer applications - Social networking-Media applications -Multiplayer online gaming	K1-K4	6	1-4

BOOK FOR STUDY

Ben Redwood, Filemon Schöffner. The 3D Printing Handbook: Technologies, design and applications.,2018 (Unit 3.2)

David Poole Alan Mackworth. Artificial Intelligence-Foundations of Computational Agents. Cambridge University Press,2010. (Unit 2)

Rajkumar Buyya, Christian Vecchiola, S. Thamarai Selvi. Mastering Cloud Computing Foundations and Applications Programming. Newnes.,2013 (Unit 4&5)

Steve Aukstakalnis. Practical Augmented Reality -A Guide to the Technologies, Applications, and Human Factors for AR and VR. Pearson Education, Inc.,2017. (Unit 1)

Victoria Zukas, Jonas A. Zukas. An introduction to 3D Printing. First Edition Design Pub.,2015. (Unit 3.1)

BOOKS FOR REFERENCE

Dieter Schmalstieg, Tobias Hollerer. Augmented Reality: Principles and Practice (Usability).

Helen Papagiannis. Augmented Human: How Technology Is Shaping the New Reality.

Nils J. Nilsson. The Quest for Artificial Intelligence A History of Ideas And Achievements. Web Version by Cambridge University Press.

Sean Morey and John Tinnell. Augmented Reality: Innovative Perspectives across Art, Industry, and Academia.

WEB RESOURCES

<https://www.udemy.com/topic/3d-printing/>

<https://developer.ibm.com/articles/cl-cloudintro/>

<https://elearn.nptel.ac.in/shop/iit-workshops/completed/foundation-course-on-virtual-reality-and-augmented-reality/>

PATTERN OF ASSESSMENT**Continuous Assessment Test:****Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (2)	5x2=10	2	2
	K2 (3)		3	3
B (Internal Choice)	K1 (5)	$4 \times 5 = 20$	1	2
	K2 (5)		1	2
	K3 (5)		1	2
	K4 (5)		1	2
C (Internal Choice)	K3 (10)	$2 \times 10 = 20$	1	2
	K4 (10)		1	2
	Total	50	11	17

Other Components: Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion **Two to three** components will be prescribed

End Semester Examination:**Total Marks: 100****Duration: 3 Hours**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A	K1 (5)	10x2=20	5	5
	K2 (5)		5	5
B (Internal Choice)	K1 (5)	$6 \times 5 = 30$	1	2
	K2 (5)		1	2
	K3 (10)		2	4
	K4 (10)		2	4
C (Internal Choice)	K1 (10)	$5 \times 10 = 50$	1	2
	K2 (10)		1	2
	K3 (20)		2	4
	K4 (10)		1	2
	Total	100	21	32

*Equal weightage to be given to all units

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

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SYLLABUS

(Effective from the academic year 2023–2024)

MULTIMEDIA

CODE:23CS/PE/MM23

CREDITS: 3

L T P: 2 0 1

TOTAL TEACHING HOURS: 39

OBJECTIVE OF THE COURSE

- To know about multimedia and its elements
- To acquire skills in multimedia using Photoshop, Flash and Dreamweaver
- To enable students, develop a static web site using the acquired skills

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	illustrate the concepts of multimedia and World Wide Web	K1,K2
CO2	apply Photoshop, Flash, multimedia concepts to create animations	K3
CO3	design web page with different elements using Dreamweaver	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Introduction What is Multimedia – Where to use Multimedia – Introduction to Text, Images, Sound, Animation, Video – File Formats - Stages of a Multimedia Project – Hardware – Software – Authoring Systems – Multimedia Team – Introduction to designing for the World Wide Web	K1-K2	3	1-2
2	2.1 Introduction to Adobe Photoshop Features of Adobe Photoshop - Workspace basics – Panels and menus, Tools, Rulers, Undo and History, Keyboard Shortcuts, Grids and Guides – Image and Color Basics - Palettes, Customizing Color Pickers and Swatches - Image	K1-K4	11	1-3

UNIT	CONTENT	CL	HRS	CO
	<p>and Color Basics - Blending Modes – Creating, Opening, Importing images in Photoshop - Layer Basics – Saving the Photoshop File</p> <p>2.2 Tools</p> <p>Selection Tools - Drawing and Painting - Assisting Tools – Image Adjustments – Repair and Restoration – Reshaping and Transformation – Adding Text</p>			
3	<p>3.1 Introduction to Adobe Flash</p> <p>Features, Flash Work Environment - Stage, Menu Bar, Drawing Tools and their Modifiers - Basic Drawing Techniques – Timeline - Layers - Symbols – Libraries - Object types - Image types - Graphics formats - Colors and Resolution</p> <p>3.2 Animation Techniques</p> <p>Animation basics - Tweening and its Types - Shape Hint - Frame-by-Frame Animation - Text Animations - Creating Guide Path, Banners - Layer Masking – Onion Skinning - Spot Light Effects – Buttons - Linking Images - Slide Shows - Adding Sound to Movies - Working with Scenes - Publishing Movies</p>	K1-K4	11	1-3
4	<p>4.1 Introduction to Adobe Dreamweaver</p> <p>Features of Dreamweaver - Customizing Your Workspace - HTML Basics - Text, Lists and Tables -Working with Images - Working with the Insert Panel - Copying and Pasting Images from Photoshop - Working with Navigation – Creating Internal Hyperlinks - Creating an Image-based Link - Creating an External Link – Working with Forms - Form Elements</p>	K1-K4	9	1-3
5	<p>5.1 Mini Project</p> <p>Create a website using Dreamweaver, Photoshop and Flash</p>	K1-K4	5	1-3

BOOKS FOR REFERENCE

Adobe Creative Team, Adobe Photoshop CS6 Classroom in a Book, Adobe Press, 2012.

Adobe Creative Team, Adobe Flash Professional CS6 Classroom in a Book, Adobe Press, 2012.

Adobe Creative Team, Adobe Dreamweaver CS6 Classroom in a Book, Adobe Press, 2012.

Jeremy Osborn, Jennifer Smith, AGI Creative Team, Web Design with HTML and CSS Digital Classroom, Wiley Publishing, 2011.

Tay Vaughan, Multimedia: Making it Work Eighth Edition, Mc Graw Hill, 2011.

WEB RESOURCES

https://help.adobe.com/archive/en/photoshop/cs6/photoshop_reference.pdf

https://help.adobe.com/archive/en/flash/cs6/flash_reference.pdf

https://help.adobe.com/archive/en/dreamweaver/cs6/dreamweaver_reference.pdf

<https://www.w3schools.com/html/default.asp>

<https://www.w3schools.com/css/default.asp>

PATTERN OF ASSESSMENT:

Continuous Assessment Test:

Theory :

Total Marks: 25

Duration: 45 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$3 \times 5 = 15$	1	2
	K2 (5)		1	2
	K4 (5)		1	2
B (Internal Choice)	K3 (10)	$1 \times 10 = 10$	1	2
	Total	25	4	8

Practical :

Total Marks: 25

Duration: 45 minutes

Knowledge Level	Marks
K5	15
K6	10
Total	25

Other Components:

Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribe

End Semester Examination:**Theory: Total Marks: 50****Duration: 90 minutes**

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$6 \times 5 = 30$	1	2
	K2 (5)		1	2
	K3 (10)		2	4
	K4 (10)		2	4
B (Internal Choice)	K3 (10)	$2 \times 10 = 20$	1	2
	K4 (10)		1	2
	Total	50	8	16

Project: 50 marks (Demonstration and Viva)

*Equal Weightage to be given to all units

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

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SYLLABUS

(Effective from the academic year 2023–2024)

E-COMMERCE AND CONTENT MANAGEMENT SYSTEMS

CODE:23CS/PE/EC23

CREDITS: 3

L T P: 2 0 1

TOTAL TEACHING HOURS: 39

OBJECTIVE OF THE COURSE

- To understand overall framework of E-Commerce and the role of internet in modern business
- To learn the strategies for developing electronic commerce Web sites, various payment schemes and security issues in E-Commerce
- To provide hands-on experience in the implementation of E-Commerce using an open source software

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explain the e-commerce framework and role of internet in modern business	K1, K2
CO2	apply appropriate strategies to develop an e-commerce website with payment systems	K3
CO3	analyse security and search engine optimization	K4
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse		

UNIT	CONTENT	CL	HRS	CO
1	1.1 Introduction E-Commerce - History, Overview of the Framework - E-Business Models – Network – Infrastructure - Role of Internet - E-commerce and World Wide Web 1.2 Planning for Electronic Commerce Identifying Benefits and Estimating Costs of Electronic Commerce Initiatives - Strategies for Developing Electronic Commerce Web Sites - Managing Electronic Commerce Implementations	K1-K2	8	1-2

UNIT	CONTENT	CL	HRS	CO
2	2.1 Introduction to WordPress Discovering WordPress – Installing WordPress 2.2 Getting Used to the WordPress Environment An overview of the Dashboard – WordPress Settings – RSS feeds – User Profile	K1-K4	8	1-3
3	3.1 WordPress's Site Building Tools and Pages Using WordPress's Site Building Tools – Appearance menu – Plugins – Media Library - Pages v Posts – Writing Posts – Internal linking of posts – Homepage of the Site - Custom Menus – User Management – Themes – Widgets – Configure WordPress as a CMS	K1-K4	8	1-3
4	4.1 Implementing eCommerce with Easycart Implementing eCommerce with Easycart - Understanding Easycart - Obtaining and Installing Easycart - Configuring Easycart - Managing Cart settings, Checkout Settings, Order settings, Price Handler settings, Product settings, Store settings – Store Administration - Enhancing Easycart	K1-K4	8	1-3
5	5.1 Electronic Payment Systems Digital Token based EPS – Smart cards – Credit cards – Risks – Designing EPS 5.2 Electronic Commerce Security and SEO Online Security Issues Overview - Security for Client Computers – Communication Channel Security – Security for Server Computers – Main points for safe SEO – WordPress SEO	K1-K4	7	1-3

BOOKS FOR STUDY

Kalakota ,Ravi and Andrew B Whinston. Frontiers of E-COMMERCE. Pearson. 2011.
Lonmo, Dennis. Master WordPress Like A Boss: A Beginners Guide to Planning, Designing, and Creating Your Very Own Unique WordPress Website. 2018.
Schneider, Gary P. Electronic commerce. Cengage Learning, Inc; 11th edition. 2014.
Williams, Brad, David Damstra, and Hal Stern. Professional WordPress: design and development. John Wiley & Sons, 2015

BOOKS FOR REFERENCE

Laudon, Kenneth C; Traver, Carol Guercio E-Commerce: Business, Technology, Society. 10th ed, Prentice Hall, 2013
Plumley, George. WordPress 24-hour trainer. John Wiley & Sons, 2015.
Williams, Andy. Wordpress for beginners, A visual step-by-step guide to creating your own wordpress site in record time, starting from zero. Amazon Asia-Pacific Holdings Private Limited

WEB RESOURCES

<https://wordpress.org/download/>

<https://www.oracle.com/in/content-management/what-is-cms/>

https://onlinecourses.swayam2.ac.in/aic20_sp07/preview

PATTERN OF ASSESSMENT

Continuous Assessment Test:

Theory :

Total Marks: 25

Duration: 45 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$3 \times 5 = 15$	1	2
	K2 (5)		1	2
	K4 (5)		1	2
B (Internal Choice)	K3 (10)	$1 \times 10 = 10$	1	2
	Total	25	4	8

Practical :

Total Marks: 25

Duration: 45 minutes

Knowledge Level	Marks
K3	15
K4	10
Total	25

Other Components:

Total Marks: 50

Assignment, seminar, quiz, open book test, group discussion

Two to three components will be prescribed

End Semester Examination:

Theory:

Total Marks: 50

Duration: 90 minutes

Section	Cognitive Level and Allocation of Marks	Marks per Section	No. of Questions to be answered	No. of Questions to be set
A (Internal Choice)	K1 (5)	$6 \times 5 = 30$	1	2
	K2 (5)		1	2
	K3 (10)		2	4
	K4 (10)		2	4
B (Internal Choice)	K3 (10)	$2 \times 10 = 20$	1	2
	K4 (10)		1	2
	Total	50	8	16

Project: 50 marks (Demonstration and Viva)

*Equal weightage to be given to all units

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023–2024)

DIGITAL FORENSICS

CODE:23CS/PI/DF24

CREDITS: 4

OBJECTIVES OF THE COURSE

- To introduce fundamentals of digital forensics
- To study technical knowledge required to investigate, detect and prevent digital crimes
- To gain knowledge on digital forensics legislations, digital crime, forensics processes, procedures, e-discovery tools and e-evidence collection
- To provide preservation, investigating operating systems and file systems, network forensics and art of steganography
- To provide a study of mobile forensics

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- recall relevant legislation and codes of ethics
- investigate computer forensics, digital detective, processes, policies, procedures, data acquisition and validation, e-discovery tools
- apply the principles of email, web and network forensics to handle real life problems
- analyze e-discovery, guidelines and standards, e-evidence, tools and environment
- demonstrate IT acts and mobile forensics techniques

Unit 1

1.1 Digital Forensics Science

Forensics science, computer forensics, and digital forensics. Computer Crime - Criminalistics as it relates to the investigative process, analysis of cyber-criminalistics area, challenges faced by digital forensics

Unit 2

2.1 Cyber Crime Scene Analysis

Identifying digital evidence, collecting evidence in private-sector incident scenes, processing law enforcement crime scenes, preparing for a search, securing a computer incident or crime scene, seizing digital evidence at the scene

Unit 3

3.1 Evidence Management & Presentation

Create and manage shared folders using operating system, importance of the forensic mindset, define the workload of law enforcement, Types of Evidence, define who should be notified of a crime, parts of gathering evidence

Unit 4

4.1 Computer Forensics

Preparing a computer case investigation, Procedures for corporate hi-tech investigations, conducting an investigation, Complete and critiquing the case

4.2 Network Forensics

Overview of network forensics, open-source security tools for network forensic analysis

Unit 5

5.1 Mobile Forensics

Mobile forensics techniques, mobile forensics tools, recent trends in mobile forensic technique and methods to search and seizure electronic evidence. Legal Aspects of Digital Forensics: IT Act 2000, amendment of IT Act 2008

BOOKS FOR STUDY

B. Nelson, A. Phillips, and C. Steuart, Guide to Computer Forensics and Investigations, 4th Edition, Course Technology, 2010

BOOKS FOR REFERENCE

Sammons, John. The Basics of Digital Forensics, 2nd Edition, Elsevier, 2014

Vacca, John. Computer Forensics: Computer Crime Scene Investigation, 2nd Edition, Laxmi Publications, 2005.

WEB RESOURCES

<https://www.eccouncil.org/cybersecurity/what-is-digital-forensics/>

<https://www.open.edu/openlearn/science-maths-technology/digital-forensics/content-section-0?active-tab=description-tab>

<https://nij.ojp.gov/digital-evidence-and-forensics>

https://onlinecourses.swayam2.ac.in/cec20_1b06/preview

PATTERN OF ASSESSMENT

End Semester Examination: Total Marks: 100

Duration: 3 Hours

Section A - 10 x 2 = 20 marks (Answer all the questions)
(2 questions to be set from each unit)

Section B - 6 x 5 = 30 marks (6 out of 8)
(Atleast 1 question from each unit)

Section C - 5 x 10 = 50 marks (5 out of 7)
(Atleast 1 question from each unit)

*Equal weightage to be given to all Units

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SYLLABUS

(Effective from the academic year 2023–2024)

DIGITAL IMAGE PROCESSING

CODE: 23CS/PI/IP24

CREDITS: 4

OBJECTIVES OF THE COURSE

- To understand the fundamentals of digital image processing
- To know the techniques for transformation, enhancement, restoration and compression of images
- To learn segmentation and reconstruction of images

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION
CO1	analyze the fundamentals in image processing
CO2	implement strategies for various spatial and frequency domain techniques available
CO3	apply noise model available for image restoration
CO4	utilize concepts to reduce the image size by compression techniques.
CO5	compare image segmentation and reconstruction

Unit 1

1.1 Fundamentals of Digital image

Introduction – Origin – Steps in Digital Image Processing – Components –
Elements of Visual Perception – Image Sensing and Acquisition – Image Sampling
and Quantization – Relationships between pixels

Unit 2

2.1 Spatial Domain

Gray level transformations – Histogram processing – Basics of Spatial Filtering–
Smoothing and Sharpening Spatial Filtering

2.2 Frequency Domain

Introduction to Fourier Transform – Smoothing and Sharpening frequency domain
filters – Ideal, Butterworth and Gaussian filters

Unit 3

3.1 Image Restoration

Noise models – Mean Filters – Order Statistics – Adaptive filters – Band reject Filters –
Band pass Filters – Notch Filters – Optimum Notch Filtering – Inverse Filtering –
Wiener filtering

Unit 4

4.1 Image Compression

Fundamentals – Image Compression models – Error Free Compression – Variable
Length Coding – Bit-Plane Coding – Lossless Predictive Coding – Lossy Compression
– Lossy Predictive Coding – Wavelet Coding

Unit 5

5.1 Image Segmentation

Detection of isolated points – Line Detection – Edge Models – Basic Edge Detection

5.2 Image Reconstruction

Principles of Computed Tomography (CT) - Projections and the Radon Transform -
The Fourier-Slice Theorem - Reconstruction Using Parallel-Beam Filtered Back
projections

BOOKS FOR STUDY

Rafael C. Gonzales, Richard E. Woods, “Digital Image Processing”, Pearson Education, Third Edition, 2010.

BOOKS FOR REFERENCE

Anil Jain K. “Fundamentals of Digital Image Processing”, PHI Learning Pvt. Ltd., 2011.
Jayaraman S., Esaki Rajan S., T.Veera Kumar, “Digital Image Processing”, Tata McGraw Hill Pvt. Ltd., Second Reprint, 2010.

WEB RESOURCES

<http://eeweb.poly.edu/~onur/lectures/lectures.html>

<http://www.caen.uiowa.edu/~dip/LECTURE/lecture.html>

PATTERN OF ASSESSMENT:

End Semester Examination: Total Marks: 100

Duration: 3 Hours

Section A - $10 \times 2 = 20$ marks (Answer all the questions)
(2 questions to be set from each unit)

Section B - $6 \times 5 = 30$ marks (6 out of 8)
(Atleast 1 question from each unit)

Section C - $5 \times 10 = 50$ marks (5 out of 7)
(Atleast 1 question from each unit)

*Equal weightage to be given to all Units



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

M.A. Degree
HUMAN RESOURCE MANAGEMENT
(CHOICE BASED CREDIT SYSTEM)

OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED CURRICULUM
FRAMEWORK (LOCF)

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

POSTGRADUATE PROGRAMME OUTCOMES (POS)

On successful completion of the Programme, postgraduates will

PO 1	acquire in-depth and advanced knowledge in their chosen field of study, encompassing relevant theories, concepts, methodologies, and research findings.
PO 2	demonstrate competency in research and writing, with intellectual independence for critical enquiry/scientific reasoning, problem solving and innovative thinking.
PO 3	synthesise their domain knowledge with that of other relevant disciplines, to meet the challenges of higher studies/academia/work, in local and global contexts.
PO 4	display proficiency in communication and academic writing for coherent, contextual and independent exposition of knowledge and ideas.
PO 5	demonstrate enhanced professional and entrepreneurial skills, and the ability for life-long learning.
PO 6	use relevant digital/technological skills, and display leadership traits and creativity to contribute individually or collaboratively in local, national and global contexts.
PO 7	engage sensitively with a range of socio-cultural and ethical issues, and use their disciplinary knowledge in contributing to environmental causes and sustainable development.
PO 8	display self-awareness, attitudes of inclusivity, and effectively engage in a multicultural society with respect for democracy, peace and diversity.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

DEPARTMENT OF HUMAN RESOURCE MANAGEMENT

PROGRAMME DESCRIPTION

Graduates of the HRM programme will be equipped to comprehend the importance of employee relations and HR-related issues. This course aims at providing a broad spectrum of classroom and experiential learning and offers opportunity to every individual candidate to find their latent talent to explore and initiate innovative projects. Students will engage in events and discuss current HR trends with practitioners, faculty and guest speakers. Students will be encouraged to enroll in professional bodies like MMA, ISTD, NHRD etc. The programme envisages to create conceptually strong, personally empowered and professionally successful women leaders across a wide spectrum of industries and sectors including, IT/ITeS, banking and finance, telecom, manufacturing, public sector, pharmaceutical, retail and management consultancy.

VISION OF THE DEPARTMENT

To develop professionals with knowledge, skills and attitude to create and manage human resource effectively

MISSION OF THE DEPARTMENT

- To deliver Holistic understanding of strategic human resource management at global and local level
- To comprehend the significance of legislations in HRM
- To provide hands-on exposure in the fields of HRM
- To develop teamwork, interpersonal communication and project management skills
- To improve problem solving, strategic thinking and case analysis skills
- To train students with best attitude to respect individual with dignity and positivity

PROGRAMME SPECIFIC LEARNING OUTCOME (PSO's)

On successful completion of the M.A. Human Resource Management Programme, the students will be able to

PSO1	Demonstrate advanced knowledge of theories, concepts, and practices in the field of human resource management
PSO2	Build HR competencies to analytically and critically think to address complex HRM challenges and make informed decisions.
PSO3	Lead and manage organizational change processes to engage people from diverse cultures combating social and economic progress.
PSO4	Implement HR functions in practical business environment facing organisational, national and global challenges
PSO5	Design and evaluate HR policies, procedures and practices that comply with legal and ethical standards

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

DISTRIBUTION OF CREDITS AND HOURS

M.A. Human Resource Management 2023-2024

Courses	Semester 1		Semester 2		Semester 3		Semester 4		Total Credits	Total Hours
	C	H	C	H	C	H	C	H		
PC	4	5	4	5	4	5	4	5	16	20
	4	5	4	5	4	5	4	5	16	20
	4	5	4	5	4	5	4	5	16	20
	4	5	4	5					8	10
Dissertation							7	9	7	9
PE-dept.	5	5			5	5	5	5	15	15
PE-Common			3	3	3	3			6	6
PV			2	2	2	2			4	4
PK			2	2					2	2
PA	2	2							2	2
PN					2				2	0
Library		3		3		5		1	0	12
TOTAL	23	30	23	30	24	30	24	30	94	120

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
SEMESTER-I									
23HR/PC/HM14	Human Resource Management	4	4	1	0	3	50	50	100
23HR/PC/OB14	Organisational Behaviour	4	4	1	0	3	50	50	100
23HR/PC/FC14	Financial Concepts	4	4	1	0	3	50	50	100
23HR/PC/LL14	Labour Legislations	4	4	1	0	3	50	50	100
	PA/PL								
	Department Elective I								
SEMESTER-II									
23HR/PC/HD24	Human Resource Development	4	4	1	0	3	50	50	100
23HR/PC/OM24	Organisational Management	4	4	1	0	3	50	50	100
23HR/PC/RS24	Research and Statistics	4	4	1	0	3	50	50	100
23HR/PC/DM24	Diversity Management	4	4	1	0	3	50	50	100
23HR/PK/SS22	Soft Skills	2	2	0	0	-	50	-	100
CD / ET	Value Education								
	Common Elective I								
SEMESTER-III									
23HR/PC/EW34	Employee Welfare and Industrial Relations	4	4	1	0	3	50	50	100
23HR/PC/CM34	Compensation Management and Social Security	4	4	1	0	3	50	50	100
23HR/PC/SM34	Strategic Human Resource Management	4	4	1	0	3	50	50	100
23HR/PN/SI32	Summer Internship	2	0	0	0	-	50	-	100
CD / ET	Value Education								
	Department Elective II								
	Common Elective II								
SEMESTER-IV									
23HR/PC/GM44	Global Human Resource Management	4	4	1	0	3	50	50	100
23HR/PC/HA44	HR Analytics	4	4	1	0	3	50	50	100
23HR/PC/MC44	Managerial Counselling	4	4	1	0	3	50	50	100
23HR/PC/DS47	Dissertation	7	0	0	9	-	-	100	100
	Department Elective III								
Postgraduate Elective Courses Offered to Parent Department									
23HR/PE/PA15	Performance Appraisal	5	5	0	0	3	50	50	100
23HR/PE/WW15	Women and Workspace	5	5	0	0	3	50	50	100
23HR/PE/ED15	Entrepreneurship Development	5	5	0	0	3	50	50	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
23HR/PE/TQ15	Total Quality Management	5	5	0	0	3	50	50	100
23HR/PE/MI15	Managing Interpersonal Effectiveness	5	5	0	0	3	50	50	100
23HR/PE/LD15	Learning and Development	5	5	0	0	3	50	50	100
Postgraduate Elective Courses Offered to Other Departments									
23HR/PE/MD23	Management of Development Organisations	3	3	0	0	3	50	50	100
23HR/PE/IC23	Indian Constitution and Labour Welfare	3	3	0	0	3	50	50	100
23HR/PE/DO23	Designing Organisations for Innovations	3	3	0	0	3	50	50	100
The Department will offer one Social Awareness / Service Learning Course									
Social Awareness Courses									
23HR/PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100
23HR/PA/CR12	Child Rights	2	2	0	0	-	50	-	100
23HR/PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100
23HR/PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100
23HR/PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100
23HR/PA/RR12	Rural Realities	2	2	0	0	-	50	-	100
23HR/PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100
23HR/PA/UR12	Urban Realities	2	2	0	0	-	50	-	100
23HR/PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100
Independent Elective Courses									
23HR/PI/QR24	Qualitative Research	4	0	0	0	-	-	100	100
23HR/PI/PO24	Psychology and Structure of Organisation	4	0	0	0	-	-	100	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

HUMAN RESOURCE MANAGEMENT

CODE:23HR/PC/HM14

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To acquire knowledge on the procedure and policies in managing human resources
- To provide an understanding of the importance of human resource planning
- To identify various training and performance methods for effective functioning of the organisation
- To analyse compensation package and benefits to motivate and retain employees
- To comprehend the concept of HR Audit and Industrial Relation for contemporary development of the organisation

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	recall and translate the knowledge on HR concepts to explain its relevance in organisation.	K1,K2
CO2	apply the methods and concepts for effective HR planning.	K3
CO3	illustrate training programs to enhance employee skills and performance.	K4
CO4	examine approaches to motivate diverse workforce for personnel and organisational growth.	K5
CO5	formulate innovative practices and strategies for cordial industrial relations.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction		2	1-5
	1.1 Introduction of Human Resources Management: Definition, Importance of Human Resources.	K1,K2		
	1.2 Objectives of Human Resources Management, Qualities of a good personnel managers	K1,K2	3	
	1.3 Evolution and growth of Personnel Management in India	K3,K4	4	
	1.4 Human Resource Policies: Need, type and scope and Advantages	K5,K6	1	
2	Human Resource Planning		4	1-5
	2.1 Human Resources Planning: Significance and Objectives of Human Resource Management Long and Short-term planning, Job Analysis, Skills inventory, Job Description and Job Specification	K1-K4		
	2.2 Recruitment and selection: Purposes, types and methods of recruitment, Relative merits and demerits of the different methods	K1-K6	3	
	2.3 Selection - Purposes, process and types of test	K1-K6	2	
	2.4 Functions and Scope of Human Resource Management from Procurement to Separation: Placement, Induction, Transfer, Promotions, Disciplinary actions, Termination	K1-K6	2	
	2.5 Services: Resignation, Dismissal, Retrenchment and Voluntary Retirement Schemes, Exit Interviews, Prevention of employee turnover	K1-K6	2	
3	Developing Human Resource	K1-K3	1	1-5
	3.1 Orientation and Placement			
	3.2 Training: Importance, Need & Types, Training Methods- On-the Job, Off- the Job	K1-K6	4	
	3.3 Training: Methods of Executive Development Programs	K1-K6	4	
	3.4 Performance Appraisal: Concept, Objectives & Methods of Performance Appraisal	K1-K6	4	
4	Motivating and Compensating Human Resource	K1-K6	3	1-5
	4.1 Motivation: Meaning and Importance, Motivation Theories - Vrooms, Porter lawler model			
	4.2 Compensation: Factors to be considered for Determination of Wages and Salaries, Types: Monetary and Non-Monetary	K1-K6	4	
	4.3 Employees Welfare Programmes: Statutory and Non-Statutory welfare	K3-K6	2	

UNIT	CONTENT	CL	Hrs	CO
	4.4 Incentives and Perquisites: Importance and types.	K1-K6	2	
	4.5 Fringe Benefits: Meaning, Need, Objectives and Types.	K1-K5	2	
5	HRM Audit	K1,K2	2	1-5
	5.1 HR Audit: Nature and Scope			
	5.2 Approaches to HR Audit	K3,K4	2	
	5.3 Management of Differences: Grievance Handling: Discipline and Domestic Enquiry	K3-K6	4	
	5.4 Handling of Sexual Harassment in the Work Place	K3-K6	2	
	5.5 Industrial Relations: Current Trends and Issues in HRM and Case Studies.	K1-K6	6	

BOOK FOR STUDY

Prasad, L.M. *Human Resource management* (4th edition): Sultan Chand and Sons, New Delhi, 2020

BOOKS FOR REFERENCE

Aswathappa K. *Human Resource Management- Text and Cases* (8th edition): Tata McGraw-Hill Education, India, 2017

Gupta, C.B. *Human Resource Management*. New Delhi: Sultan Chand, New Delhi, 2014

Raymond A. *Fundamentals of Human Resource Management* (3rd edition): Tata McGraw-Hill Education, India, 2012.

JOURNALS

<https://onlinelibrary.wiley.com/journal/17488583>

<https://www.tandfonline.com/toc/rijh20/current>

WEB RESOURCES

<https://hrwale.com/recruitment/88-2/>

<https://management.org/training/index.htm>

<https://www.peoplehum.com/glossary/incentives>

<https://www.managementstudyguide.com/human-resource-planning.htm>

<https://u-next.com/blogs/hr-analytics/a-comprehensive-guide-on-industrial-relations-in-hrm/>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A – 50 words	K1(6) K2(4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B – 600 words	K3(10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C – 600 words(K5)	K5 (10) K6(10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study / Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A – 50 words	K1(10) K2(10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B – 600 words	K3(20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C – 1200 words(K5)	K5 (20) K6(20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/HM14												
I	Course Title: Human Resource Management												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	1	2	3	3	2	2	3	3	3	2	3
CO 2	1	3	2	2	3	3	2	3	3	3	2	2	3
CO 3	1	2	3	3	2	1	3	3	3	3	3	2	3
CO 4	2	2	3	1	2	3	1	3	2	3	3	3	3
CO 5	1	3	3	2	3	2	3	2	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

ORGANISATIONAL BEHAVIOUR

CODE:23HR/PC/OB14

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To provide an overview of the major challenges and paradigm shift facing management
- To understand the individual and group behaviour on the effective functioning of an organization
- To gain an insight into the organizational culture and climate and the approaches in managing organizational change.
- To compare and contrast various motivation theories
- To design a successful leadership model for the organization

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explain various organisation models to plan innovative strategies in organisation.	K1
CO2	summarize the significance of individual and group behaviour in an organization.	K2
CO3	develop frameworks to effectively resolve conflicts, develop organizational culture and climate in creating a diverse environment.	K3,K4
CO4	examine the motivation theories in fostering organisation development.	K5
CO5	implement appropriate leadership theories and styles to combat in dynamic work environment.	K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction		2	1-5
	1.1 Fundamental Concepts: Nature of People, Nature of Organisation, Organisation Behaviour.	K1,K2		
	1.2 Models of Organisational Behaviour: Autocratic, Custodial, Supportive, Collegial.	K3-K6	3	
	1.3 Nature, Importance and Scope of Behaviour of Workforce in an Organisation.	K1-K4	3	
	1.4 Basic Concepts and New Challenges in Managing WorkForce.	K1-K6	3	
	1.5 Challenges and Opportunities to OB: Responding to Globalisation, Managing Workforce Diversity.	K1-K3	2	
2	Foundation of Individual and Group Behaviour		2	1-5
	2.1 Individual Behaviour: Environmental Factors Affecting Individual Behaviour.	K1-K3		
	2.2 Personality: Definition, Personality Traits, Types	K1-K4	3	
	2.3 Perception: Meaning and Definition, Factors Influencing Perception.	K1-K4	3	
	2.4 Group Behaviour, Nature of Work Groups, Group Cohesiveness, Group Performance and Group Norms, Stages of Group Development.	K1-K4	2	
	2.5 Formal Groups and Informal Groups in Organisation.	K3-K6	3	
3	Dynamics of Organizational Behaviour		3	1-5
	3.1 Foundations of Organizational Structure: Work Specialization, Departmentalization, Chain of Command, Span of Control, Centralization and Decentralization.	K1-K4		
	3.2 Organizational Culture and Climate: Importance of understanding Organisational Culture and Climate, Creating and Sustaining Culture, Factors affecting Organisational Culture and Climate.	K1-K6	4	
	3.3 Organizational Change: Stability Vs Change, Proactive Vs Reactive Change, Forces Vs Resistance, Managing Change.	K1-K2	2	
	3.4 Stress: Nature of Stress, Causes and Consequences of Stress, Managing Stress in Workplace Group Dynamics.	K1-K6	4	
4	Motivations in Organisations	K1-K5	3	
	4.1 Moods, Emotions and Emotional Intelligence: Importance and Components.			

UNIT	CONTENT	CL	Hrs	CO
	4.2 Attitudes and Values: Attitude-Behaviour Relationship, Sources of Attitude, Work related Attitudes.	K1-K5	3	1-5
	4.3 Motivation: Maslow's Need Hierarchy, Herzberg's Two Factor Theory and ERG Theory, McClelland, Reinforcement Theory and Vroom's Expectancy Theory	K1-K6	4	
	4.4 Techniques of motivation, Reinforcement and Punishment, Motivation and Organization reward system, Awards, Employee Empowerment and Engagement.	K1-K4	3	
5	Leadership in Organisation		2	1-5
	5.1 Leadership: Importance and Skills of Leadership	K1-K2		
	5.2 Power and Politics: Sources of Power, Political Behaviour in Organisations, Managing Politics	K1-K4	2	
	5.3 Leadership Styles: Autocratic, Democratic, Laissez-faire, Transformational, transactional	K1-K6	3	
	5.4 Leadership Theories: Behavioural and Contingency theories	K1-K6	3	
	5.5 Conflict and Negotiation: Sources and Types of Conflict, Negotiation Strategies and Negotiation Process	K1-K6	3	

BOOK FOR STUDY

Stephen P. Robbins, Timothy A. Judge "Essentials of Organizational Behavior" Pearson Publication, New Delhi, 2019

Luthans, Fred. 'Organizational Behaviour' McGraw Hill Education(12th Edition), Singapore, 2010.

BOOKS FOR REFERENCE

Steven L. Mc Shane , Mary Ann Von Glinow , Himanshu Rai "Organizational Behavior" McGraw Hill Publication, Standard Edition, Noida, India, 2022

Sharma, S., Organisational Behaviour, Tata McGraw-Hill Education, New Delhi, 2012

Aswathappa, K. Organizational Behaviour. Himalaya Publishing House, Twelfth Revised Edition, New Delhi, 2016.

John W. Newstrom , Keith Davis , Organisational Behaviour, Tata Mc graw -Hill(10th Edition), New Delhi, 2001

JOURNALS

<https://onlinelibrary.wiley.com/journal/10991379>

<https://www.tandfonline.com/toc/worg20/current>

WEB RESOURCES

<https://ob.aom.org/home>

<https://www.open.edu/openlearn/money-management>

<https://openstax.org/details/books/organizational-behavior>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A – 50 words	K1(6) K2(4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B – 600 words	K3(10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	3 K3 question 2 K4 question
C – 600 words(K5)	K5 (10) K6(10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study / Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A – 50 words	K1(10) K2(10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B – 600 words	K3(20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C – 1200 words(K5)	K5 (20) K6(20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/OB14												
I	Course Title: Organisational Behaviour												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	2	1	2	1	3	3	3	2	2
CO 2	1	2	2	1	2	3	3	3	3	3	3	2	3
CO 3	2	2	2	1	2	3	3	3	3	3	3	3	3
CO 4	2	1	2	2	2	1	3	3	3	3	3	3	3
CO 5	2	3	3	2	3	3	2	1	3	3	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

FINANCIAL CONCEPTS

CODE:23HR/PC/FC14

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To familiarize basic financial concepts to ensure optimum funds utilization
- To understand the banking concepts and gain insight into various bank accounts
- To focus on the application of electronic money for ease of transactions
- To analyse and interpret the various investment plans for managerial discussion making
- To design an effective portfolio for insurance and taxation

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the meaning, significance and scope of financial concepts in an entity	K1,K2
CO2	apply financial concepts to maximise the wealth and profit of the shareholders in combating social and economic progress	K3
CO3	classify various bank accounts and e-transaction procedures to act professionally	K4
CO4	evaluate time value of money, insurance and tax planning to stimulate learning opportunities for effective financial and managerial planning.	K5
CO5	design managerial approaches which are concerned with planning and controlling of the firm's financial resources.	K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO	
1	Basic Financial Concepts				
	1.1 Meaning of Finance, Money, Income, Expenditure, Savings	K1,K2	2	1-5	
	1.2 Terms- Accounts, Book-Keeping,Transactions, Journal and Ledger	K1-K6	3		
1.3 Introduction to Trading, Profit and Loss Account and Balance Sheet (Basic sums included)	K1-K6	8			
2	Banking	K1,K2		1-5	
	2.1 Banking Terms: Deposit, Clearing, Credit, Debit, Passbook, Tenure, Maturity		2		
	2.2 Types of Accounts:	K3-K6			6
	2.2.1 Savings Bank Account-Facilities.				
	2.2.2 Fixed Deposit Account-Meaning, Features and Method of Operation.				
2.2.3 Recurring Deposit Account-Meaning, Features and Method of Operation.					
2.3 Crossing of Cheque	K3-K5	2			
2.4 Demand Draft- Meaning, Procedure for getting Payment and Receipt through Banks	K1-K5	2			
3	Electronic Money			1-5	
	3.1 Net Banking, Online Payments, Credit Cards and Debit Cards - Usage, Cash Withdrawals, Mobile Money	K1-K5	4		
	3.2 Basics of Crypto currency - Public/private keys, transactions, mining.	K1-K4	5		
	3.3 Bitcoin in practice – Bitcoin, online wallets, sending/receiving, paper wallets/cold storage.	K3-K6	4		
4	Loans and Investments	K1-K4		1-5	
	4.1 Loans: Meaning, Importance, Needs and Types.		2		
	4.2 Repayment: Meaning and Methods.	K1-K6	3		
	4.3 Investment Common Terms- Stock, Shares/ Stock/ Equity, SENSEX, NIFTY, Dividends, IPO, DEMAT Account, Investing through Mutual Funds, Stocks	K1-K6	6		
5	Time Value of Money and Insurance			1-5	
	5.1 Time Value of Money: Meaning and Importance, Compounding, Power of Compounding, Interest (Basic Sums)	K1-K6	6		
	5.2 Insurance – Common Terms: Insurer, Insured, Risk, Premium, Sum Assured, Sum Insured, Claim, Insurance Policy, Types of Insurance- Working of Insurance.	K1-K5	3		

UNIT	CONTENT	CL	Hrs	CO
	5.3 Taxation- Meaning and Importance, Types of tax – Direct, Indirect, GST, Method of Collection/ Payment, Terms – PAN, TDS, Returns, Rights and Obligation of Tax Payer.	K1-K5	4	
	5.4 Demonitization – Basic Concepts and Need	K1-K3	2	

BOOK FOR STUDY

Prof D.K. Chatterjee Basic Accounts & Finance for Non-Accountants, Himalaya Publishing House, 4th edition, Maharashtra, 2011.

BOOKS FOR REFERENCE

Antony Lewis, The Basics of Bitcoins and Blockchains: An Introduction to Cryptocurrencies and the Technology that Powers Them, Mango Publication, Florida, 2018

Wayne Label, Accounting for Non-Accountants: Financial Accounting Made Simple for Beginners, Source Books, Illinois, 2013

J.Fred Weston & Samuel Weaver, Finance and Accounting for Non financial Managers, McGraw-Hill publication, India, 2001

WEB RESOURCES

<https://financialservices.gov.in/>

https://doe.gov.in/ecoffee_table_book/index.html

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A – 50 words	K1(6) K2(4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B – 600 words	K3(10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	4 K3 question 2 K4 question
C – 600 words(K5)	K5 (10) K6(10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study, Sums)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A – 50 words	K1(10) K2(10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B – 600 words	K3(20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C – 1200 words(K5)	K5 (20) K6(20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study, Sums)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/FC14												
I	Course Title: Financial Concepts												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	2	1	2	1	2	3	3	3	2
CO 2	2	3	2	2	3	1	2	1	3	3	3	2	2
CO 3	2	2	2	2	2	1	3	3	2	2	3	3	3
CO 4	2	2	2	2	3	2	3	1	2	3	3	3	3
CO 5	2	2	1	3	3	3	2	1	3	3	3	2	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT SYLLABUS

(Effective from the academic year 2023-2024)

LABOUR LEGISLATIONS

CODE:23HR/PC/LL14

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To gain insight on the constitution and its relevance to labour legislations.
- To discuss the fundamentals of labour legislations.
- To create awareness on various protective labour laws.
- To apply policies and procedures for addressing industrial disputes.
- To implement laws related to employees compensation and benefits for social security.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	state the development and the judicial setup of labour laws to work independently as a hr professional.	K1
CO2	demonstrate the laws related to protective, regulatory and working conditions in different settings.	K2
CO3	calculate and infer essential hr metrics like working hours, wages, gratuity, pf, esi and compensatory benefits.	K3,K4
CO4	recommend various grievance handling measures as per statutory compliance.	K5
CO5	construct schemes related to employee social security and stimulate growth opportunities.	K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Indian Constitution		2	1-5
	1.1 Labour Legislation: Concepts, Need, Principles.	K1,K2		
	1.2 History of Labour Legislations	K3,K4	1	
	1.3 Indian Constitution: Fundamental Rights – Article 16,19,23,24	K1-K6	5	
	1.4 Directive Principles of State Policy- Article 38,39,41,42,43,43A,47,48	K1-K6	5	
2	Fundamentals of Labour Legislation		3	1-5
	2.1 Social Security, Social Insurance, Social Assistance Schemes, Social Security Legislation.	K1,K2		
	2.2 Codes of Labour Legislations in India	K1-K4	5	
	2.3 International Labour Organisation (ILO) – Meaning, Aim, Principles, Structure and Functions	K1-K6	5	
3	Protective Labour Legislation: Introduction, Overview, Amendments	K1-K6	6	1-5
	3.1 Factories Act,1948			
	3.2 Employee Provident Fund Act, 1952	K1-K6	4	
	3.3 Sexual Harassment of Women at Workplace Act, 2013	K1-K6	3	
4	Regulative Labour Legislation: Introduction, Overview, Amendments	K1-K6	5	1-5
	4.1 Industrial Employment (StandingOrders) Act, 1946			
	4.2 The Contract Labour (RegulationandAbolition) Act,1970	K1-K6	3	
	4.3 Industrial dispute Act,1947	K1-K6	5	
5	Employees Security: Introduction, Overview, Amendments	K1-K6	4	1-5
	5.1 The Employees’s Compensation Act,1923			
	5.2 The Employees State Insurance Act,1948	K1-K6	3	
	5.3 The Maternity Benefit Act, 1961	K1-K6	3	
	5.4 Payment of Gratuity Act,1972	K1-K6	3	

BOOK FOR STUDY:

Ram Chandrashekharan, Constitutional Government and Democracy in India, Academic Aspiration, New Delhi, 2021

N.D Kapoor, Elements of Industrial Law, Sultan Chand & Sons, New Delhi, 2020

BOOKS FOR REFERENCE

Parul Gupta, Industrial Relation and Labour Laws for Managers, Sage Publications India Pvt Ltd, New Delhi, 2019

B Nanadhakumar, Industrial Law, Vijay Nicole imprints Pvt Ltd, Chennai, 2017

JOURNAL

<https://www.ebsco.com/> - *Journal of Legal History*

WEB RESOURCE:

<https://labour.gov.in/labour-law-reforms>

<https://www.indiacode.nic.in>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A – 50 words	K1(6) K2(4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B – 600 words	K3(10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	5 K3 question 2 K4 question
C – 600 words(K5)	K5 (10) K6(10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A – 50 words	K1(10) K2(10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B – 600 words	K3(20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C – 1200 words(K5)	K5 (20) K6(20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/LL14												
I	Course Title: Labour Legislations												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	3	2	1	3	2	3	2	3	2	2
CO 2	2	2	3	3	3	2	2	1	3	3	3	2	3
CO 3	2	2	1	2	1	2	3	3	3	3	3	2	2
CO 4	2	2	1	2	2	3	3	3	3	3	3	3	3
CO 5	2	1	2	1	3	3	3	3	3	3	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

HUMAN RESOURCE DEVELOPMENT

CODE:23HR/PC/HD24

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To enlighten the students on the importance HRD principles and approaches
- To know and understand the HR metrics and measurements
- To familiarize with the pedagogy for training and development
- To enable students to understand the training evaluation and development methods
- To provide insight on ethical issues and employee empowerment

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	gain knowledge about human resource development principles and practices	K1
CO2	apply the HR metrics and measurements in the functions of Human Resource	K2
CO3	build the skills to efficiently develop the human resources in different sectors	K3
CO4	evaluate various strategies to empower employees	K4
CO5	design effective training action plans	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction	K1-K3	2	1-5
	1.1 Concept, Objectives, Approaches & Principles – Systems & strategies in HRD			
	1.2 HRD Interventions: Organizational Goal setting process - Key Result Areas (KRA) and Key Performance Indicators (KPI)	K1-K4	3	
	1.3 HRD Process Model	K2-K6	3	
	1.4 Learning Objects, Methods of learning, learning theories	K3-K6	5	
2	Approaches to Measuring Human Resources	K1-K6	3	1-5
	2.1 Competitive Benchmarking			
	2.2 HR Accounting, HR Auditing	K1-K6	3	
	2.3 HR Effectiveness Index, HR Key Indicators	K3-K6	4	
	2.4 HR Management by Objectives.	K1-K3	3	
3	Talent Development	K1- K6	3	1-5
	3.1 Creating a climate for training Need Analysis at Individual and Organizational level			
	3.2 Principles of training, Need for Training and Development	K3-K6	3	
	3.3 Difference Between Training and Development	K1-K3	1	
	3.4 Fundamental Concepts of Socialization	K3-K6	3	
	3.5 Career Management and Development	K1-K6	3	
4	Methods of Development and Evaluation			1-5
	4.1 Training-Meaning and Methods of Training: On the Job and Off the Job Training	K1-K6	4	
	4.2 Executive Development: Meaning and Methods.	K1-K6	4	
	4.3 Training Aids – Meaning and Significance, Types of Training Aids.	K1-K4	2	
	4.4 Evaluation of Training Program. Kirk Patrick's model- The Cost/Benefit Analysis of training.	K3-K6	3	
5	Ethical issues in HRD and Employee Empowerment	K1-K3	2	1-5
	5.1 Ethics in downsizing			
	5.2 Issues in managing a diverse workplace	K1-K3	2	
	5.3 Breaking the glass ceiling	K1-K4	3	
	5.4 Employee Empowerment - Definition, objectives and types	K1-K6	3	
	5.5 Employee Counseling - Role of Counselors in Organizations, developing Positive Employee	K1-K6	3	

BOOKS FOR STUDY

Prasad, L.M. *Human Resource management* (4th edition). New Delhi, Sultan Chand and Sons, 2020
Jon Werner, M. *Human resource management: Foundation, framework & application*. New Delhi, Cengage learning India Private Limited, 2006
Lynton P Rolf, *Training for Development*. New Delhi, Vistaar, 2005.

BOOKS FOR REFERENCE

Gary Dessler., Biju Varkkey. *Human Resource management* (15th edition). India, Pearson India Education Pvt, Ltd, 2018
Blanchard Nick P., James W. Thacka, *Effective Training, Systems, Strategies & Policies* (2nd edition). New Delhi, Prentice Hall, 2005.
Vohra Munish, *Management Training and Development*. New Delhi, Anmol, 2009

JOURNALS

Journal of Management
International Journal of Human Resource Management

WEB SOURCES

<https://management.org/training/index.htm>
<https://bernardmarr.com/how-to-measure-hr-effectiveness-finding-the-hr-kpis-that-matter-the-most/>.

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (5) K2 (5)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/HD24												
II	Course Title: Human Resource Development												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	2	2	1	2	3	3	2	1	2
CO 2	1	3	2	1	3	3	1	2	2	3	1	3	2
CO 3	2	1	2	2	3	3	2	3	2	3	3	2	1
CO 4	2	2	1	2	3	3	2	3	2	1	3	3	3
CO 5	2	3	1	3	2	3	2	2	1	3	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

ORGANISATIONAL MANAGEMENT

CODE:23HR/PC/OM24

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To understand procedures, structures and policies in managing the organization.
- To acquire knowledge of various functions of organization.
- To understand the delegation and controlling functions of the organization.
- To gain knowledge on organizational development process and interventions
- To familiarize Total Quality Management Tools.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the procedures and policies for effective management of the organization	K1
CO2	exhibit skills to make plan and execute innovative solutions to problems in the fields of HRM	K2
CO3	design appropriate controlling techniques and decision process in the area of HR Management	K3
CO4	critically assess and design organizational interventions to effectively contribute to dynamic organization	K4
CO5	demonstrate competence in utilizing TQM tools to sustain competitive advantage	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Management 1.1 Management: Definition, Concept, Nature, Objectives, Need, Importance of Management.	K1-K3	3	1-5
	1.2 Management Principles: Process/ Functions of management, Management Roles, Levels of Management, Managerial Skills and Challenges of Management	K1-K5	5	
	1.3 Evolution of Management thoughts: Classical Approach, Neo classical Approach, Modern Approach.	K1-K6	5	
2	Management Functions – Planning, Organizing, Decision Making 2.1 Planning: Definition, Features of Planning, Planning process, Types of planning, Forecasting: Definition, Difference between Planning and Forecasting	K1-K4	4	1-5
	2.2 Organizing: Definitions, Need, Principles of Organization, Process of Organization, Types of Organization Structure.	K1-K6	4	
	2.3 Decision Making: Definition, Concepts, Decision Making Environment, Types of Decisions, Decision Making Model, Difficulties in Decision Making.	K1-K6	5	
3	Management Functions - Delegation, Decentralization Vs Centralization, Controlling 3.1 Delegation of Authority: Meaning, Advantages, Barriers to Effective Delegation, Guidelines for Effective Delegation.	K1-K3	4	1-5
	3.2 Decentralization of Authority: Definition, Advantages, Disadvantages, Centralization: Definition, Advantages, Disadvantages.	K1-K4	4	
	3.3 Controlling: Definition, Need, Characteristics, Steps in Controlling Process, Types of Control.	K1-K6	5	
4	Basics of Organisational Development 4.1 Organisational Development: Definitions, Nature, Objectives	K1-K2	3	1-5
	4.2 Characteristics and Importance of Organizational Development	K1-K3	3	
	4.3 The Process of Organizational Development	K3-K5	3	
	4.4 Organisational Development Intervention and Types of Intervention	K1-K6	4	
5	Tools for Management 5.1 Tools for Management and Planning: PERT, CPM	K1-K4	8	1-5
	5.2 Change Management: Meaning, Types and Process of Change	K1-K6	5	

BOOKS FOR STUDY

Koontz, Harold and Heinz Weihrich. *Essentials of Management- An International, Innovation and Leadership Perspective* 10th edition. McGraw Hill Education India Private Ltd, 2018.

Singh, Chandrani and Aditi Khatri. *Principles and Practices of Management and Organisational Behaviour*. Sage Publications India Pvt Ltd, 2021.

BOOK FOR REFERENCE

Gupta, C.B. *Human Resource Management*, Mahamaya Publication, 2009

JOURNALS

Organizational Management Journals

Journals on Management & organization

WEB SOURCE

<https://www.coursera.org/articles/management>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
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Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
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C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/OM24												
II	Course Title: Organisational Management												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	3	2	1	2	2	3	2	3	1	3
CO 2	2	3	2	3	2	3	2	2	1	3	3	2	3
CO 3	2	3	2	1	3	2	1	2	2	3	3	2	3
CO 4	2	3	1	3	2	2	2	3	2	1	3	3	3
CO 5	2	2	2	1	2	3	3	3	2	3	3	1	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

RESEARCH AND STATISTICS

CODE:23HR/PC/RS24

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To understand basic concepts and the framework of research process.
- To familiarize various techniques in designing the sample of the research study
- To gain knowledge in scaling techniques and the data collection methods.
- To provide insights to hypothesis testing and analysis of data
- To provide an exposure to test of significance and scientific way of report writing

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand research process, various research designs and techniques to facilitate managerial decision making	K1
CO2	identify the core research problem and to substantiate the result with collected data	K2
CO3	evaluate literature from a variety of sources pertinent to the objectives of the study	K3,K4
CO4	scientifically substantiate the study undertaken with relevant findings as a report	K5
CO5	apply statistical tools to business and management problems	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Research Methods and Techniques			
	1.1 Meaning, Objectives, Scope, criteria for good Research	K1- K4	3	1-5
	1.2 Types of Research, Research Process: Stages in Research Work, Problem Formulation	K1-K6	4	
	1.3 Defining the research problem	K1-K4	3	
	1.4 Research Design: Need, Features, Types	K1-K6	3	
2	The Sample Design		3	1-5
	2.1 The Need for Samples	K1-K3		
	2.2 Selecting the Sample: Random and Non-Random Methods	K1-K6	4	
	2.3 Designing and Conducting a Sample Study	K1-K3	2	
	2.4 Sampling and Non-Sampling Errors	K1-K3	2	
	2.5 Merits and Demerits of Sampling	K1-K4	2	
3	Measurement, Scaling Techniques and data collection	K1-K3	2	1-5
	3.1 Measurement in Research			
	3.2 Measurement Scales	K1-K6	3	
	3.3 Test of Sound Measurement	K1-K3	2	
	3.4 Types of Scaling Techniques	K3-K6	3	
	3.5 Data collection Methods	K1-K6	3	
4	Process of data and Testing Hypotheses	K1- K6	3	1-5
	4.1 Basic Concepts, Procedure for hypothesis testing			
	4.2 Types of hypothesis: Null, Alternate, Type I and Type II Errors	K1-K6	3	
	4.3 Processing of data: editing, coding, classification and tabulation	K1-K6	3	
	4.4 Methods of correlation and regression	K1-K6	4	
5	Analysis and Report Writing			1-5
	5.1 Test of significance: chi-square, ANOVA-one way, two way	K1- K6	4	
	5.2 Introduction to SPSS –Statistical Tool	K1-K3	3	
	5.3 Interpretation – Need, Techniques	K1-K4	3	
	5.4 Report writing – Significance, Types, Layout.	K1-K6	3	

BOOK FOR STUDY

Kothari C.R., and Garg, Gaurav. *Research Methodology : Methods And Techniques (Multi Colour Edition)*. New Age International Publishers (Fourth Edition), India, 2019.

BOOKS FOR REFERENCE

Napoleon. D., and Sathya Narayanan, Balaji. *Research Methodology- A Theoretical Approach*. Lakshmi Publications, India, 2014.

Vinod, Chandra, and Anand, Hareendran. *Research Methodology*. Pearson, 2017

Gupta, Santhosh. *Research Methodology and Statistical Techniques*. New Delhi, 2003.

Taylor, B. *Research Methodology*. New Delhi: Prentice Hall India, 2007.

JOURNALS

International Journal of Social Research Methodology

International Journal of Methodology

International Journal of Research and Review

WEB SOURCES

<https://www.tandfonline.com>

<https://study.sagepub.com>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/RS24												
II	Course Title: Research and Statistics												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	3	3	1	3	2	2	2	3	3	1	2	2
CO 2	2	2	1	3	2	3	2	2	2	3	1	2	3
CO 3	3	2	3	2	3	2	1	2	2	1	3	3	2
CO 4	2	2	1	2	2	3	1	3	1	2	3	2	3
CO 5	2	2	2	2	1	3	3	3	2	1	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

DIVERSITY MANAGEMENT

CODE:23HR/PC/DM24

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To enlighten the importance of workforce diversity
- To understand the principles of diversity, multiculturalism and social justice in the context of HR practices
- To inculcate individual awareness about the societal and organizational concerns
- To discuss the various techniques and approaches in managing work force diversity
- To facilitate the understanding of the business case and organizational reason for diversity and inclusions

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	deepen the knowledge on best practices and policies for creating more inclusive work environments	K1
CO2	demonstrate professional culture and experiences in organizations to achieve respectful behavior towards a diverse workforce.	K2
CO3	build required managerial styles and strategies to promote understanding of the opportunities related to a diverse workforce	K3
CO4	analyze various issues and concerns related to work across local and global context	K4
CO5	develop critical thinking skills around diversity to advance the ability to create a more inclusive environment.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Workforce Diversity – Overview			
	1.1 Workforce Diversity-Meaning, Features and Significance	K1- K4	3	1-5
	1.2 Dimensions of Workforce Diversity, Advantages and Limitations of having a diverse workforce, Differences between primary and secondary dimensions of diversity	K1-K6	4	
	1.3 Positive and Negative effects of workforce diversity in workplace	K3-K6	2	
	1.4 Types of Diversity Management: Intra-national diversity management Cross-national diversity management	K1-K6	4	
2	Diversity and HRM Functions	K1- K3	3	1-5
	2.1 Steps to Recruit and Retain a Diverse Workforce			
	2.2 Workforce Diversity and HRM Functions: Diversity and Recruitment, Diversity and Supervision, Diversity and Training, Diversity and Compensation, Diversity and Performance Management, Diversity and Work life Balance.	K1-K6	5	
3	2.3 Role of Recruiter in Hiring Diversified Workforce, Workforce Diversity–Key to Organizational Performance, Workforce Diversity as a Determinant of Sustainable Competitive Advantage	K3-K6	5	1-5
	Styles and Strategies	K3- K6	3	
	3.1 Organizational Strategies in Workforce Diversity			
	3.2 Workplace Inclusion strategies through corporate leadership, diversity training, mentoring, employee resource groups, supplier diversity programs, corporate social responsibility initiatives	K1-K6	4	
4	3.3 Characteristics: Voluntary organizational action, Providing tangible benefits, Inclusive and affirmative action	K3-K6	3	1-5
	3.4 Organizational Adaptation – culture, practice, policies, effective communication	K1-K6	3	
	Issues and Concerns	K1- K3	3	
	4.1 Ethical and Legal Issues in Managing Diversity			
	4.2 Best Practices in Achieving Workforce Diversity.	K1-K4	2	
	4.3 Recent Trends of Diversity.	K3-K6	2	
	4.4 Role of Technology in Handling Workforce Diversity.	K1-K6	3	1-5
	4.5 Workforce Diversity Management for Creativity and Innovation.	K1-K6	3	

UNIT	CONTENT	CL	HRS	CO
5	Managing Workforce Diversity	K1- K6	4	1-5
	5.1 Diversity Management Programmes – Concept, Corporate Culture and Diversity at workplace.			
	5.2 Techniques of Managing Work Force Diversity, Approaches to Diversity Management System	K3-K6	4	
	5.3 Flexible work programs, Workplace bullying and Inclusion	K1-K6	5	

BOOKS FOR STUDY

Azhar Kazm., *Business Policy*. New Delhi. Tata Mc Graw Hill, 2008.

Hill, Charles W.L and Gareth R. Jones. *Strategic Management: An Integrated Approach*. New Delhi. Cengage Learning, 2012.

BOOKS FOR REFERENCE

Ghosh, P.K. Strategic Management- Text & Cases. Sultan Chand.

Thomson Strickland. Strategic Management. New Delhi. Tata Mc Graw Hill, 2003.

JOURNALS

International Journal of Business Ethics in Developing Economies

Journal of Diversity Management (JDM)

WEB SOURCES

<https://thriiver.co.uk/managing-diversity-in-the-workplace/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination: Total Marks: 100

Duration: 3 hours

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/DM24												
II	Course Title: Diversity Management												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	3	1	2	2	2	3	1	3	2	2
CO 2	2	2	1	3	3	3	2	2	1	2	3	3	2
CO 3	1	3	2	2	3	2	3	1	2	1	3	2	3
CO 4	2	2	2	2	1	3	3	3	2	2	3	3	1
CO 5	2	3	3	2	3	1	2	2	1	3	2	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

SOFT SKILLS

CODE: 23HR/PK/SS22

CREDITS : 2

L T P : 2 0 0

TOTAL TEACHING HOURS : 26

OBJECTIVES OF THE COURSE

- To empower students and create opportunities for self-development
- To instill confidence in students to face challenges.
- To manage emotions and resolve conflicts.
- To organize activities and manage time.
- To set goals and plan ahead

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION
CO1	communicate with confidence and poise.
CO2	accept themselves and improve on their weaknesses.
CO3	strengthen the relationships through confronting and solving problems.
CO4	demonstrate ms office knowledge in work environment.
CO5	plan the future with clarity and focus.

UNIT	CONTENT	HRS
1	Behavioural Traits	6
	1.1 Self-Awareness	
	1.2 Communication Skills: Verbal and Non-Verbal	
	1.3 Leadership Qualities	
	1.4 Etiquette and Good Manners	
	1.5 Experiential Learning: Based on activities	
2	Team Work	5
	2.1 Interpersonal Skills	
	2.2 People Management.	
	2.3 Creative Thinking.	
	2.4 Critical Thinking	
	2.5 Experiential Learning – Based on activities	

UNIT	CONTENT	HRS
3	Time Management	5
	3.1 Importance of time management	
	3.2 Planning and Prioritizing	
	3.3 Organizing skills	
	3.4 Action Plan	
	3.5 Experiential Learning – Based on activities	
4	MS Office	5
	4.1 MS Word	
	4.2 MS Excel	
	4.3 MS PowerPoint	
	4.4 Experiential Learning – Based on activities	
5	Career Management	5
	5.1 Career Goals and Decision Making	
	5.2 Career Planning	
	5.3 Resume Writing	
	5.4 Handling Interviews	
	5.5 Experiential Learning – Based on activities	

BOOKS FOR REFERENCE

Khera. Shiv. You Can Win. New Delhi: Macmillan India, 2002.
Mishra. Rajiv. K. Personality Development: Transform Yourself. New Delhi: Rupa 2004.
Newstorm, John. W. and Scannell. Edward. E. Games Trainers Play: Experiential Learning.
New Delhi: Tata McGraw Hill, 1980.

PATTERN OF EVALUATION

Internal Assessment: Quiz / Group Presentation /Assignment

No End Semester Examination

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

EMPLOYEE WELFARE AND INDUSTRIAL RELATIONS

CODE: 23HR/PC/EW34

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To enable an understanding of the need for good employment relationship
- To examine the need for efficient employee performances and its impact on organization
- To give an understanding about the different tools used for effective communication in an organization.
- To illustrate the importance of employees as a stakeholder in an organization.
- To equip them with the knowledge to handle different Industrial disputes.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	gain knowledge about employee's behaviour and challenges in their relationship.	K1
CO2	identify employee's personal goals and their contribution as a productive employee to an organization.	K2
CO3	formulate a skill for effective usage of social media platforms and ethical workplace communication	K3
CO4	construct and plan an employee engagement programme	K4
CO5	develop an understanding of the different laws of employment and labour relations	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO	
1	Introduction				
	1.1 Employee Relations – Concepts, Definitions and Need	K1- K3	1	1-5	
	1.2 Approaches: The Systems Model, The Pluralist Approach, Marxist Approach.	K1- K3	3		
	1.3 Employment as a Psychological Contract	K1-K4	4		
1.4 Employee Burnout – Causes, Symptoms and Treatment	K1-K6	5			
2	Employee Welfare				
	2.1 Employee Welfare-Meaning, Objectives,	K1- K3	3	1-5	
	2.2 Types of Employee Welfare - Statutory and Non-Statutory Welfare Measures.	K2-K6	5		
2.3 Labour Welfare Theories.	K3-K6	5			
3	Industrial Relations and Trade Union				
	3.1 Industrial Relations: Meaning, Objectives	K1- K3	1	1-5	
	3.2 Industrial Disputes: Forms of Disputes and Settlement Machineries – Works Committee, Conciliation, Adjudication, Voluntary Arbitration.	K2-K6	5		
3.3 Trade Union: Purpose and Functions, Policies, Recognition and Registration, Affiliation, Membership.	K1- K6	4			
	3.4 Role of ILO in Industrial Relations	K1-K4	3		
4	Collective Bargaining				
	4.1 Collective Bargaining – Meaning, Types, Process and Importance	K1- K6	4	1-5	
	4.2 Suggestions to improve Collective Bargaining.	K3-K6	2		
	4.3 Negotiations - Types of Negotiations, Problem solving attitude, Negotiation skills.	K2-K6	4		
4.4 Exit policy: Voluntary retirements and Golden Handshake	K1-K5	3			
5	Discipline & Grievance Redressal				
	5.1 Discipline: Causes of Indiscipline, Maintenance of discipline, Procedure of taking disciplinary action	K1- K5	5	1-5	
	5.2 Domestic Enquiry: Concept and Practice, Principles of Natural Justice	K1-K5	3		
	5.3 , Principles of Hot stove rule				
5.4 Grievance handling: - Meaning of Grievance, Sources of grievance, Constitution of Grievance committee, Benefits of Grievance system, Grievance Redressal machinery	K2-K6	5			

BOOKS FOR STUDY

Tripathi, P.C. *Personnel Management & Industrial Relations (15th edition)*. New Delhi, Sultan Chand and Sons, 2000

Dessler, Gary and Biju Varkkey. *Human Resource management (15th edition)*. India, Pearson India Education Pvt. Ltd, 2018

BOOKS FOR REFERENCE

Thornton, Gail. *Strategic Employee Communication: Building Culture of Engagement*. USA. Stinger Publishing, 2018.

Ruck, Kevin. *Exploring Internal Communication: Towards Informed Employee Voice*. London. Grower Publishing, 2015

JOURNALS

Indian Journal of Industrial Relations

Journal of Management

International Journal of Human Resource Management

WEB SOURCES

<https://www.britannica.com/money/topic/industrial-relations>

<https://getuplearn.com/blog/employee-welfare/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/EW34												
III	Course Title: Employee Welfare and Industrial Relations												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	1	2	2	3	3	1	2	2
CO 2	2	2	2	3	3	2	2	1	2	3	3	1	2
CO 3	2	3	2	2	3	2	1	2	1	2	3	1	2
CO 4	2	2	1	2	2	3	3	3	1	2	2	3	3
CO 5	2	1	3	2	3	3	2	2	2	2	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

COMPENSATION MANAGEMENT AND SOCIAL SECURITY

CODE:23HR/PC/CM34

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To introduce the basic concepts of Compensation Management.
- To familiarize with various techniques used to fix the compensation structure.
- To learn about refining various incentive schemes.
- To discuss various concepts related to employee benefits.
- To describe the role of various bodies involved in Compensation Management.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	infer procedures and policies in planning compensation for employees	K1, K2
CO2	demonstrate skills to develop compensation structure to retain employee's payroll	K3
CO3	evaluate rational and contemporary compensation systems in organisations.	K4
CO4	develop a fair decision in helping employee to gain benefits.	K5
CO5	formulate approaches to manage legal requirements related to compensation.	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Concepts related to Compensation 1.1 Introduction: Compensation meaning, objectives, nature of compensation, types of compensations, compensation responsibilities.	K1- K6	5	1-5
	1.2 Components of Compensation, Compensation system design issues, Compensation approaches, Individual Vs team rewards	K1-K6	4	
	1.3 Perceptions of pay Fairness, legal constraints on pay systems.	K1-K6	4	
2	Compensation Management 2.1 Managing Compensation: Strategic Compensation planning, Aligning Business strategy and compensation strategy	K1-K3	3	1-5
	2.2 Method of Job evaluation systems, Wage and Salary surveys, the wage curve, pay grades and Broad banding. Factors affecting the wage mix	K1-K6	4	
	2.3 Government regulation on compensation.	K1-K6	4	
	2.4 Compensation Challenges.	K1-K3	2	
3	Variable Pay and Executive Compensation 3.1 Variable Pay: Concept, Types -Individual, Group and Organisational Executive Compensation	K1-K6	4	1-5
	3.2 Individual incentive plans-Piecework, Standard hour plan, Bonuses, Merit Pay	K1-K6	3	
	3.3 Group incentive plans- Team compensation, Gain sharing incentive Plans.	K1-K6	2	
	3.4 Organizational incentive plans-Profit Sharing plans, Stock Options - ESOP, ESPP	K1-K6	2	
	3.5 Executive Compensation and International compensation Management.	K1-K4	2	
4	Managing Employee Benefits 4.1 Benefits- Nature and Services. Strategic perspectives on benefits- Employee Benefit Communication Methods.	K1-K6	5	1-5
	4.2 Benchmarking benefit schemes, Compensation Benchmarking Analysis	K1-K4	3	
	4.3 Employee benefits programs- security benefits, retirement security benefits, health care benefits, time-off benefits, Fringe Benefits.	K1-K6	5	
5	Security Benefits and Legal aspects 5.1 Wage Boards: Objectives, Structure and Working	K1-K6	4	1-5
	5.2 Pay Commissions: Features, Objectives, Importance	K1-K6	5	
	5.3 Concept of Social Security: Laws relating to Social Security, Provident Fund, ESI, Gratuity, Bonus, Retirement.	K1-K5	4	

BOOK FOR STUDY

Newman, Jerry M., Barry Gerhart, and George T. Milkovich, *Compensation (12th Edition)*, Special India Edition, McGraw Hill India Pvt Limited, 2021

BOOKS FOR REFERENCE

Singh, B. D. *Compensation and Reward Management* published by Excel Books, 2017.

Martocchio, Joseph J. *Strategic Compensation: A Human Resource Management Approach* Pearson Education, 2018. ISBN-13: 978-9332584839

Bhatia, Dr. Kanchan. *Compensation Management* Himalaya Publishing House, 2014. ISBN-13: 978-9352022151.

JOURNALS

Compensation and Management Review

Journal of Compensation and Benefits

WEB SOURCES

<https://journals.sagepub.com/home/cbr>

<https://www.sciencegate.app/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/CM34												
III	Course Title: Compensation Management and Social Security												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	1	2	2	2	1	2	3	3	2	1
CO 2	2	1	3	3	3	3	2	2	2	2	1	3	3
CO 3	2	2	1	2	2	3	3	3	1	3	3	2	2
CO 4	2	1	2	2	3	3	3	2	1	2	2	3	3
CO 5	2	2	2	2	2	1	3	3	2	1	3	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

STRATEGIC HUMAN RESOURCE MANAGEMENT

CODE:23HR/PC/SM34

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To provide a comprehensive knowledge on the concepts of Strategic Human Resource Management.
- To develop right HR Strategies on investment to boost organizational competitiveness.
- To integrate the role of HRM function in setting and implementing organisations strategy
- To understand the importance of career competency and development.
- To familiarize with the contemporary features of the Corporate Social Responsibility and its functioning.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explain the basic concepts, principles and practices associated with strategic formulation and implementation.	K1
CO2	demonstrate competencies to plan and execute investment modules.	K2
CO3	develop creative solutions using a strategic management perspective.	K3
CO4	prepare employees towards professional growth	K4
CO5	design csr strategies towards organisational sustainability	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Strategic Framework			
	1.1 Nature and Scope of Human Resource Management.	K1- K4	3	1-5
	1.2 SHRM Characteristics, SHRM Framework, Strategic role of HRM, Strategic HRM vs Traditional HRM.	K1- K6	4	
	1.3 HR Policies, Sound HR policies, HR policies in recent times	K1- K6	3	
	1.4 HR Strategies to enhance performance	K1- K6	3	

UNIT	CONTENT	CL	Hrs	CO
2	Organizational Renewal	K2- K6	4	1-5
	2.1 Strategic Organizational renewal – challenges, Job redesign, Job redefining			
	2.2 Managing Organizational renewal	K2- K6	4	
	2.3 Managing Change and Organizational development	K2- K6	3	
	2.4 Creating Team based Organizations, Flexi work arrangements	K2- K6	2	
3	Strategic HRM System and Investment			1-5
	3.1 Investment Perspective of HR: investment consideration.	K1-K4	2	
	3.2 Defining and Measuring the investment in HR	K1-K6	3	
	3.3 E-Employee profile, Designing HR portals, Issues in employee privacy, Employee surveys online.	K1-K6	4	
	3.4 Development and Implementation of HRIS	K2-K6	4	
4	Career & Competency Development	K1- K6	4	1-5
	4.1 Career Concepts: Roles, Career stages, Career planning and Process			
	4.2 Career Development Models: Career Motivation and Enrichment.	K2- K6	3	
	4.3 Managing Career plateaus, Designing Effective Career Development Systems	K1- K6	3	
	4.4 Competencies and Career Management: Competency Mapping Models, Equity and Competency based Compensation.	K1- K6	3	
5	Corporate Social Responsibility & Sustainability	K1- K6	3	1-5
	5.1 Corporate Social Responsibility: Meaning, Definition and Scope. History and Evolution of CSR, Concept of Charity, Corporate Philanthropy, Corporate Citizenship.			
	5.2 History and Models of CSR in India, CSR through Triple bottom line, CSR initiative in India	K1- K6	3	
	5.3 CSR Tools, CSR Programme Planning: Planning, Evaluation, Implementation and Monitoring, Documentation.	K1- K6	4	
	5.4 CSR and Green HRM Practices.	K2- K5	3	

BOOKS FOR STUDY

Mello, Jeffrey. A. *Strategic human resource management*. Cengage Learning. India, 2014

Smith, P. E., & Rees, G. *Strategic human resource management: An international perspective*. Sage Publication, New Delhi, 2017

Werner, J. M., & DeSimone, R. L. R. L. *Human resource development*. Cengage Learning. USA, 2011

Sharma, Atuland B.N.Mandal.*Corporate Social Responsibility in India*. Global Vision Publishing House, India, 2020

Soundarapandian, M. *Corporate Social Responsibility and Sustainable Development Vol I & II*. Concept Publishing Company. New Delhi, 2014.

BOOKS FOR REFERENCE

Dess, Gregory G., et al. *Strategic Management: Creating Competitive Advantages*. McGraw-Hill Education. United Kingdom, 2020.

Azmi, F. T. *Strategic human resource management: text and cases*. Cambridge University Press. India, 2019.

Fernando, A. C. Satheesh E.K., Muraleedharan E.P. *Corporate Governance: Principles, Policies and Practices, 3/E*. Pearson Education India, 2018.

JOURNAL

Public Integrity - <https://search.ebscohost.com>

Discrete Dynamics in Nature & Society - <https://search.ebscohost.com>

WEB SOURCE

<https://www.shrm.org/>

<https://www.unido.org>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
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C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/SM34												
III	Course Title: Strategic Human Resource Management												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	3	2	2	1	2	2	3	3	2	1	2
CO 2	2	3	2	3	3	2	1	2	3	3	3	2	1
CO 3	2	3	1	2	2	3	2	1	2	3	1	3	2
CO 4	2	1	2	2	2	3	2	3	2	1	2	3	3
CO 5	2	2	2	2	2	1	3	3	2	2	3	1	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

SUMMER INTERNSHIP

CODE:23HR/PN/SI32

CREDITS : 2

The student is required to

- Undergo practical training in a reputed organization for 100 hours
- Maintain a log book duly countersigned by the Supervisor of the organisation
- The log book to contain the following details:
 - a. Hours worked
 - b. Nature of work
- Submit interim reports to the Faculty Advisor after completion of every 25 hours of work
- A final consolidated report to be submitted to the Faculty Advisor

Preparation of final Project Report

The Report should have a minimum of 50 pages detailing the work assigned and performed in the organisation.

Pattern of Evaluation

Log Book	10 marks
Interim Report	20 marks
Project Report	40 marks
Viva	30 marks

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

GLOBAL HUMAN RESOURCE MANAGEMENT

CODE:23HR/PC/GM44

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To provide exposure with robust understanding Global HR practices and issues
- To impart knowledge on HR issues in international alliances
- To understand the cultural differences to work in a multi cultural environment
- To understand various perspectives and concepts in the field of Global Strategic management
- To enable students to develop global business strategies, organizational structures and work systems

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	summarize global hr framework of analysis of better understanding of the present and emerging environment	K1
CO2	recognize the importance of mergers and acquisition on global hr	K2
CO3	analysis and synthesis information and ideas from multiple sources to generate new insights	K3
CO4	build strategic partnership to enhance multinational performance and competitive advantage	K4
CO5	develop cultural agility and competencies to invoke best global hr practices understand of the opportunities related to global and cross-cultural human resource management	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction			
	1.1 IHRM: Meaning, Difference between Domestic Vs International HRM	K1-K6	4	1-5
	1.2 Issues in HRM, International Business Strategies	K1-K5	5	
	1.3 Culture: Its Coverage and Determinants; Cross Cultural Theory	K1-K6	4	
2	Managing Culture Diversity	K1-K5	4	1-5
	2.1 Cross-cultural Differences in the Workplace			
	2.2 Cultural Sensitivity	K1-K4	3	
	2.3 Cross-cultural Communication Process and Negotiations: Planning and Preparation Parameter	K1-K6	3	
	2.4 Types and Strategies of Organisation Culture	K2-K6	3	
3	Expatriation, Repatriation and Mergers and Acquisition – HR Issues			1-5
	3.1 International Personnel: Home or local: Expatriates (expats); Home-country nationals, Third-country nationals and inpatriates	K1-K5	3	
	3.2 Management of expatriates, Reasons for the use expatriates, (recruitment, training and development), Repatriation and Mobility Management.	K1-K6	3	
	3.3 HR Issues in Acquisitions, Mergers and Joint Ventures	K2-K4	4	
	3.4 HR issues in international alliances.	K1-K4	3	
4	Strategic Management System	K1-K5	5	1-5
	4.1 Different types of International Assignment			
	4.2 Strategic Management of international Assignment	K2-K6	4	
	4.3 Primary Measures of Corporate Performance: Benchmarking, Key Factor Rating	K1-K4	3	
5	Compensation and Benefits			1-5
	5.1 Introduction to Compensation System: Objective, Factors affecting International Compensation.	K1-K3	4	
	5.2 Structure of International Compensation	K2-K5	4	
	5.3 Approaches of International Compensation Management.	K3-K6	5	

BOOK FOR STUDY

Peter J Dowling, Marion Festing, Allen D. Engle, Sr. *International Human Resource Management* 7th Edition, Delhi, Cengage Learning India Pvt Ltd 2019
Anne-Wil Harzing, Ashly H. Pinnington. *International Human Resource Management* Sage Publications India Pvt Ltd 2017 New Delhi.

BOOKS FOR REFERENCE

Srinivas R. Kandula. *International Human Resource Management* Sage Publications India Pvt Ltd 2018 New Delhi.

JOURNAL

The International Journal of Human Resource Management

WEB SOURCE

<https://www.economicdiscussion.net/human-resource-management/what-is-international-human-resource-management/31956>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
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C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/GM44												
IV	Course Title: Global Human Resource Management												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	1	2	2	2	2	2	3	3	2	2	1
CO 2	2	2	3	1	1	3	2	2	1	2	3	2	2
CO 3	1	2	3	2	3	2	2	2	2	2	3	3	1
CO 4	2	1	2	2	2	3	3	2	2	2	1	3	3
CO 5	2	2	3	1	2	3	2	3	2	1	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

HR ANALYTICS

CODE:23HR/PC/HA44

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To identify HR benchmarks and metrics relevant to organisation mission and goals
- To learn and effectively use the data to analyze trends
- To enable people-data, collected by HR systems and business information systems within the context of the operating environment
- To apply the tools, methods, approaches and techniques of HR analytics in various HR subsystems.
- To analyze problems and issues in HR and the relevance of HR analytics

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the core topics related to analytics and their applications in the hr domain	K1
CO2	evaluate organisational success and design better systems and solve business problems	K2
CO3	identify the application and uses of hr analytics in various hr sub-systems	K3
CO4	logically synthesize the tools, methods and techniques of hr analytics to understand real world corporate scenario.	K4
CO5	gain insights on the latest trends and challenges in hr analytics.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	HRA Frameworks	K1- K4	3	1-5
	1.1 Current approaches to measuring HR and reporting value from HR contributions	K1-K6	4	
	1.2 Strategic HR Metrics versus Benchmarking, Measuring HR Effectiveness, The HR Scorecard			
	1.3 HR Maturity Framework: From level 1 to level 5	K1-K4	3	
	1.4 HR Analytics Frameworks- LAMP framework; HCM:21 Framework and Talentship Framework.	K1-K4	3	
2	Basics to HR Analytics	K1-K3	3	1-5
	2.1 Introduction to Business Analytics,			
	2.2 Differences between Business Intelligence and Business Analytics, Differences between Business Analytics and Big Data Analytics.	K1-K3	3	
	2.3 Basics of HR Analytics, Analytics Evolution, Analytical capabilities, Analytic value chain, Analytical Model	K1-K5	3	
	2.4 Typical application of HR analytics.	K1-K5	4	
3	HRIS for HR Analytics			1-5
	3.1 Human Resource Information System; Role of HRIS in analytics	K1-K5	3	
	3.2 HRIS development and Implementation	K1-K5	3	
	3.3 The development process- need analysis, systems design, structure and culture	K1-K5	3	
	3.4 HRIS Applications- Making HRIS work.	K1-K6	4	
4	Analytics for HR subsystems			1-5
	4.1 HR Analytics for Staffing, Training & Development	K1-K6	3	
	4.2 Performance Management Systems, Career Planning Systems, Rewards and Compensation Management	K1-K6	3	
	4.3 Employee Relations Systems, Competency Management Frameworks & Competency Mapping	K1-K6	3	
	4.4 Integration of competency-based HR System	K1-K6	4	
5	Trends and Future Challenges			1-5
	5.1 Technology and changes in HR Analytics, Role of social media, Big Data and Predictive Analytics in HR	K1-K6	4	
	5.2 Assessing the effectiveness of HR Analytics, Post analysis steps, Review and monitoring, Issues in HR valuation and measurement;	K1-K6	4	
	5.3 Emerging challenges: Global and Indian Experience.	K1-K5	5	

BOOKS FOR STUDY

Bhattacharyya, Dipak Kumar. *HR Analytics – Understanding theories and Applications* Sage Publications, India, 2017

Ulrich, Dave, and Wayne Brockbank. *The HR Value Proposition*. Harvard Business School Press, 2010.

Fitz-enz, Jac, and John Mattox. *Predictive Analytics for Human Resources*. Wiley, 2014.

BOOKS FOR REFERENCE

Becker, B. E., Mark A. Huselid, and Dave, Ulrich. *The HR scorecard: Linking people, strategy, and performance*. Harvard Business Press, 2001

Edwards, Martin and Kirsten Edwards. *Predictive HR Analytics: Mastering the HR Metric*. 2nd ed., Kogan Page, India, 2019.

JOURNALS

Human Resource Management Journal

Journal of Business Analytics

WEB SOURCES

www.ebscohost.com

<https://hranalyticsacademy.com/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
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Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/HA44												
IV	Course Title: HR Analytics												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	2	2	2	1	3	3	1	2	2
CO 2	1	2	3	3	3	3	2	2	2	3	3	1	2
CO 3	2	1	2	3	2	3	2	2	2	2	3	3	1
CO 4	2	2	3	2	2	3	3	1	1	2	3	3	2
CO 5	2	2	1	2	2	1	3	3	1	2	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

MANAGERIAL COUNSELLING

CODE:23HR/PC/MC44

CREDITS : 4

L T P : 4 1 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To learn the counsellors' roles and responsibilities within evolving practice environment
- To understand counselling skills through theory and practice sessions
- To provide theoretical foundations underlining different counseling and therapeutic approaches
- To describe the skilled approaches of counselling in different facets of life
- To assess the various counselling practices in different situations at workplace

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	demonstrate developmental concept into everyday relationships and situations	K1, K2
CO2	exhibit an emerging professional identity and an openness to ongoing personal and professional developments	K3
CO3	apply the developmental theories and specific evidence-based research finding to understand counselling practice and social issues	K4
CO4	demonstrate the ability to conceptualize the cases using different therapeutic approaches	K5
CO5	critically evaluate the strength and limitations and the unique features associated with each form of therapy	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Concept and Foundation of Counselling			
	1.1 Evolution of Counselling	K1- K3	2	1-5
	1.2 Definition and Characteristics of Counselling.	K1-K5	3	
	1.3 Counselling Ethics and Skills used in Counselling	K1-K6	3	
	1.4 Profile of the Counsellor and the Client	K1-K3	2	
	1.5 The Manager's Counselling Role	K1-K4	3	

UNIT	CONTENT	CL	Hrs	CO
2	Counselling - Goals 2.1 Achievement of Positive Mental Health, Resolution of Problems, Improving Personal Effectiveness, Change, Decision making, Goal setting Modification of Behaviour and achievement of work life balance.	K1- K6	7	1-5
	2.2 Recording in Counselling: Importance of Recording, Skills required for Recording in Counselling, Types of Recording in Counselling.	K1-K5	6	
3	Different Approaches and Types of Counselling	K1- K6	3	1-5
	3.1 Client centred Approach			
	3.2 Cognitive Behavioural Therapeutic Approach	K1-K4	2	
	3.3 Gestalt Counselling	K1-K4	2	
	3.4 Transactional Analysis	K1-K4	2	
	3.5 Solution focused Counselling	K1-K4	2	
4	3.6 Directive Counselling, Non-Directive Counselling, Eclectic Approach to Counselling	K1- K6	3	1-5
	Egan Model of Counselling – the Skilled Approach	K1- K6	4	
	4.1 Stage: 1 Problem Exploration and Clarification			
	4.2 Stage: 2 Integrative understanding / dynamic self-understanding	K1- K6	4	
5	4.3 Stage:3 Facilitating action; developing a new perspective; preferred Scenario	K1- K6	5	1-5
	Counselling in Different situations	K1- K6	3	
	5.1 Performance Counselling, Career Counselling			
	5.2 De-addiction Counselling, HIV Counselling	K1- K6	2	
	5.3 Family Counselling/Marital Counselling	K1- K6	3	
	5.4 Grief Counselling, Counselling suicidal clients.	K1- K6	2	
	5.5 Counselling in Disaster situations	K1- K6	3	

BOOKS FOR STUDY

Rao, S.Narayana, and Prem Sahajpa. *Counseling and Guidance* Tata Mc GrawHill, 2016.
 Gibson, and Mitchell. *Introduction to Counseling and Guidance* PHI India Ltd. 2008
 Egan, Gerard. *The Skilled Helper*. Brooks/Cole, 2014.

BOOKS FOR REFERENCE

Reeves, Andrew. *Counselling and Psychotherapy*. New Delhi: SAGE,2013.
 Rogers, Carl R. *On Becoming A Person*. Boston: Houghton Mifflin,1976.
 Tolbert, E.L. *An Introduction to Guidance*. wBoston: Little Brown, 1982.

JOURNALS

Journal of Counseling Psychology
 Journal of Counseling & Development

WEB SOURCES

<https://www.ncbi.nlm.nih.gov/pmc>

<https://www.nhs.uk/mental-health>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PC/MC44												
IV	Course Title: Managerial Counselling												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	1	2	2	2	2	3	2	2	2	1
CO 2	2	1	2	3	3	2	1	2	1	3	3	2	2
CO 3	1	2	3	3	3	2	2	1	2	3	3	1	2
CO 4	1	2	2	2	3	2	3	3	3	1	3	2	2
CO 5	2	3	1	3	3	2	2	2	1	2	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

DISSERTATION

CODE:23HR/PC/DS47

CREDITS : 7

OBJECTIVES OF THE COURSE

- To understand and comprehend basics in research methodology and apply them in research project.
- To demonstrate the ability to choose methods appropriate to research aims and objectives
- Develop skills in qualitative and quantitative data analysis and presentation
- To identify and discuss the concepts and procedures of sampling, data collection, analysis and reporting.
- To use findings of the study to provide workable solutions in the organization.

COURSE LEARNING OUTCOMES

On successful completion of this course, students will be able to

- Undertake a research study independently.
- Develop advanced critical thinking skills.
- Apply research tools, techniques and statistics to conduct research.
- Develop skills in analyzing the collected data to make meaningful interpretation.
- Enhance scientific writing skills.

GUIDELINES FOR DISSERTATION REPORT

Page Limit: The Dissertation can have minimum 50 to 100 pages typed in Times New Roman font style, size 12, with 1½ line spacing in A4 Size Paper.

Cover Page- should include

Logo of the College and Title of the Dissertation

Dissertation submitted to Stella Maris College (Autonomous) in partial fulfillment of the requirement for the Degree of Master of Human Resource Management by Name of the candidate, Department No., Department of Human Resource Management, Month, Year

The dissertation report includes

- Contents Page
- Certificate of the Research Guide and Head of the Department and Acknowledgement by the Candidate
- Chapter I – Introduction to the Study
- Chapter 2- Review of Literature
- Chapter 3 Research Methodology and Scope and Significance of the Study; Chapterisation

- Chapter 4 - Analysis and Interpretation of Data
- Chapter 5 – Summary of the Study, Findings, Suggestions and Conclusion
- Bibliography / References shall be given in the alphabetical order according to MLA Format 7th edition
- Appendix will include the tool of data collection and other secondary information

SUBMISSION

Each student shall submit two copies of the dissertation to the Head of the Department on the date specified by the Controller of Examinations. One copy of the dissertation will remain in the College

GUIDELINES FOR ASSESSMENT

VIVA-VOCE EXAMINATION

Rubrics for Evaluation	Marks	Cognitive Level
Documentation	15	K1
Formulating topic statement	10	K2
Explaining the conceptual framework	20	K3
Data analysis and Interpretation	30	K4
Managerial Implications	10	K5
Findings, Suggestion and Conclusions	15	K6

The dissertation will be valued by the Research Guide and an External Examiner. Each Examiner will evaluate the dissertation for a maximum of 50 marks each. The External Examiner will conduct the Viva Voce. An aggregate of the two marks will be the final marks awarded for the dissertation out of a total of 100 marks

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

PERFORMANCE APPRAISAL

CODE:23HR/PE/PA15

CREDITS :5

L T P : 5 0 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To Understand and apply various methods and challenges in appraisal
- To know the process of performance management
- To gain insight in to assessment of wage and salary structure in human resources
- To provide knowledge on various incentive schemes and benefits
- To familiarize the performance counseling process and skills

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	describe the concepts and importance of performance appraisals.	K1, K2
CO2	apply the principles, benefits, and elements of performance management in an organization	K3
CO3	categorize effective wage and salary structure that contribute to economic growth	K4
CO4	compare and recommend incentive schemes, rewards and benefits to the employees.	K5
CO5	create competent counseling skills to develop employee career	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Introduction			
	1.1 Performance Appraisal – Concept, Objectives, Importance and Uses	K1-K3	2	1-5
	1.2 Process of Appraisal	K3-K5	3	
	1.3 Methods of Appraisal: Traditional and Modern Methods	K3-K6	5	
	1.4 Problems in Appraisal	K3,K4	3	
2	Performance Management Process			
	2.1 Performance Management: Definition, Objectives, Needs and Importance	K1-K3	2	1-5
	2.2 Performance Management Cycle	K3,K4	4	
	2.3 Steps in setting performance criteria	K3-K6	4	
	2.4 Competency mapping	K1-K6	3	
3	Wages and Salary Administration			
	3.1 Wages: Concepts and Types (Minimum Wage, Fair Wage, Living Wage)	K1-K4	5	1-5
	3.2 Essentials of Sound Wage and Salary Structure	K3,K4	4	
	3.3 Factors affecting Wages and Methods of Wage Payments	K1-K6	4	
4	Incentives, Fringe Benefits and Rewards			
	4.1 Incentives: Meaning and Essential of Sound Incentives Plans	K1-K3	2	1-5
	4.2 Types of Incentive Plans	K3-K6	3	
	4.3 Fringe Benefits: Need, Importance and Types	K1-K3	3	
	4.4 Reward- Meaning, Objectives, Principles, Importance and Types	K1-K6	5	
5	Performance Counselling and Performance Metrics			
	5.1 Performance counselling-Definition, features, process and skills	K1-K6	4	1-5
	5.2 Employee performance metrics – Concepts and Importance	K1,K2	4	
	5.3 Performance metrics categories: Work quality metric – 9 box grid, defects, errors, net promoter score; Work quantity metrics; Work efficiency metrics; Organisational performance metrics.	K3-K6	5	

BOOK FOR STUDY:

Amitabha Sengupta, Human Resource Management: Concepts, Practices and New Paradigms, Sage Publications Pvt Ltd, India, 2021

Gary Dessler and Biju Varkkey, Human Resource Management, Pearson Education Service Pvt Ltd, India, 2020.

R.C Sharma and Nipun Sharma, Human Resource Management: Theory and Practice, Sage Publications India Pvt Ltd, India, 2018

BOOKS FOR REFERENCE:

Harold Koontz and Heinz Weihrich, Essentials of Management: An International, Innovation and Leadership Perspective, McGraw Hill Education India Pvt Ltd, India, 2018

Tapomoy Deb, Human Resource Development: Theory & Practice, Ane Books Pvt Ltd, New Delhi, 2014

JOURNAL

<https://www.ebsco.com/> - Human Performance

WEB RESOURCE:

<https://hbr.org/1976/07/appraisal-of-what-performance>

<https://www.managementstudyguide.com/performance-appraisal.htm>

<https://www.aihr.com/blog/performance-appraisal/>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A – 50 words	K1(6) K2(4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B – 600 words	K3(10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	1 K3 question 2 K4 question
C – 600 words(K5)	K5 (10) K6(10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A – 50 words	K1(10) K2(10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B – 600 words	K3(20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C – 1200 words(K5)	K5 (20) K6(20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PE/PA15												
	Course Title: Performance Appraisal												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	3	2	1	2	3	3	2	2	1
CO 2	1	3	2	2	3	3	2	2	2	3	3	1	2
CO 3	2	2	1	2	3	3	3	2	1	2	3	3	2
CO 4	2	1	2	2	2	3	3	3	2	1	3	3	2
CO 5	2	2	2	1	3	2	3	3	2	1	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

WOMEN AND WORKSPACE

CODE:23HR/PE/WW15

CREDITS :5

L T P : 5 0 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To gain knowledge of gender as a social construct, gender relations and gender issues in work
- To understand the root causes of gender inequality in positions of power, leadership and the workplace.
- To identify interventions and policies that address the structural barriers.
- To design the policies, programmes and protective measures for women
- To implement strategies to reduce the gender gap in the workplace.

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	identify and discuss the basic concepts relevant to gender.	K1,K2
CO2	apply leadership styles to manage and lead diverse workforce	K3
CO3	examine the gender inequality to display the ethical practice in workplace	K4
CO4	evaluate the interventions and practices that promote equality, inclusion, and co-operation in the workspace	K5
CO5	design the protective measures and programmes for the benefit of women	K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	Hrs	CO
1	Gender Concepts			
	1.1 Sex and Gender, Gender as a Social Construct, Gender Identities; Gender Relations, Gender Sensitization	K1,K2	3	1-5
	1.2 Gender Roles and Responsibilities, Gender Stratification, Gender Stereotyping, Productive Work, Reproductive Work, Differential Access and Control Over Resources, Gender Mainstreaming;	K1-K4	4	
	1.3 Patriarchal and Ideological Constructs that Govern Status of Women.	K3-K6	3	
	1.4 Status of Women in India; Sex Ratio in India, Women in the workforce and work force participation.	K3-K6	3	
2	Feminism and Empowerment of Women			
	2.1 Feminism: Concept, Meaning and Definition; Types of Feminism – Liberal, Social, Radical and Post-Modern Feminism.	K1-K6	3	1-5
	2.2 Women's Movements: Pre and Post- Independence Perspectives in India, Landmarks of Women's Movement in India.	K3-K5	4	
	2.3 Women Empowerment: Concept, Meaning and Definition, Types of Empowerment.	K1-K6	4	
	2.4 Indicators of Women's Development: GDI, GEM	K1-K3	2	
3	Women, Work and Leadership			
	3.1 Women in the Unorganised Sector: workforce participation, contract labour, equal remuneration, job insecurity, challenges and issues in the unorganised sector.	K1-K6	4	1-5
	3.2 Women in the Organised Sector: workforce participation, contract labour, equal remuneration, job insecurity, challenges and issues in the organised sector.	K1-K6	4	
	3.3 Women in leadership and management positions and experiences in administration governance, managerial positions, Glass ceiling.	K1-K6	5	
4	Protective Measures, Policies and Programmes for Women			
	4.1 Constitutional and Legal Provisions for women; Rights of Women with reference to Employment	K1-K6	2	1-5
	4.2 Maternity Benefit Amendment Act (2017), Sexual Harassment of Women at Workplace Act-2013.	K1-K6	4	

UNIT	CONTENT	CL	Hrs	CO
	4.3 Convention on Elimination of All forms of Discrimination against Women and Girls (CEDAW) 1982, ILO Guidelines for Gender in Employment.	K1-K6	2	
	4.4 Special Initiatives: National and State Commissions for Women; Ministry for Women and Child Development; National Policy for the Empowerment of Women – 2001; Reservation for Women in Local Self Government, Gender audit in workplace, safety and protection measures in workplaces.	K1-K6	5	
5	Issues in the Workspace			1-5
	5.1 Social and biological reproductive roles, triple role burden, role conflict	K1-K6	2	
	5.2 Entry barriers for women – perceptions of management and organization on women, absenteeism, discrimination, salary – issues and remedies.	K3,K4	4	
	5.3 Characteristics of organisations: Gender insensitive environment.	K1-K4	4	
	5.4 Women friendly workplace, Creche facilities, recreational facilities.	K1-K6	3	

BOOKS FOR STUDY

Robyn Ryle, Questioning Gender -A Sociological Exploration, Sage Publication, India, 2020
Premalatha Arora, Transforming Gender Studies, Pacific Publication, Seattle, Washington, 2011

BOOKS FOR REFERENCE

Kashibai Kanitkar , Feminist vision or treason against men? Permanent Black Publication, India, 2011

George Odysseus Tsobanoglou, Women Livelihoods and Socio Economic Growth: Emerging Development, The Wooden Press Publication, New York, 2011

JOURNAL RESOURCE

<https://search.ebscohost.com/> - Gender & Education

WEB RESOURCES

www.unwomen.org
www.un.org/womenwatch/daw/cedaw
www.ncw.nic.in
www.wcd.nic.in/wdcact.pdf
www.censusindia.gov.in

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A – 50 words	K1(6) K2(4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B – 600 words	K3(10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C – 600 words(K5)	K5 (10) K6(10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A – 50 words	K1(10) K2(10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B – 600 words	K3(20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C – 1200 words(K5)	K5 (20) K6(20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PE/WW15												
	Course Title: Women and Workspace												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	1	3	2	2	1	2	3	2	1	2	2
CO 2	1	2	2	2	3	3	2	3	2	3	3	1	2
CO 3	2	2	2	3	2	1	3	3	2	2	3	3	1
CO 4	2	2	3	1	2	2	3	3	2	1	2	3	3
CO 5	2	3	1	2	2	2	3	3	1	2	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

ENTREPRENEURSHIP DEVELOPMENT

CODE:23HR/PE/ED15

CREDITS : 5

L T P : 5 0 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To provide comprehensive knowledge on the various aspects related to entrepreneurial development
- To understand the nature and dimensions of social entrepreneurship
- To know the various institutional support provided for the entrepreneurship development
- To familiarize the planning and feasibility techniques for establishing a new business
- To emphasize the importance of women entrepreneurs

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	explore entrepreneurial skills and management functions of an organization	K1
CO2	build strategies and tactics to assess enterprise creation	K2
CO3	apply competencies to profit and non-profit firms to create social and economic value.	K3
CO4	demonstrate entrepreneurial skills to craft innovative business	K4
CO5	create women entrepreneurs in recognizing opportunities, mobilizing resources, and managing risks, to build viable enterprises	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction			
	1.1 Entrepreneurship: Meaning, Definition, Characteristics, Scope Business model	K1- K4	2	1-5
	1.2 Entrepreneur - Meaning, Definition, Scope, Need, Function and Types of Entrepreneurs	K1- K6	4	
	1.3 Role of Entrepreneurship in Economic Development	K1- K5	3	
	1.4 Factors Influencing Entrepreneurship Development; Internal and External Environment Economic and Non - Economic, Psychological, Social, Cultural, Political, Legal and Economic Factor	K1- K5	3	
2	Social Entrepreneurship Models			
	2.1 Social Entrepreneurship - Models: Entrepreneur Support Model, Market Intermediary Model, Employment Model, Market Linkage Model, Fee-for-Service Model, Low-Income Client as Market, Service Subsidization Model, Cooperative Model, Organisational Support Model, Empowerment Model, Networking Model.	K1-K6	10	1-5
	2.2 Social Entrepreneurship: Micro Credit Model, Cooperative Model, Public Private Partnership.	K1-K5	3	
3	Institutional support			
	3.1 Institutional support: District Industries Centre (DIC) & National Small Industries Corporation (NSIC)	K1-K5	3	1-5
	3.2 Small Industries Development Organisation (SIDO) & Small Industries Development Bank of India (SIDBI)	K1-K5	3	
	3.3 National Bank for agriculture and Rural Development (NABARD & Tamil Nadu- TAHDCO	K1-K5	3	
	3.4 National Scheduled Caste Finance and Development Corporation (NSFDC)	K1-K5	4	
4	Business Venture - Feasibility and Planning			
	4.1 Idea Generation and Screening of Business Idea, Sources of Idea, Evaluation of Idea. Selection of Business Idea	K1-K6	5	1-5
	4.2 Business Plan – Meaning, Contents and Significance of Business Plan, Business Plan Process, Advantages of Planning Business	K1-K6	4	
	4.3 Project Formulation; Feasibility Report, Preparing a Model Project Report for Starting a New Venture	K1-K6	4	
5	Women Entrepreneurs			
	5.1 Importance and Characteristics of Women Entrepreneurs	K1-K6	4	1-5
	5.2 Functions, Growth and Challenges of Women Entrepreneurs	K1-K3	3	
	5.3 Recent Trends of Women Entrepreneurs in India	K1-K4	2	
	5.4 Women Entrepreneurs- Case study	K1-K6	4	

BOOKS FOR STUDY

Varshney, Indu. *Women Entrepreneurship and Economic Development*. Kunal Books, New Delhi, 2017
Gupta, C.B. *Entrepreneurial Development*. New Delhi: Sultan Chand, 2012.

BOOKS FOR REFERENCE

Gupta, C.B. *Entrepreneurship and Small Business Management*. Sultan Chand, New Delhi, 2000.
Verma, S, B. *Entrepreneurship and employment*. Deep & Deep, 2005.
Khanka, Dr.S.S., and Dr. C. B. Gupta. *Entrepreneurship and Small Business Management* Sultan Chand & Sons, 2022.
Arora, Renu, and S. K. Sood. *Entrepreneurial Development*. Ludhiana: Kalyani, 2007
Desai, Vasanth. *Entrepreneurial Development*. Himalaya, Mumbai: 2012.

JOURNALS

Journal of Entrepreneurship, Management and Innovation
Journal of Entrepreneurship Management

WEB SOURCES

<https://doaj.org/>
<https://www.tansidco.org/>
<https://www.india.gov.in/schemes>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
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C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PE/ED15												
	Course Title: Entrepreneurship Development												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	3	2	3	2	2	1	3	3	2	2	2
CO 2	1	3	3	2	3	2	2	2	2	3	3	1	2
CO 3	2	2	2	2	1	3	3	3	1	2	3	3	2
CO 4	2	2	2	2	3	3	3	3	2	2	1	3	3
CO 5	2	2	3	3	2	1	3	1	2	1	3	2	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

TOTAL QUALITY MANAGEMENT

CODE:23HR/PE/TQ15

CREDITS :5

L T P : 5 0 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To gain insights on basic concepts of TQM
- To understand the TQM framework
- To familiarize the continuous process improvement techniques
- To learn various quality control tools
- To educate various quality control awards

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the concepts and principles of Total Quality Management	K1
CO2	adapt concepts and principles in developing the human resources for the organizational effectiveness.	K2
CO3	apply process improvement techniques for high quality output.	K3
CO4	analyze various Quality Control Tools and to implement the quality process.	K4
CO5	enriched knowledge with TQM system adopted by national and international countries.	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to TQM		3	1-5
	1.1 Definition of Quality, Dimensions of Quality, Need for Quality.	K1-K4		
	1.2 Evolution of Quality Management	K3,K4	3	
	1.3 TQM: meaning, Characteristic and fundamental concepts.	K1-K5	3	
2	TQM Framework - Principles			1-5
	2.1 Historical review: W.Edwards Deming, Joseph .M. Juran and Philip.B. Crossby, Ishikawa	K1-K6	4	
	2.2 Customer satisfaction, Customer perception, customer complaints, service quality, customer retention.	K3-K6	3	
	2.3 Employee involvement- motivation, empowerment, teams, recognitions and rewards, performance appraisal and supplier partnership	K1-K4	4	
3	TQM Framework – Techniques			1-5
	3.1 Continuous process improvements- Juran Triology, PDSA cycle	K1- K6	6	
	3.2 5S Kaizen, Quality Circle	K1-K6	5	
	3.3 FMEA, QFD	K1-K6	5	
4	TQM Tools			1-5
	4.1 Seven basic QC tools-Check sheets, Cause and Effect diagram, Pareto analysis.	K1- K6	6	
	4.2 Scatter diagram, Histogram, Control charts and Flow diagram.	K1-K6	6	
	4.3 Concepts of Six Sigma and Benchmarking	K1-K6	5	
5	Quality System			1-5
	5.1 Quality audit, Quality awards - Deming Price (Japan), Malcolm Baldrye National Quality Award (United States), European Quality Award, Golden Peacock National Quality Award and Australian Quality Award	K1- K4	5	
	5.2 Quality Standards: ISO 9000, 2000 and 14000	K1- K4	4	
	5.3 Impact of TQM on Human Resource Management	K1-K5	3	

BOOKS FOR STUDY

Sharma. D.D., 2005, *TQM- Principles, Practices and Cases*, Delhi, Sultan Chand Publications

BOOKS FOR REFERENCE

Krishnan. K, Karmegam. G and Somasundaram . R, *TQM*, Coimbatore, R.K.Publishers.
Besterfield Dale H, 2018, *Total Quality Management*, India, Pearson Publication

JOURNALS

Total Quality Management and Business Excellence

WEB SOURCES

<https://asq.org>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PE/TQ15												
	Course Title: Total Quality Management												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	1	2	2	2	3	2	3	1	2
CO 2	1	3	3	3	2	2	2	2	3	3	1	2	2
CO 3	2	2	1	2	3	3	2	3	2	1	3	3	2
CO 4	1	3	2	3	3	1	2	2	1	2	3	2	3
CO 5	2	1	3	1	2	3	3	3	2	2	3	3	1

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

MANAGING INTERPERSONAL EFFECTIVENESS

CODE:23HR/PE/MI15

CREDITS : 5

L T P : 5 0 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To recognize the need to self-monitor the personal growth of individual
- To recognize the characteristics of competent communication in interpersonal interaction
- To understand various theories related to interpersonal interaction
- To provide better understanding of transactional analysis
- To practice effective conflict management techniques

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand the importance of self-monitoring and personal growth.	K1
CO2	identify the barriers of communication and to overcome them effectively.	K2
CO3	explain various theories related to personality.	K3
CO4	apply transactional analysis in organisation to enrich communication.	K4
CO5	formulate and implement conflict resolution strategies to enhance interpersonal relations	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Personal Growth	K1-K2	2	1-5
	1.1 Self-Definition and Perception			
	1.2 Self-Awareness: Discovering facets of interpersonal trust through Johari Window.	K1-K6	3	
	1.3 Self -Esteem, Self-Effectiveness	K1-K4	3	
	1.4 Self-Presentation- Motives and Strategies	K1-K4	2	
	1.5 Self-Monitoring: Meaning, Importance Types.	K1-K3	1	
	1.6 Impression Management – Definition and Techniques	K1-K6	2	
2	Communication and Language			1-5
	2.1 Business communication - Types of business communication	K1-K6	3	
	2.2 Barriers - Ways of Overcoming	K3-K6	3	
	2.3 Qualities of a Good Speaker	K1-K3	2	
	2.4 Communication flows in an Organisation	K3-K6	2	
	2.5 Non-Verbal Communication -Paralanguage, Eye Contact, Facial Expression, Kinesics, Body Language, Deception and Detecting Deception.	K1-K6	3	
3	Assertive training and understanding human personality			1-5
	3.1 Assertion and Aggression, Preparing for Assertive Business Writing - Tools, Tips, Pitfalls.	K1-K6	3	
	3.2 Attitude- components, nature, characteristics, theories.	K1-K6	4	
	3.3 Empathy – Meaning, Teaching and Learning of empathy.	K1-K4	3	
	3.4 Personality – Meaning and determinants.	K1-K6	3	
4	Transactional Analysis	K1-K3	2	1-5
	4.1 Introduction - Ego States - Strokes - Life Positions			
	4.2 Types of Transactions	K1-K6	3	
	4.3 Time Structures - Withdrawal, Pastimes, Rituals, Activities, Games	K1-K4	2	
	4.4 Stamps - Rackets and Sweat Shirts - Scripts	K1-K3	2	
	4.5 Advantages and Disadvantages of Transaction Analysis.	K1-K3	2	
	4.6 T-group sensitivity training, encounter groups and appreciative enquiry.	K1-K6	2	
5	Interpersonal Relations	K1-K3	2	1-5
	5.1 Interpersonal needs for openness, inclusion and control.			
	5.2 Discovering interpersonal orientation through FIRO-B.	K1-K6	3	
	5.3 Time management: Definition and Strategies	K1-K3	2	
	5.4 An Introduction to Neuro Linguistic Programming (NLP)	K1-K4	3	
	5.5 Emotional Intelligence: Concepts and Components	K1-K3	3	

BOOKS FOR STUDY

Robins, Stephen P. *Organizational Behaviour (18th edition)*. India. Pearson India Education Pvt. Ltd, 2018

Gowda, N.K. Ranachandra. *Personal growth and interpersonal effectiveness*. Himalaya publishing house, 2017.

BOOKS FOR REFERENCE

Dessler, Gary, and Biju Varkkey. *Human Resource management (15th edition)*. India, Pearson India Education Pvt,Ltd, 2018

Venkatapathy, R., and Jackson, P.T. *Managing Interpersonal Effectiveness*, India. Adhithya Publishers, 2003.

Gibson, Robert L., and Marianne H. Mitchell, *Introduction to Counseling and Guidance (7th edition)* PHI, 2005.

JOURNALS

Academy of Management Journal

Journal of Management Studies

WEB SOURCES

<https://www.counselling-directory.org.uk/transactional-analysis.html>

<https://www.skillsyouneed.com/ips/what-is-communication.html>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PE/MI15												
	Course Title: Managing Interpersonal Effectiveness												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2	2	1	2	2	1	3	3	3	2	2	1
CO 2	2	1	3	2	3	3	2	2	2	1	3	2	2
CO 3	2	2	1	3	3	3	2	2	2	2	3	1	2
CO 4	2	2	2	3	1	2	3	3	2	1	3	3	2
CO 5	2	3	1	2	2	3	3	2	1	2	2	3	3

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

LEARNING AND DEVELOPMENT

CODE:23HR/PE/LD15

CREDITS : 5

L T P : 5 0 0

TOTAL TEACHING HOURS : 65

OBJECTIVES OF THE COURSE

- To enhance new knowledge, skills, capabilities to develop learning and development into a high value strategic function
- To study training programs and processes in different organization and analyze their effectiveness
- To gain insights of various training evaluation methods
- To build training and developmental strategies that enable long term organizational goals
- To understand various career planning and development strategies

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	understand basic concepts associated with learning process and theories	K1
CO2	design various training programs based the training need analysis	K2
CO3	develop relevance and usefulness of training expertise in the organizational work environment	K3
CO4	create and implement HRD strategies that aligns with the overall business strategy	K4
CO5	apply effective career development strategies to attract and retain employees in the organization	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Learning			
	1.1 Meaning, Significance and basic principles of learning	K1- K3	3	1-5
	1.2 The Forces Influencing Working and Learning, classification of learning capabilities	K2 – K4	3	
	1.3 Theories of Learning 1.3.1 Behaviouristic Learning 1.3.2 Behaviouristic Learning 1.3.3 Social Learning	K1 – K6	3	
	1.4 Learning Process, Learning Cycle.	K1 – K6	4	
2	Introduction to Training and Development			
	2.1 Definition, Meaning, Need for Training, Objectives of Training	K1 – K2	3	1-5
	2.2 Difference between Training and Development	K1 - K2	3	
	2.3 Nature of training and development and Importance of training and development	K2 – K5	3	
	2.4 Overview of Training Functions, Types of Training.	K1 – K6	4	
3	Process and Methods			
	3.1 Process of Training: Steps in Training, Identification of Job Competencies, Criteria for Identifying Training Needs (Person Analysis, Task Analysis, Organization Analysis), Assessment of Training Needs, Methods And Process Of Needs Assessment.	K1 - K6	6	1-5
	3.2 Methods of Training: On the Job Training Methods and Off the Job Training Methods	K1 – K6	7	
4	Designing and Implementation of Training Programme			
	4.1 Trainer identification, Factors to improve effectiveness of training	K1 – K3	3	1-5
	4.2 Development of competency-based training programs	K3-K4	3	
	4.3 Management Development Programme, Budgeting of Training	K3 – K6	3	
	4.4 Evaluation of training programs	K1 – K6	4	
5	Management Development			
	5.1 Approaches to management development	K1 – K3	4	1-5
	5.2 Career Planning and Development - classification and stages in career planning	K1 – K5	4	
	5.3 Job Evaluation - principles and method	K1 – K6	5	

BOOK FOR STUDY

K Aswathappa, Sadhna Dash. *Human Resource Management Text and Cases* McGraw Hill Education India Private Ltd Chennai 2021

R.C Sharma and Nipun Sharma 2018, *Human Resource Management Theory and Practice* Sage Publications India Pvt Ltd.

Dipak Kumar Bhattacharyya (2015). *Training and Development Theories and Applications* Sage Publications India Pvt Ltd

BOOKS FOR REFERENCE

Dessler, Gary. and Biju Varkkey *Human Resource Management 12th Edition 2011 Pearson Education in South Asia*

JOURNALS

International Journal on Training and Development

Training and Development Journal

WEB SOURCE

<https://www.cipd.org/asia>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

**Mapping of Course Outcomes (COs)
to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)**

Semester	Subject Code: 23HR/PE/LD15												
	Course Title: Learning and Development												
Course Outcomes (COs)	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)				
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3	2	2	1	2	2	2	3	3	2	1	2
CO 2	1	3	3	2	3	2	2	2	2	1	3	2	3
CO 3	2	2	2	1	3	3	3	2	2	3	3	1	2
CO 4	2	1	2	2	2	3	3	3	2	2	3	3	1
CO 5	2	2	3	2	2	3	1	3	1	2	3	3	2

High Correlation: 3

Moderate Correlation: 2

Low Correlation: 1

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

**Postgraduate Elective Courses Offered by Human Resource Management
to students of M.A. / M.Sc. / M.Com Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

MANAGEMENT OF DEVELOPMENT ORGANISATIONS

CODE:23HR/PE/MD23

CREDITS : 3

L T P : 3 0 0

TOTAL TEACHING HOURS : 39

OBJECTIVES OF THE COURSE

- To understand the basic concepts, principles and evolution of management
- To know the administrative structure and managerial functions
- To learn the various business organisations
- To acquire skills to participate positively in the global management of resources
- To understand the knowledge on company's social responsiveness

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	utilize the gained knowledge in applying the concepts related to management	K1
CO2	apply the skills to manage the function of the organization effectively.	K2
CO3	understand how the various business organization structures process.	K3
CO4	demonstrate the roles, skills and functions to participate positively in the global management	K4
CO5	exhibit moral principles in a leadership position to guide their actions and behaviours	K5, K6
CL – Cognitive Level		
K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Management 1.1 Management: Meaning, Definition, Nature of management	K1- K4	3	1-5
	1.2 Management: Basic Concepts and Principles, Goals of Management, Approaches to Management, Behavioral Approach, Human Relation Approach of Social Work Principles in Management of Welfare Organization	K1-K6	5	
2	Management Functions 2.1 Management Functions: Concept and Principles of Management Planning, Policy Making, Goal Setting, Organization, Staffing, Coordination, Communication, Supervision and Control, Public Relations and Publicity; Reporting and Evaluation.	K1- K6	2	1-5
	2.2 Managerial Role, Functions & skills Managerial Role, levels of management, functions, managerial skills of an effective manager.	K1-K5	4	
	2.3 Conflict Management: Meaning, types of Conflict, impact of Conflict on organisations performance, Conflict management and strategies	K1-K6	3	
3	Management of Organisations 3.1.Board, Trustee Committees, Executives and their roles and functions Laws related to CBOs and NGOs	K1- K4	3	1-5
	3.2.Society Registration Act 1976s, Trust Act of 1912, Cooperative Societies Act 1912 and issues related issues.	K1-K6	3	
	3.3 Organisational Management Mission and Vision; Governance, Delegation, decentralization, coordination, collaboration, authority, responsibility accountability; Organisational design of Partnerships between private and public spaces, collaborations	K1-K5	3	
4	Financial Support 4.1 Public Funding Agents: State and National Government Projects	K1- K6	3	1-5
	4.2 International agencies	K1-K6	2	
	4.3 Private Funding Agents: Corporate Funding through CSR	K3-K6	3	
5	Project Management 5.1 Planning of Project Proposals – Types, Steps, Format, Fund Raising	K1- K6	3	1-5
	5.2 Evaluation of Projects; Project Management	K3-K6	2	

BOOK FOR STUDY

Dinakar Pagare. Business Management(16th edition). New Delhi.Sultan Chand and Sons, 2019.

Khushboo Manoj. Principles and practices of management.New Delhi.Centrum Press, 2011

Prasad, L.M. *Human Resource management* (4th edition). New Delhi, Sultan Chand and Sons, 2020

BOOKS FOR REFERENCE

Prasad, L.M. *Human Resource management* (4th edition). New Delhi, Sultan Chand and Sons, 2020

Biju Varkkey. *Human Resource management* (15th edition). India, Pearson India Education Pvt,Ltd, 2018

Jayasankar, J. *Principal of Management*. India. Margham Publications, 2013

JOURNALS

Journal of Management Studies

International Journal of Human Resource Management

WEB SOURCES

https://www.managementstudyguide.com/management_functions.htm

<https://www.webbusinesstrends.com/business-organization/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
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STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

**Postgraduate Elective Courses Offered by Human Resource Management
to students of M.A. / M.Sc. / M.Com Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

INDIAN CONSTITUTION AND LABOUR WELFARE

CODE:23HR/PE/IC23

CREDITS : 3

L T P : 3 0 0

TOTAL TEACHING HOURS : 39

OBJECTIVES OF THE COURSE

- To acquire knowledge on the Indian Constitution, its functioning, structures and governance at various levels
- To gain an understanding of social policy in India its models and critique its functioning in India
- To learn the approaches and models of social policy
- To understand the National and International Labour policy
- To familiarize the role of labour legislation and labour welfare

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	summarize the role of the Constitution, its functioning and its impact on governance in India	K1
CO2	analyse the social policies and its role in different sectors.	K2
CO3	utilize the different models of social policy and their relevance to the Indian situation	K3
CO4	apply the knowledge on labour concepts, labour welfare policies and programmes for the wellbeing of employees	K4
CO5	evaluate the role of ministry in benefitting the welfare of employees	K5, K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 – Create		

UNIT	CONTENT	CL	HRS	CO
1	Indian Constitution			
	1.1 Indian Constitution vis-à-vis Labour Legislation –Fundamental Rights – Article 16,19,23,24	K1- K6	3	1-5
	1.2 Directive Principles of State Policy- Article 39,41,42,43,43A.	K1- K6	3	
	1.3 Jurisprudence – meaning; Industrial Jurisprudence – meaning and scope	K1 - K2	2	
2	Social policy and Social Welfare Systems			
	2.1 Introduction to Social policy, Concept of distribution and redistribution. Inequalities, needs and welfare	K1 - K4	4	1-5
	2.2 Social Planning and Social Policy, Public policy, Sectoral policies for Social Security, Employment and Labour.	K1 - K6	4	
3	Approaches to Social Policy			
	3.1 Normative concepts of social policy - needs and choice, rights and obligations, justice and merit, citizenship and status.	K1- K4	3	1-5
	3.2 Approaches to social policy - Unified, Integrated and Sectoral approach	K1 - K6	2	
	3.3 Different models of social policy and their relevance to the Indian situation	K 4 - K6	3	
4	National and International Labour Policies	K1 -K4	4	1-5
	4.1 International labour Organisation and Labour standard			
	4.2 Labour welfare and Issues of labour– Social Security, Social Insurance, Social Assistance Schemes, Social Security Legislation	K1 - K6	4	
5	Labour Welfare			
	5.1 Social Security Legislations- Welfare related Labour Legislations & other important Acts	K1- K6	4	1-5
	5.2 Role of Ministry of labour and employment for labour welfare	K1 - K4	3	

BOOK FOR STUDY

N.D Kapoor HKumar, H.L. (2011). *Handbook of Industrial Law*, Sultan Chand and Sons Publisher.

BOOKS FOR REFERENCE

Kumar, H.L. (2017). *Digest of Important Labour Cases*(11th Edition). New Delhi: Universal Law Publisher.

Misra, S.N. (2016). *Labour and Industrial Laws*. New Delhi: Universal Law Publisher.

Taxmann's (2001). *Labour Laws*. New Delhi: Taxman Allied Services.

JOURNAL

Awards Digest: Journal of Labour Legislation

WEB SOURCE

<https://www.indiacode.nic.in/>

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks: 50

Duration: 90 minutes

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:

Total Marks: 100

Duration: 3 hours

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

**Postgraduate Elective Courses Offered by Human Resource Management
to students of M.A. / M.Sc. / M.Com Degree Programme**

SYLLABUS

(Effective from the academic year 2023-2024)

DESIGNING ORGANISATIONS FOR INNOVATIONS

CODE:23HR/PE/DO23

CREDITS : 3

L T P : 3 0 0

TOTAL TEACHING HOURS : 39

OBJECTIVES OF THE COURSE

- To understand the nature of the change and developmental process in organisations
- To comprehend the main drivers and approaches of the change
- To understand the different tools and techniques of organisational analysis
- To learn the process of organizational developmental interventions
- To gain knowledge on recent trends in organizational development

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION	CL
CO1	emphasize the importance of organization to adapt to technology and live with the pace of change	K1
CO2	apply the organizational development process to lead an innovative project	K2
CO3	examine the tools driving organizations to change and development	K3
CO4	demonstrate various organizational development interventions to achieves its purpose through its design function structure and process	K4
CO5	create lead design workgroups with multidisciplinary competencies with the learnt knowledge and skills	K5,K6
CL – Cognitive Level K1 – Remember K2 – Understand K3 – Apply K4 – Analyse K5 – Evaluate K6 –Create		

UNIT	CONTENT	CL	HRS	CO
1	Introduction to Organizational Development 1.1 Definition, Growth and Relevance	K1- K4	2	1-5
	1.2 Theories of Planned Change- Action Research Model, General Model of Planed Change, Systems Theory, Kurt Lewin Theory, Positive Model	K1- K6	3	
	1.3 Types of Planned Change Change	K1- K6	2	
2	Organizational Design 2.1 Contextual Dimension and Structural Dimension	K1 - K6	4	1-5
	2.2 Organisational Restructuring: Reasons, Strategies, Benefits	K1 - K6	4	
3	Tools and Techniques 3.1 Organisational Diagnosis, Process and practice	K3 - K6	3	1-5
	3.2 Questionnaire as a Diagnostic Tool	K2 - K6	3	
	3.3 Interview as a Diagnostic Tool	K2 - K6	2	
	3.4 Workshops, Task-forces and Other Methods			
4	Process and Designing 4.1 OD Process: Initiating OD relationship, Contracting and diagnosing the problem Collection and analysis for Diagnostic Information, Feedback.	K2 - K6	4	1-5
	4.2 Designing Interventions: Human Process Interventions- Coaching, Training and Development, Process Interventions, Third Party Intervention and team building, Intergroup Relations Interventions, Large Group Interventions.	K2 - K6	4	
5	Special Application of OD 5.1 OD in Community Based Organisations	K2 - K6	2	1-5
	5.2 OD in Family Owned Organisations	K2 - K6	1	
	5.3 OD in Educational Institutions	K2 - K6	1	
	5.4 OD in Public Sector Organisations	K2 - K6	2	
	5.5 Future of OD Case Studies	K2 - K6	2	

BOOK FOR STUDY

Ratan Raina, *Change Management and Organizational Development*. Sage publication. India, 2018

Daft, Richard L. *Organization theory and design*. Cengage learning, USA, 2015.

Burke, W. Warner. *Organization change: Theory and practice*. Sage publications, India, 2023.

BOOKS FOR REFERENCE

Rosenfeld, R. H., and D. C. Wilson. *Managing organizations: text, readings and cases*. McGraw-Hill. London, 1999.

McShane, Steven L., Mary Ann Von Glinow, and Sharma R. Radha. *Organizational Behavior: Emerging knowledge and practice for the real world*. Tata McGraw Hill, India, 2009.

JOURNAL

Work & Stress - <https://search.ebscohost.com>

WEB SOURCE

<https://hrb.org>

PATTERN OF ASSESSMENT**Continuous Assessment:****Total Marks: 50****Duration: 90 minutes**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (6) K2 (4)	5x2 = 10	3 K1 question 2 K2 Question	3 K1 question 2 K2 question (All Questions to be answered)
B 600 words	K3 (10) K4 (10)	2x10 =20	1 K3 question 1 K4 question	2 K3 question 2 K4 question
C 600 words (K5)	K5 (10) K6 (10)	2x10 =20	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

Other Components: Total Marks: 50

Seminars / Quiz / Problem Solving / Assignment / Exhibition / Case Study / Mini Project

End-Semester Examination:**Total Marks: 100****Duration: 3 hours**

Section	Cognition Level and Allocation of Marks	Marks per section	No. of Questions to be answered	No. of Questions to be set
A 50 words	K1 (10) K2 (10)	10x2 = 20	5 K1 question 5 K2 Question	5 K1 question 5 K2 question (All Questions to be answered)
B 600 words	K3 (20) K4 (20)	4x10 =40	2 K3 question 2 K4 question	3 K3 question 3 K4 question
C 1200 words (K5)	K5 (20) K6 (20)	2x20 =40	1 K5 question 1 K6 question	2 K5 question 2 K6 question (Case Study/ Discussion based question)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

QUALITATIVE RESEARCH

CODE:23HR/PI/QR24

CREDITS : 4

OBJECTIVES OF THE COURSE

- To impart knowledge in qualitative research and approach for research
- To familiarize various techniques in designing the sample of the research study
- To gain knowledge in scaling techniques and the data collection methods.
- To provide an exposure to test of significance and scientific way of report writing

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION
CO1	apply and undertake qualitative research activities
CO2	apply various tools and matrix in research related exercises
CO3	formulate research problems and research questions
CO4	write research proposal and undertake qualitative research

UNIT	CONTENT
1	Introduction
	1.1 Introduction to Qualitative Research
	1.2 Difference between Qualitative and Quantitative Research
	1.3 Basic Definitions & Types of Qualitative Research
	1.4 Qualitative Research relevance to contemporary Management Research
2	Approaches to Qualitative Research
	2.1 Different Approaches to Qualitative Research – Phenomenology, Grounded theory, Ethnography, Historical, Narrative and Case study
	2.2 Literature Review: Systematic Review, Review of Literature, Paraphrasing
	2.3 Reference citation Methods – Examples of online reference software.
	2.4 Ethics involved in conducting Qualitative Research
3	Tools of Data Collection
	3.1 Qualitative Research Cycle – Step by Step Guide – Design Cycle, Ethnographic cycle, Analytic cycle
	3.2 Qualitative Research Cycle – Step by Step Guide – Design Cycle, Ethnographic cycle, Analytic cycle
	3.3 Data Collection Methods and Tools– Indepth Interview, Focus Group Discussion and Observation
	3.4 Data Collecting and Recording – Primary Data and Secondary Data
	3.5 Data Editing, Data Coding, Interpretation and Analysis
4	Research Designs and Methodology
	4.1 Concept, Scope and Relevance of Mixed Method Research with relevance to current Social work research
	4.2 Mixed Methods Research Design – Convergent, Sequential, Embedded and Multi-factorial.
	4.3 Data Analysis and Interpretation
	4.4 Data Collection, Transcription of Data, Data Cleaning, Coding, Editing and Data Interpretation and Analysis
5	Qualitative Research Proposal
	5.1 Formulating a sample Qualitative Research Proposal (Assignment)
	5.2 Identifying a Research Problem
	5.3 Identifying Research Questions and Research Variable
	5.4 Formulating a Qualitative Research Design and proposal
	5.5 Data Analysis Introduction to Software - Atlas T, R- QAM Software

BOOK FOR STUDY

Creswell, John W; Creswell, David J. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Sage Publications, 2018

BOOKS FOR REFERENCE

Brennen, Bonnie S. Qualitative Research Methods For Media Studies 2nd Edition. T&F/India, 2018

Dayal, Manoj. Media Metrics: An Introduction to Quantitative Research in Mass Communication. Sage Publications India, 2017

JOURNAL

International Journal of Research and Review

WEB RESOURCES

<https://www.tandfonline.com>

<https://study.sagepub.com>

PATTERN OF ASSESSMENT

End Semester Examination

Total Marks: 100

Duration: 3 Hours

Section – A 10 x 2=20 marks (All questions to be answered in 50 words each)

Section – B 4 x 10 = 40 marks (4 out of 6 questions to be answered in 600 words each)

Section – C 2 x 20 = 40 marks (2 out of 4 questions to be answered in 1200 words each)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: HUMAN RESOURCE MANAGEMENT

SYLLABUS

(Effective from the academic year 2023-2024)

PSYCHOLOGY AND STRUCTURE OF ORGANISATION

CODE:23HR/PI/PO24

CREDITS : 4

OBJECTIVES OF THE COURSE

- To introduce an understanding of Organisational Psychology
- To equip students with knowledge of employee counselling
- To enable students understand the structure of an Organisation
- To understand the knowledge on company's social responsiveness

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

COs	DESCRIPTION
CO1	learn the different concepts in industrial/organizational psychology.
CO2	understand and offer counselling service at work
CO3	imbibe knowledge about structure of an organisation
CO4	exhibit moral principles in a leadership position to guide their actions and behaviours

UNIT	CONTENT
1	Introduction to Industrial Psychology
	1.1 Meaning and Definition , nature, scope of Industrial Psychology 1.2 Role and importance of Psychology in industrial settings
2	Motivation and Leadership
	2.1 Meaning of motivation and leadership
	2.2 Equity Theory and Goal setting Theory of Motivation
	2.3 Motivation and Leadership Styles
3	2.4 Motivation, Leadership and performance at work
	Industrial Counselling
	3.1 Definition, objectives, need and types of employee counselling
	3.2 Counselling Process
	3.3 Work stress and stress Management techniques, Crisis Intervention
4	3.4 Job analysis and performance evaluation
	3.5 Use of Psychometric Testing, SWOC analysis and Conducting Training programmes in an Organisation
	Organisational Structure and Organisational Chart
	4.1 Organisation, Types of Organisations, Characteristics of Formal and Informal Organisations, Benefits of Informal Organisations, Bureaucratic Organisations and Human Relations Organisations.
	4.2 Vision, Mission of an Organization
5	4.3 Meaning, need and Types of Organisational Structure and Organisational Chart
	4.4 Difference between Organisational Structure and Organisational Chart.
	Social Responsibility and Managerial Ethics
	5.1 Introduction – Social Responsibility, Greening of Management, Value Based Management
	5.2 Managerial Ethics – Basic Concepts, Factors affecting Employee ethics

BOOK FOR STUDY

Bhattacharyya Dilip Kumar(2014) Organisational Behaviour, New Delhi Oxford University Press
 Brody Ralph: Effectively Managing Human Services Organizations (Sage Publications, New Delhi-2001)

BOOKS FOR REFERENCE

Singh, Anup and Rajan K Gupta: Designing and Developing Organizations for Tomorrow (Sage Publications, New Delhi-2001)
 Wendell: Organizational Development Prentice Hall of India, New Delhi-2000

JOURNAL

Organizational Psychology Review: SAGE Journals
 Journal of Occupational and Organizational Psychology-Wiley Journals

WEB SOURCE

https://www.researchgate.net/.../267796178_Handbook_of_Industrial_and_Organization.1.
<http://www.blackwellpublishing.com/intropsych/pdf/chapter20.pdf>

PATTERN OF ASSESSMENT**End Semester Examination****Total Marks: 100****Duration: 3 Hours**

Section – A 10 x 2=20 marks (All questions to be answered in 50 words each)

Section – B 4 x 10 = 40 marks (4 out of 6 questions to be answered in 600 words each)

Section – C 2 x 20 = 40 marks (2 out of 4 questions to be answered in 1200 words each)



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

PG
SOCIAL AWARENESS PROGRAM /
SERVICE LEARNING
(CHOICE BASED CREDIT SYSTEM)

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600086

Postgraduate Programmes

SOCIAL AWARENESS

(Effective from the academic year 2023 – 2024)

Guidelines for the conduct of the course

COURSE DESCRIPTION

The Social Awareness course (SA) of the College enables students to understand and react appropriately to both the problems and needs of society and the interpersonal struggles of the members of the communities around them. It trains and sensitises them to become aware of their environment, the different social contexts in which they interact, as well as interpret the emotions of people with whom they communicate. Students will improve their skills in connecting with others verbally and non-verbally, acquire higher levels of emotional intelligence, the ability to empathise with others and understand the roles they play in society.

OBJECTIVES OF THE COURSE

- To enable students to respect and appreciate cultural diversity
- To foster and nurture the ability to empathise with others and individual selves
- To facilitate the acquisition of the attitudes, skills, and knowledge to function in different environments and among different communities
- To enable them to communicate effectively and appropriately in different social contexts

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Understand diverse culture and social norms
- Respond in appropriate ways to the problems and interpersonal struggles of members of different communities
- Empathise with issues and problems faced by people and groups from diverse backgrounds and cultures
- Identify resources to meet with the challenges of diversity and difference
- Understand social justice issues
- Evaluate impact of their interactions and work with communities

Service orientation Guidelines:

- Students are expected to earn 2 credits for SAP
- Departments may choose any one of the given course topics
- Classroom sessions to be activity-based wherever possible
- Visits to communities is a course requirement
- Students are expected to engage and interact with the community, reflect on their experiences and make notes in their journals
- Class room sessions and Field Visits to relevant communities form the major components of the course. The faculty facilitator is expected to arrange for the visits to the community with the help of the SAP Coordinator. They may choose to go either in the morning or afternoon. If in the morning (Aided Sections) they may choose a day on which there are no common class hours (Language, English, GE) and exchange hours with the major subjects teachers. The same protocol holds for Shift II. They may choose a day on which there are no common class hours in the afternoon (Language, English, GE) and exchange hours from the major subject teachers.
- Faculty facilitators are expected to prepare the students for field visit to the community with specific background information.
- Activities to be completed three weeks before the end of the semester.
- Faculty to submit a report on the entire programme to the SAP coordinator and a copy to be retained with the department. (Please include photographs (geotagged), letters, videos, the impact assessment report {community and student} self –reflection journals (two/three samples) and any other additional material that would support the report)

They may request the SA Coordinator for resource persons for inputs on specific areas.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086**Social Awareness / Service Learning****COURSES OF STUDY****(Effective from the academic year 2023-2024)****CHOICE BASED CREDIT SYSTEM**

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
Social Awareness Courses									
23 _ /PA/RD12	Rights of Differently Abled	2	2	0	0	-	50	-	100
23 _ /PA/CR12	Child Rights	2	2	0	0	-	50	-	100
23 _ /PA/CA12	Civic Awareness	2	2	0	0	-	50	-	100
23 _ /PA/HW12	Health and Wellbeing	2	2	0	0	-	50	-	100
23 _ /PA/LC12	Learning from Communities	2	2	0	0	-	50	-	100
23 _ /PA/RR12	Rural Realities	2	2	0	0	-	50	-	100
23 _ /PA/SE12	Social and Economic Issues	2	2	0	0	-	50	-	100
23 _ /PA/UR12	Urban Realities	2	2	0	0	-	50	-	100
23 _ /PA/SZ12	Care of Senior Citizens	2	2	0	0	-	50	-	100
Service Learning Courses									
23FA/PL/AC12	Art for Children	2	2	0	0	-	50	-	100
23CH/PL/FW12	Food Adulteration and Water Pollution	2	2	0	0	-	50	-	100
23CS/PL/CB12	Computer Basics	2	2	0	0	-	50	-	100

___refers department. Ex. 23IS/PA/RD12

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Course on Social Awareness Offered to students of
M.A. /M.Sc./ M.Com. Degree Programmes**

SYLLABUS

(Effective from the academic year 2023 – 2024)

RIGHTS OF THE DIFFERENTLY ABLED

CODE:23__ /PA/RD12

CREDITS: 2

TOTAL HOURS: 26

OBJECTIVES OF THE COURSE

- To enable students to gain knowledge about different types of disabilities
- To help them develop an attitude of respect and dignity towards persons with disabilities
- To introduce them to key ideas in the Rights of Persons with Disabilities Act 2016

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Understand the various kinds of disabilities
- Demonstrate knowledge about various rehabilitation measures for persons with disabilities
- Work with persons living with disabilities
- Describe key ideas in the Rights of Persons with Disabilities Act 2016

Unit 1

Introduction

(7 hours)

- 1.1 Concept of disability and impairment –WHO definition, causes and magnitude of various disabilities, their impact on persons with disability and their families
- 1.2 Types of disability – physical, sensory, intellectual, multiple disabilities, learning disabilities, developmental disabilities, psychosocial disability process of rehabilitation
- 1.3 Early identification, education, vocational rehabilitation and social inclusion and empowerment within the family and community

Unit 2

Legal Provisions for the Disabled and Rehabilitation for the Disabled (7 hours)

- 2.1 Persons with Disability Act, 2016
- 2.2 Role of Government and Non-Government Institutions working for the differently-abled
- 2.3 Needs and problems of persons with disability and their families
- 2.4 Role of Community Based Rehabilitation (CBR) for the differently-abled

Unit 3**Field Work****(12 hours)**

Field Visit to Government and Non-Government Institutions and schools for the disabled.
Projects, Surveys and campaigns with collaborating Institutions

BOOKS FOR REFERENCE

Clark Joan Simeon. Disabled citizens London: George Allen & Unwin, 1970.

Gajendragadkar S.N. Disabled in India USA: California U P, 1983.

Narasimhan M.C. Disability a Continuing Challenge's: Michigan U P, 1989

PATTERN OF ASSESSMENT**No End Semester Examination****Evaluation****Total Marks: 50**

Reports of visits / Class Presentations / Reflection Journal

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Course on Social Awareness Offered to students of
M.A. /M.Sc./ M.Com. Degree Programmes**

SYLLABUS

(Effective from the academic year 2023 – 2024)

CHILD RIGHTS

CODE: 23__/PA/CR12

**CREDITS: 2
TOTAL HOURS: 26**

OBJECTIVES OF THE COURSE

- To understand the scope and implications of children's rights nationally and internationally
- To understand social issues related to children and the institutions working for children
- To identify the different interventions and actors involved in child protection

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Analyse the impact of violence, exploitation and abuse on children's physical and emotional development
- Identify critical issues concerning children's rights
- Identify strategies and programmes for the implementation of children's rights

Unit 1

Introduction

(7 hours)

- 1.1 Defining the concept of child and categories of children
 - 1.1.1 Street Children; Destitute Children; Abandoned Children; Orphan; Sexually Abused, Children; Refugee Child, Migrant Children, Tribal Children, Children living with HIV/AIDS, Children in Conflict with the Law
- 1.2 Causes and consequences of violence against children
 - 1.2.1 Child Labour
 - 1.2.2 Child Prostitution
 - 1.2.3 Child Abuse
- 1.3 Child Rights: The legal foundation of children's protection and human rights

Unit 2

Interventions and Legal Provisions

(7 hours)

- 2.1 Interventions
 - 2.1.1 Social interventions
 - 2.1.2 Community-based interventions (Child Line)
 - 2.1.3 Institutional Intervention: NGOs and INGOs working for Children – CRY, ActionAID, UNICEF, UNDP
 - 2.1.4 Awareness and advocacy on Services for children

- 2.2. Legal Provisions
 - 2.2.1 Child Labor (Prohibition and Regulation) Act, 1986
 - 2.2.2 The Juvenile Justice (Care and Protection of Children) Act, 2015
 - 2.2.3 The Prohibition of Child Marriage Act, 2006
 - 2.2.4 The Right of Children to Free and Compulsory Education, Act, 2009
 - 2.2.5 The Protection of Children from Sexual Offences Act, 2012 (POCSO)
 - 2.2.6 Convention on the Rights of Children (UNCRC)

Unit 3

Field Work

(12 hours)

Field Visit to Government and Non-Government Institutions/community/schools.
Projects, Surveys and campaigns with collaborating Institutions

BOOKS FOR REFERENCE

Bajpai, Asha. Child Rights in India: Law, Policy and Practice. India: Oxford, 2006.
Brotherton Graham Cronin Mark. Working with Vulnerable Children, Young People and Families. UK:Routledge,2013
Sarada,D. Rajini. N. Child Rights and Young Lives: Theoretical Issues & Empirical Studies. India: Discovery, 2009

PATTERN OF ASSESSMENT

No End Semester Examination

Evaluation

Total Marks: 50

Reports of visits / Class Presentations / Reflection Journal

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Course on Social Awareness Offered to students of
M.A. /M.Sc./ M.Com. Degree Programmes**

SYLLABUS

(Effective from the academic year 2023 – 2024)

CIVIC AWARENESS

CODE: 23__/PA/CA12

**CREDITS: 2
TOTAL HOURS: 26**

OBJECTIVES OF THE COURSE

- To enable students to gain knowledge about the importance of civic awareness
- To enable them to acquire the knowledge and attitudes that will make them responsible citizens
- To enable them to contribute for empowerment of society

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Apply essential aspects of civic engagement (such as observation, reflection and dialogue)
- Recognise the potential for individual to bring about change
- Understand the role and impact of government policies on society
- Contribute to solving civic issues within the community

Unit 1

Introduction

(10 hours)

- 1.1 Introduction to Civic Awareness
- 1.2 Rights and Responsibilities, citizenship, electoral participation, volunteerism, activism and advocacy
- 1.3 Basic Understanding of the Indian Constitution – Preamble- Fundamental Rights - Rights and Duties of an Indian Citizen, Right to Information and Right to Public Services

Unit 2

Governmental and Non-governmental Initiatives

(4 hours)

- 2.1 Initiatives in Local Governments: Social Audit, Citizen Charter, Citizen Report Card
- 2.2 Social Accountability
- 2.3 Government and Non-Government Organisations working for important areas: health, sanitation, Energy, Waste Management, Food and Consumer Protection

Unit 3

Field Work

(12 hours)

Field Visit to Government and Non-Government Institutions for urban local governance/Schools and Community visits, projects, survey and campaign with collaborating Institutions

BOOKS FOR REFERENCE

Ahuja Ram. Social Problems in India. Rawat Publications. 3rd Edition, 2014

Allan, R. Modern Politics and Government. New York: Palgrave MacMillan, 2000.

Jacob. "Energy Policy", Nova publisher, 2009. Smith. C.B. Energy "Management Principles", Pergamon Press, 2006.

Bharucha, E. Textbook of Environmental Studies. Hyderabad: Universities Press, 2005

Sunil Khanna, Krishnamohan, Wealth from waste, Tata Energy Research Institute, 2006

PATTERN OF ASSESSMENT

No End Semester Examination

Evaluation

Reports of visits / Class Presentations / Reflection Journal

Total Marks: 50

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Course on Social Awareness Offered to students of
M.A. /M.Sc./ M.Com. Degree Programmes**

SYLLABUS

(Effective from the academic year 2023 – 2024)

HEALTH AND WELLBEING

CODE:23 __/PA/HW12

**CREDITS: 2
TOTAL HOURS: 26**

OBJECTIVES OF THE COURSE

- To understand the concept of health and its importance for wellbeing
- To understand factors affecting health
- To familiarise students with various health problems and its impact
- To familiarise students with basic concepts of AYUSH
- To acquaint students with Government and non-governmental health care services

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Understand the importance of health and wellbeing
- Describe the different factors influencing health and wellbeing
- Understand basic concepts in AYUSH
- Identify the different Government and non-governmental Health Care Services

Unit 1

Introduction

(8 hours)

- 1.1 Definitions and Concepts: Health and Fitness, Hygiene, Nutrition, Malnutrition, Under-nutrition, Disease, Mental Health, Well Being, Balanced Diet
- 1.2 Primary Health Care, Public Health Care, Health Problems in India, Environment and Health
- 1.3 Overview of Alternative systems of Medicine, AYUSH (Ayurveda, Yoga, Unani, Siddha, Homeopathy)
- 1.4 Major Health Problems Related to Women and Children

Unit 2

Health Care Schemes and Institutions

(6 hours)

- 2.1 Health Care Services and Programmes – ICDS, Mid-day meal Scheme, Nutrition on Wheels, Applied Nutrition Programme
- 2.2 Government Health Care Schemes
- 2.3 Organisations - WHO, Indian Red Cross Society, ICMR, CSWB Hospitals (Types)
- 2.4 Health and Medical Insurance

Unit 3**Field Work****(12 hours)**

Field Visit to Urban and Rural Communities/Government and Non-Government Institutions working for Health Care Services. Projects, Surveys and campaigns with collaborating Institutions

BOOKS FOR REFERENCE

Park, J., E., and Park, K, Textbook of Preventive and Social Medicine. Jabalpur: Banarsidas.

Bajpee. Textbook of Preventive and Social Medicine. New Delhi: Jaypee Brothers Medical Publishers, 1995.

Park, K. Textbook of Prevention and Social Medicine. Jabalpur: Banaridas, 2011.

Web Resources

www.health.com

www.aarogya.com

PATTERN OF ASSESSMENT**No End Semester Examination****Evaluation**

Reports of visits / Class Presentations / Reflection Journal

Total Marks: 50

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Course on Social Awareness Offered to students of
M.A. /M.Sc./ M.Com. Degree Programmes**

SYLLABUS

(Effective from the academic year 2023 – 2024)

LEARNING FROM COMMUNITIES

CODE:23 __/PA/LC12

CREDITS: 2

TOTAL HOURS: 26

OBJECTIVES OF THE COURSE

- To introduce students to diverse occupational communities in India
- To enable students to understand the way of life and practices of these communities
- To acquaint students with the impact of Governmental and Non-Governmental interventions in community development
- Enlighten students about the challenges faced by these communities

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Understand the cultures and traditions of diverse occupational communities in India
- Demonstrate competency in addressing diverse problems of different communities
- Demonstrate effective skills in interacting effectively with these communities

Unit 1

Introduction to Community

(7 hours)

- 1.1 Nature of Community
- 1.2 Types of community (Urban, Semi-urban, Rural and Tribal)
- 1.3 Occupation – Based communities
 - Agricultural
 - Handloom weaving
 - Pottery
- 1.4 Community needs

Unit 2

Intervention and Awareness

(7 hours)

- 2.1 Impact of Government in Community Development
- 2.2 Impact of Non- Government/ Non- Profit Organizations in Community Development
- 2.3 Impact of Corporates, Citizen/ Social Activist in Community Development
- 2.4 Indigenous tools of Communication for Awareness and Empowerment

Unit 3

Field Work

(12 hours)

Field Visit to Urban, Rural and Tribal Communities/Government and Non-Government Institutions Surveys, projects with collaborating Institutions Campaigns

BOOKS FOR REFERENCE

Melkote, Srinivas Raj, Steeves, Leslie H: Communication for Development: Theory and Practice for Empowerment and Social Justice. 2015. SAGE Publications, India.

Robinson, Jerry. W, Green, Gary Paul: Introduction to Community Development: Theory, Practice and Service Learning. 2011. SAGE Publications, LA.

PATTERN OF ASSESSMENT

No End Semester Examination

Evaluation

Reports of visits / Class Presentations / Reflection Journal

Total Marks: 50

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Course on Social Awareness Offered to students of
M.A. /M.Sc./ M.Com. Degree Programmes**

SYLLABUS

(Effective from the academic year 2023 – 2024)

RURAL REALITIES

CODE:23 __/PA/RR12

**CREDITS: 2
TOTAL HOURS: 26**

OBJECTIVES OF THE COURSE

- To enable students to gain knowledge about rural realities and problems in rural communities
- To enable them to understand the local self-administration of rural development and various development agencies working for rural development
- To help them learn about community development programmes in India and policies relating to them

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Articulate the socio-economic conditions of the people in the community
- Assess the needs and problems of the people in the community
- Understand various community development programmes and policies

Unit 1

Introduction

(7 hours)

- 1.1 Rural Community Meaning, Characteristics: Types of Villages: Panchyath, Rural
- 1.2 Community Problems: Overview of Socio-Economic Problems - Poverty, Illiteracy, Financial Exclusions, Unemployment, Problems related to Agriculture, Health and Problems Related to Energy, Water and Sanitation
- 1.3 Gender issues, Issues related to Women and Children.

Unit 2

Programmes

(7 hours)

- 2.1 Community development programmes across the various sector in India: ICDS, MGNREGS, IRDP, PMGY, PMGSY, DIKSHA, NRHM, Indra Awas Yojana (IAY) –
- 2.2 Role of Voluntary Agencies in Rural Development and other Civil Society and NGOs in Rural Development
- 2.3 Corporate Social Responsibility (CSR) and Rural Community Development

Unit 3

Field Work

(12 hours)

Field Visit to Government and Non-Government Institutions working for Rural Communities /Visit to Schools/ communities. Projects, Surveys and campaigns with collaborating Institutions

BOOKS FOR REFERENCE

Meier, G. M., & Rauch, J. E. Leading issues in economic development. New York: Oxford University Press. (2005).

Mishra & Puri. Economics of Development and Planning. New Delhi: Himalaya, 2017.

PATTERN OF ASSESSMENT**No End Semester Examination****Evaluation**

Reports of visits / Class Presentations / Reflection Journal

Total Marks: 50

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Course on Social Awareness Offered to students of
M.A. /M.Sc./ M.Com. Degree Programmes**

SYLLABUS

(Effective from the academic year 2023 – 2024)

SOCIAL AND ECONOMIC ISSUES

CODE:23__/PA/SE12

**CREDITS: 2
TOTAL HOURS: 26**

OBJECTIVES OF THE COURSE

- To develop in students an awareness of social and economic issues in India
- Enable the students to understand the present social and economic situation of the country
- To acquire students with the legislation and programs on social and economic issues

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Understand contemporary social and economic issues and debates about these issues
- Critically analyse the social and economic issues affecting rural and urban societies
- Demonstrate an understanding about various schemes and provisions

Unit 1

Introduction

(7 Hours)

- 1.1 Definition of Society, Social System in India
- 1.2 Concept of Development and Underdevelopment
- 1.3 Social Stratification based on Caste, Class, Gender, Race, Religion
- 1.4 Clean Water and Sanitation
- 1.5 Gender Equality
- 1.6 Quality Education
- 1.7 Peace and Empowerment
- 1.8 Unemployment and Underemployment

Unit 2

Legislations and programmes to address Social and Economic Issues (7 Hours)

- 2.1 Role of State and Civil Society –Constitutional Provisions - Important Legislation to Protect Human Rights and RTI Act
- 2.2 Micro Small Medium Enterprises Act
- 2.3 Khadi and Village Industries Commission

Unit 3**Field Work****(12 hours)**

Field Visit to Government and Non-Government Institutions /Rural and Urban communities. Projects, Surveys and campaigns with collaborating Institutions

BOOKS FOR REFERENCE

Agrawal, A.N. Indian Economy Problem of Development and Planning. New Delhi: New International, 2010.

Datt, R. and Sundaram. K.P.M. Indian Economy. New Delhi: Sultan Chand, 2014.

Dhar, P.K. Indian Economy. New Delhi: Kalyani Publishers, 2010.

Desai, A.R., Rural Sociology in India Bombay, Popular Prakashan 1997. Doshi, S.L. and Jain P.C. Rural Sociology. Jaipur, Rawat Publications 1999

PATTERN OF ASSESSMENT**No End Semester Examination****Evaluation****Total Marks: 50**

Reports of visits / Class Presentations / Reflection Journal

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Course on Social Awareness Offered to students of
M.A. /M.Sc./ M.Com. Degree Programme**

SYLLABUS

(Effective from the academic year 2023 – 2024)

URBAN REALITIES

CODE:23__/PA/UR12

**CREDITS: 2
TOTAL HOURS: 26**

OBJECTIVES OF THE COURSE

- To enable students to understand urban social systems and their problems and the change processes in these communities
- To help them gain knowledge on the issues and their implications in urban communities

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Demonstrate a broad understanding of urban realities
- Demonstrate critical thinking and judgement in identifying and solving problems with intellectual independence
- Demonstrate sensitivity and readiness to share their knowledge, experience, and capabilities with the marginalised and oppressed in their communities

Unit 1

Introduction

(7 hours)

- 1.1 Urban Community: Meaning, Suburban, Under Developed Areas,
- 1.2 Urban Problems (Housing, Pollution, Homeless, Shelter-less and Street Vendors, Waste Management, Water and Sanitation Issues, Problems Related to Women, Children, Youth and Elderly)
- 1.3 Drug Addiction
- 1.4 Commercial Sex Workers
- 1.5 Migration
- 1.6 Juvenile Delinquency
- 1.7 Health
- 1.8 Urban Employment
- 1.9 Urban Settlement
- 1.10 Problems with Unorganized Sector

Unit 2

Policies and Programmes

(7 hours)

- 2.1 Urban Community Development Policies and Programmes
- 2.2 Urban Planning, Housing and Urban Development Corporation (HUDCO) and Jawaharlal Nehru National Urban Rural Mission

- 2.3 Role of NGOs in urban development
- 2.4 Role of Municipality and Corporation
- 2.5 Urban Health Mission

Unit 3

Field Work

(12 hours)

Field Visit to Government and Non-Government Institutions /Schools/Urban communities. Projects, Surveys and campaigns with collaborating Institutions

BOOKS FOR REFERENCE

Datt, Ruddar and K.P.M. Sundaram, Indian Economy, New Delhi: S. Chand and Co., 2010

Dhar P.K., Indian Economy, Ludhiana: Kalyani Publishers, 2010

Jhingan M.L. The Economics of Development and Planning, New Delhi: Vrinda Publications (P) Ltd., 2007.

Kuchhal, S.C. and Puri, The Industrial Economy of India, New Delhi: Chaitanya Publishing House, 1996.

PATTERN OF ASSESSMENT

No End Semester Examination

Evaluation

Total Marks: 50

Reports of visits / Class Presentations / Reflection Journal

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

**Course on Social Awareness Offered to students of
M.A. /M.Sc./ M.Com. Degree Programmes**

SYLLABUS

(Effective from the academic year 2023 – 2024)

CARE OF SENIOR CITIZENS

CODE:23 __/PA/SZ12

**CREDITS: 2
TOTAL HOURS: 26**

OBJECTIVES OF THE COURSE

- To understand who caregivers are and the role they play in caring for the Senior Citizens
- To understand the process of ageing and its associated problems
- To understand the social and emotional problems of the Senior Citizens

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Understand the role of caregivers
- Understand the various problems of the Senior Citizens
- Identify the needs of the Senior Citizens
- Demonstrate an understanding about various rehabilitation measures for the Senior Citizens
- Describe the policies and legal provisions for the Senior Citizens

Unit 1

Introduction

(10 hours)

- 1.1 Definition, meaning and role of care-givers
- 1.2 Characteristics of old age
- 1.3 Process of ageing: Cognitive, physical, psychological and social
- 1.4 Needs during old age- physical needs, healthcare needs, and psychological, social and economic needs
- 1.4 Problems of the aged- violence, neglect, abuse, crimes, empty nest syndrome, physiological and psychological problems of Senior Citizens

Unit 2

Policies and Legal Provisions for the Senior Citizens

(4 hours)

- 2.1 National policies and programmes for Senior Citizens
- 2.2 Constitutional and legal provisions for the Senior Citizens

Unit 3

Field Work

(12 hours)

Field Visit to Government and Non-Government Institutions for Senior Citizens, Projects Surveys and Campaigns with collaborating Institutions

BOOKS FOR REFERENCE

Binstock, R.H and Shahas, E Handbook of aging and the Social Sciences 1976 Van Nostrand Reinhold

Desal, K.G Aging in India 1982 TISS Series 52

PATTERN OF ASSESSMENT

No End Semester Examination

Evaluation

Total Marks: 50

Reports of visits / Class Presentations / Reflection Journal

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600086

Postgraduate Programmes

SERVICE LEARNING

(Effective from the academic year 2023 – 2024)

Guidelines for the Conduct of the Course

COURSE DESCRIPTION

Service Learning (SL) is a course-based experiential learning that engages students in service to the community as an integrated aspect of a course. Students participate in an organised service activity that meets identified community needs and integrates the service activity to gain further understanding of course content, a broader appreciation of the discipline and an enhanced sense of personal values and civic responsibility. This method is seen as an effective way to enable students to achieve required learning outcomes through service to the community. Service Learning seeks to advance the goals of the curriculum.

The course promotes mutual learning experiences for both students and members of the community. The focus is on students reflecting on their experience of doing and learning i.e. active learning.

OBJECTIVES OF THE COURSE

- To enhance academic learning by challenging students to apply their subject knowledge and critical thinking to real-world situations
- To increase understanding of theoretical issues being addressed in the classroom
- To direct the students into practical settings where the objective is to serve the community
- To encourage reflection as a self-guided method for change and learning
- To develop skills necessary to establish and maintain relationship with communities
- To enable students to help communities learn and benefit through their active service inputs and facilitation

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Make strong connections between curricular and experiential learning
- Reflect on how thoughts and actions impact the development of supportive and inclusive communities
- Reflect and document connections between knowledge and skills resulting from classroom learning and service-learning experiences
- Demonstrate skills in establishing and maintaining relationships with communities
- Evaluate impact/benefit of SL activities and interactions in communities

Stages for Service Component

- Preparation for meeting community needs with the curriculum of selected course for the SL pedagogy
- Community interaction
- Reflection and learning on the service component

Students will get two credits on completion.

Guidelines for conduct of course

SL should be utilised as pedagogy, not just a learning tool. It should be integrated into the course/module content and the class activities, with clearly identified learning outcomes and assessment methods.

A community partner/s should be identified, their needs assessed, and the appropriate partner selected. Faculty members should attend Partnership Events hosted by the SL Coordinator in order to cultivate and reinforce community partnerships.

Learning should include preparing the students to network, establish contact and interact with partner communities through service activities.

Faculty should prepare students for active engagement in the community and encourage them to **reflect critically** on their experience. Faculty should use rubrics to evaluate students' progress before, during and after the service learning programme.

Students should leave the service learning experience with a deeper and even changed understanding of themselves, the communities they work with, and their potential to participate in the civic life of communities, country, and world.

Service Learning as pedagogy creates the opportunity for students to try and live out the core principles and values of the institution.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.A. DEGREE: BRANCH X – HISTORY OF FINE ARTS

SERVICE LEARNING

SYLLABUS

(Effective from the academic year 2023-2024)

ART FOR CHILDREN

CODE: 23FA/PL/AC12

CREDITS: 2
TOTAL HOURS: 26

OBJECTIVES OF THE COURSE

- To enhance academic learning by challenging students to apply their subject knowledge and critical thinking to real-world situations
- To develop a perspective built on academic knowledge and skills and community responsibility
- To acquire knowledge about teaching art to children
- To develop skills necessary to work with children
- To develop creative skills in art/design activities for children

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Make strong connections between curricular and experiential learning
- Employ critical thinking skills in a variety of contexts
- Reflect and document connections between knowledge and skills, resulting from classroom learning and service-learning experiences
- Work with organisations/institutions operating for children
- Plan and implement art/design activities for children

Unit 1

Introduction to Service Learning (2 hours)

- 1.1 Service Learning Principles- engagement, reflection, reciprocity, public dissemination
- 1.2 Meaning of community and understanding of community dynamics
- 1.3 Project planning stages and ethical concerns

Unit 2

Art/design activities (6 hours)

Ideation, planning and preparatory work

Unit 3

Implementation (18 hours)

- 3.1 Visits to the field/community
- 3.1 Impact analysis and documentation

PATTERN OF ASSESSMENT

- There will be no end semester examination

Evaluation:

Total Marks: 50

Journal writing/class presentation/participation in and contribution to art/design activity

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

M.Sc. DEGREE: BRANCH IV- CHEMISTRY

SERVICE LEARNING

SYLLABUS

(Effective from the academic year 2023 – 2024)

FOOD ADULTERATION AND WATER POLLUTION

CODE:23CH/PL/FW12

**CREDITS: 2
TOTAL HOURS: 26**

OBJECTIVES OF THE COURSE

- To enable students to gain knowledge about food adulterants and disseminate their knowledge to the communities
- To help them present basic inputs on water quality management and harmful effects of water pollution to the community
- To envisage, plan and work out strategies in working with communities

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Understand the nature of common adulterants in food and draw conclusions on their harmful effects
- Determine the ways of maintaining water quality
- Record correlations between classroom learning and service-learning experiences
- Exhibit skills in establishing and upholding relationships with communities
- Design and work on sustainable approaches towards water quality management
- Demonstrate ability to plan and strategise in sharing knowledge with the community through hands-on experiences

Unit 1

Introduction to Service Learning (2 hours)

- 1.1 Service Learning Principles- engagement, reflection, reciprocity, public dissemination
- 1.2 Meaning of community and understanding of community dynamics.
- 1.3 Project planning stages and ethical concerns

Unit 2

Activity-based preparation (6 hours)

- 2.1 Food Laws: Prevention of Food Adulteration Act-Salient Features of P.F.A., Misbranded Food, Brief Outline of Labeling Provisions Under P.F.A, Role and Functions of Implementing Agencies with references to Indian Scenario FPO Act,

Essential Commodities Act, Consumer Protection Act, Agricultural Produce Act (AGMARK), FSSAI-salient features

- 2.2 Food additives-types, permissible limits and harmful effects of food additives
- 2.3 Water Pollution-causes and effects, water conservation- steps taken by the government of India, methods to prevent water pollution, discussion on case studies with reference to water pollution and its preventive measures, recycling of waste water and measures taken for effluent water treatment
- 2.4 Detrimental effects of microbes in water
- 2.5 Estimation of hardness and alkalinity of water
- 2.6 Effect of presence of dissolved oxygen and elements like chlorine, lead etc. in water

Unit 3

Field Work

(13 hours)

Includes visits to the field/community;

Impact analysis; Documentation; Reflection and Recommendation

(5hours)

BOOKS FOR STUDY

Swaminathan Geetha and Mary George. *Laboratory Chemical Methods in Food Analysis*. Chennai: Margham, 2010.

Mendham J., Denny R.C., Barnes J.D and Thomas M. *Vogel's Text Book of Quantitative Chemical Analysis*, London: Pearson Education, 2002.

BOOKS FOR REFERENCE

Swaminathan, M. *Handbook of Food and Nutrition*. Bangalore: Bangalore Printing and Pub, 2001.

Luxmy Begum, P, *Water Pollution: Causes, Treatments and Solutions*. Eng., First Edition, October, 2015

JOURNALS

Journal of Food: Microbiology, Safety & Hygiene

Journal of Pollution Effects & Control

WEB RESOURCES

<http://agmarknet.nic.in/adulterants.htm>

<https://www.nrdc.org/stories/water-pollution-everything-you-need-know>

PATTERN OF ASSESSMENT

No End-Semester Examination

Evaluation:

Total Marks: 50

Journal Writing / Class Presentations (individual or group) / Documentation (photos with captions, short reports in portfolio Format)

Mandatory Component

Case study presentations- use of research papers from journals

Qualitative and quantitative experiments to be performed- evaluation of the scientific observations and results to be formulated based on the inferences drawn.

Analytical Instrumentation techniques used for testing food and water quality- preparation of reports based on that.

Group Discussions and debates.

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

SERVICE LEARNING

SYLLABUS

(Effective from the academic year 2023 – 2024)

COMPUTER BASICS

CODE:23CS/PL/CB12

CREDITS: 2
TOTAL HOURS: 26

OBJECTIVES OF THE COURSE

- To enable students to become sensitive to the needs of society and communities
- To help them develop skills necessary to establish and maintain relationships with communities
- To enable students to use their computer skills to teach school students computer basics

COURSE LEARNING OUTCOMES

On successful completion of this course, the students will be able to

- Make strong connections between curricular and experiential learning
- Reflect and document connections between knowledge and skills, resulting from classroom learning and service-learning experiences
- Demonstrate skills in establishing and maintaining relationship with the community
- Transfer knowledge and skills they have gained in class to new situations within and beyond their academic courses
- Demonstrate knowledge and gain teamwork skills by actively participating in imparting basic computer skills to the community

Unit 1

Introduction to Service Learning (2 hours)

- 1.1 Service Learning Principles- engagement, reflection, reciprocity, public dissemination;
- 1.2 Meaning of community and understanding of community dynamics
- 1.3 Project planning stages and ethical concerns

Unit 2

Activity-based preparation (6 hours)

Preparation of resource materials and activities to teach

- 2.1 Basics of electronic mail, getting an email account, Sending and receiving emails, Accessing sent emails, Using Emails, Document collaboration
- 2.2 Using Spread Sheet - Basics of Spreadsheet; Manipulation of cells, Formulas and Functions, Editing of Spread Sheet, printing of Spread Sheet
- 2.3 Making Small Presentation: Basics of presentation software, Creating Presentation,

Preparation and Presentation of Slides, Slide Show, Taking printouts of presentation / Handouts

Unit 3

Field Work

(13 hours)

Includes visits to the field/community/schools

Impact analysis; Documentation; Reflection, Recommendation and follow-up **(5 hours)**

BOOKS FOR REFERENCE

Weverka, Peter. *Office 2013 All-in-one for Dummies*. John Wiley & Sons, 2013

Channelle, Andy. *Beginning OpenOffice 3*. Apress, 2008

Harvey, Greg. *Excel 2019 All-in-one for Dummies*. John Wiley & Sons, 2018.

PATTERN OF ASSESSMENT

No End-Semester Examination

Evaluation:

Total Marks: 50

Journal Writing / Class Presentations (individual or group) / Documentation (photos with captions, short reports in portfolio Format)



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

VALUE EDUCATION
M.A. / M.Sc. / M.Com. / M.S.W. DEGREE
(CHOICE BASED CREDIT SYSTEM)

SYLLABUS
(Effective from the academic year 2023 - 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

VISION STATEMENT

The vision of the College is to build a vibrant and inclusive learning community in a culture of excellence sustained by a sound value system that promotes responsible citizenship and effects social change.

MISSION STATEMENT

The mission of the College is to empower young women to face the challenges of life with courage and commitment, to be builders of a humane and just society, and to promote a learning community in which all, especially those from less privileged backgrounds, feel part of the collaborative high quality educational process which is value based and leads to holistic growth.

EDUCATIONAL OBJECTIVES OF THE INSTITUTION

- To offer a globally relevant curriculum and promote academic excellence, equipping graduates with a comprehensive understanding of their domain of study, leading to research and innovation
- To promote professional skill development and entrepreneurship, empowering graduates to achieve professional excellence, employability, entrepreneurship and leadership qualities
- To provide a vibrant and inclusive teaching-learning environment where graduates are imbued with a strong desire for academic growth and become lifelong learners
- To contribute towards nation building by fostering in graduates a respect for values, ethics and diversity
- To be environmentally conscious and sustainable, inspiring graduates to fulfil their social and civic responsibilities

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086

DEPARTMENT OF VALUE EDUCATION

COURSES OF STUDY

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continuous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
SEMESTER-II									
23PV/CD/CL22	Christian Living	2	2	0	0	-	50	-	100
23PV/ET/HP22	Holistic Development of Personality	2	2	0	0	-	50	-	100
SEMESTER-III									
23PV/CD/WC32	Women and Christian Living	2	2	0	0	-	50	-	100
23PV/ET/WF32	Women in Family and Society	2	2	0	0	-	50	-	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF VALUE EDUCATION

SYLLABUS

(Effective from the academic year 2023–2024)

CHRISTIAN LIVING

CODE:23PV/CD/CL22

CREDITS:2

L T P:2 0 0

TOTAL TEACHING HOURS:26

OBJECTIVES OF THE COURSE

- To enable the students to recognize and develop their personal selves
- To enable students to recognize their role as Christians in society by emulating leaders in the Bible.
- To facilitate an understanding of the Divine through a study of select chapters from the Bible and papal encyclicals.

COURSE LEARNING OUTCOMES

On Successful completion of the course, students will be able to

- To identify their personal strengths and weakness
- To recognize their role as Christian leaders in society
- To display an understanding of the Divine.

Unit 1

Valuing Self

(6 Hours)

- 1.1 Self-Knowledge – Self Worth - Ps. 139 & Letter of James
- 1.2 Self-Acceptance – Self Love – Ps. 51 & Letter of James

Unit 2

Valuing Others

(14 Hours)

- 2.1 Leading Others – Moses - Exodus - Chapter 2-20
- 2.2 Servant Leadership – Jesus. - St. John chapter 13
- 2.3 Living our faith as Christian Leaders – Acts: St. Peter and St. Paul

Unit 3

Valuing the Divine

(6 Hours)

- 3.1 Creator, Preserver, Sustainer – Ps. 1, Ps. 8
- 3.2 Apostolic Exhortation of Pope Francis – Evangelii Gaudium - The Joy of the Gospel.
- 3.3 Apostolic Exhortation of Pope Francis – Gaudete et Exsultate – Call to Holiness

Retreat - All students are required to attend.

BOOKS FOR REFERENCE

Dubrin, J. Andrew. *Effective Leadership*. Delhi: Goyal, 1999.

James, G.M. *Human Excellence Development*. Chennai: Prakash 2010.

Ken Blanchard, Phil Hodges, Phyllis Hendry. *Lead Like Jesus Revisited*.

Pope Francis. *Evangelii Gaudium - The Joy of the Gospel*. Trivandrum Carmel, 2013.

Pope Francis. *Gaudate et Exultate – Rejoice and Be Glad*, Mumbai, Uchitha Graphic Printers, 2018

The Holy Bible – Revised Standard Version. Bangalore: Theological Publications in India, 2010.

Miller, M. J., & Benedict, . (2011). *YOUCAT English: Youth catechism of the Catholic Church*. San Francisco, Calif: Ignatius Press.

Miller, M. J., & Francis, . (2016). *DOCAT English: What to do?*. San Francisco, Calif: Ignatius Press.

PATTERN OF ASSESSMENT (Internal) - Marks: 50

Continuous Assessment Test:

Group discussion/Presentation/Assignments/Role Plays/Case Studies/Quiz

Teaching / Learning Methods

Lectures/Group discussions/Paper presentations/Power point presentations/Assignments/Role plays/Case studies/Debates/Documentaries and video clippings

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF VALUE EDUCATION

SYLLABUS

(Effective from the academic year 2023–2024)

HOLISTIC DEVELOPMENT OF PERSONALITY

CODE:23PV/ET/HP22

CREDITS:2

L T P:2 0 0

TOTAL TEACHING HOURS:26

OBJECTIVES OF THE COURSE

- To inculcate in the students a holistic approach towards the development of an integrated personality
- To enable the students to recognize and enhance their personal, social and spiritual values.
- To enable students to develop and understand the value of leadership and the skills pertaining to it.

COURSE LEARNING OUTCOMES

On Successful completion of the course, students will be able to

- Understand themselves better and will be able to recognize their personal, social and spiritual values.
- Enhance their knowledge of social and personal skills along with personality development.
- To apply the skills of leadership in daily life, at home, in their workplace and in society.

Unit 1

Self-Awareness

(6 Hours)

- 1.1 Understanding of the self - self-confidence, self-esteem, personal credibility.
- 1.2 Personal Development - family, education and career
- 1.3 Personal challenges – Adaptability to culture, society and environment.

Unit 2

Values Of Leadership

(12 Hours)

- 2.1 Youth leadership
- 2.2 Role of youth in nation- building – social, political, economic and cultural
- 2.3 Laws pertaining to human rights and responsibilities- Right to education Article 21(A); Right to life and liberty Article 21; Right to work, to just and favourable conditions of work Article 23(2)

Unit 3

Spiritual Awareness And Development

(8 Hours)

- 3.1 Prayer & meditation
- 3.2 Forgiveness & tolerance
- 3.3 Charity & service
- 3.4 Harmony & peace building

Workshop – Youth Leadership.
It is a requirement for all students

Teaching /Learning Methods

- Lectures
- Group discussion
- Paper presentations
- Power point presentations
- Seminars
- Role play
- Case studies
- Debates
- Documentaries and video clippings

BOOKS FOR REFERENCE

Davidar(Eds) *Human Values*. New Delhi: All India Association of Christian Higher Education (AIACHE) , 2013.

Dubrin ,J.Andrew. *Effective Leadership*.Goyal Publishers: Delhi, 1999.

Koikara, Felix. *Heal the World*. Mumbai: Better Yourself Books, 2002.

Subramanian,S.Human Rights International Challenges. New Delhi: Manas, 1997.

Thomas.M.A .*The Struggle for Human Rights*. Bangalore: Asian Trading Corporation, 1992.

Ignacimuthu, S. *Values for life*. Better Yourself Books: Mumbai, 1994.

PATTERN OF ASSESSMENT (Internal) - Marks: 50

Quiz

Assignment

Presentation - Individual / Groups

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF VALUE EDUCATION

SYLLABUS

(Effective from the academic year 2023–2024)

WOMEN AND CHRISTIAN LIVING

CODE:23PV/CD/WC32

CREDITS:2

L T P:2 0 0

TOTAL TEACHING HOURS:26

OBJECTIVES OF THE COURSE

- To create in students an awareness of Women's issues and to prepare them to contribute to the empowerment of women
- To study the women in the Bible in the context of modern Christian Living
- To enable students to identify and understand the contribution of women saints in the Catholic Church

COURSE LEARNING OUTCOME

On Successful completion of the course, students will be able to

- Engage with Women's Issues and respond to them assertively and responsibly
- Strike a balance between family life and their career
- Emulate the values professed by Christian women down the ages

Unit 1

Woman's Personal well-being - Physical, Emotional, Spiritual (6 Hours)

- 1.1 Women and Marriage.
- 1.2 Women and parenting

Unit 2

Women in the Bible (8 Hours)

- 2.1 Old Testament: Eve, Ruth, Deborah, Esther, Judith, Rahab, Delilah
- 2.2 New Testament: Mary, the mother of Jesus, Elizebeth, Mary – Magdalene, Samaritan Women, Women who ministered to Jesus.

Unit 3

Women in the Church (12 Hours)

- 3.1 Contemplative Women Saints - St. Theresa of Child Jesus, Blessed Mary of the Passion
- 3.2 Apostolic Women Saints - St. Mother Teresa, St. Agatha, St. Rani Maria
- 3.3 Martyrs - Joan of Arc, Rani Maria, FMM Martyrs
- 3.4 Intellectual (Doctors of the Church) - St. Teresa of Avila, St. Caherine of Sienna

Teaching / Learning Methods

- Lectures
- Group Discussions
- Paper Presentations
- Power Point Presentations
- Assignments
- Role Play
- Case Studies
- Debates
- Documentaries and Video Clippings

Retreat - All catholic students are required to attend

BOOKS FOR REFERENCE

Davidar(Eds). *Human Values*. New Delhi: All India Association of Christian Higher Education (AIACHE), 2013.

Puthenkalam J and Mampara A. *Sanctity in India*. Yercaud; The Retreat 2000.

Lockyer Herbert. *The Women of the Bible – the life and times of all the women of the Bible*. London: Pickering and Ingles, 1967.

Raja RJ S J. *You are Graced – Women in the Old Testament*, Bangalore: NBCLC, 2004.

Raja RJ S J. *You are Free – Women in the New Testament*, Bangalore: NBCLC, 2004

North, Colleen. *The Women In the Life and Work of Mary of the Passion*. Chennai: Vacha, 2007.

Pope John Paul II. *Dignity and Vocation of Women*. Mumbai: St. Paul's Publications, 1988.

The Holy Bible – *Revised Standard Version*. Bangalore: Theological Publications in India, 2010.

PATTERN OF ASSESSMENT (Internal) - Marks: 50

Continuous Assessment Test:

Quiz

Assignment

Presentation - Individual / Groups

Role Play

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF VALUE EDUCATION

SYLLABUS

(Effective from the academic year 2023–2024)

WOMEN IN FAMILY AND SOCIETY

CODE:23PV/ET/WF32

CREDITS:2

L T P:2 0 0

TOTAL TEACHING HOURS:26

OBJECTIVES OF THE COURSE

- To create in students an awareness about women's issues
- To sensitize the students to the problem of women
- To prepare the students for their multi-faceted roles as women
- To enable students to understand their rights as women and the laws pertaining to women's rights

COURSE LEARNING OUTCOMES

On Successful completion of the course, students will be able to

- Appreciate their roles and face challenges as women
- Understand their contributions towards society
- Promote awareness to others on the rights of women in society

Unit 1

Women and Family

(6 Hours)

- 1.1 Understanding and realization of womanhood
- 1.2 Women and marriage
- 1.3 Women and positive parenting
- 1.4 Physical, psychological and emotional well being
- 1.5 Challenges in daily life

Unit 2

Women in Society

(12 Hours)

- 2.1 Women and career
- 2.2 Women and science and technology
- 2.3 Women and media
- 2.4 Women in the political system
- 2.5 Protective laws and support system for women- 1) National Policy for Empowerment of women, 2001. 2) The Protection of Women from Domestic Violence Act 2005. 3) Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.

Unit 3

Women and Spirituality

(8 Hours)

- 3.1 Spirituality and daily living
- 3.2 Great spiritual women of India
- 3.3 Promoting justice and peace- contribution of contemporary women

Workshop – 1. Human Rights Issues and Challenges

2. Gender Issues

Teaching / Learning Methods

- Lectures
- Group Discussions
- Presentations
- Seminars
- Role Plays
- Case Studies
- Debates
- Documentaries and Video Clippings

BOOKS FOR REFERENCE

Davidar(Eds). *Human Values*. New Delhi: All India Association of Christian Higher Education (AIACHE), 2013.

D'Souza, Philomena. *Women Icon of Liberation*. Mumbai: Better Yourself Books, 2005.

Forbes, Geraldine. *Women in Modern India*. Cambridge. Cambridge University Press, 1999.

Fernando Peter. *Woman's Image Making and Shaping*. Pune: Ishvani Kendra, 1985.

North Colleen. *The Women In the Life and Work of Mary of the Passion*. Chennai: Vacha, 2007.

PATTERN OF ASSESSMENT (Internal) - Marks: 50

Continuous Assessment

Quiz

Assignment

Presentation - Individual / Groups

Seminars



STELLA MARIS COLLEGE
(AUTONOMOUS), CHENNAI - INDIA

PGDCS
POSTGRADUATE DIPLOMA IN COMPUTER SCIENCE
(CHOICE BASED CREDIT SYSTEM)

OUTCOME BASED EDUCATION (OBE)
LEARNING OUTCOME BASED
CURRICULUM FRAMEWORK (LOCF)

SYLLABUS
(Effective from the academic year 2023 – 2024)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

DEPARTMENT OF COMPUTER SCIENCE

PROGRAMME DESCRIPTION

The Postgraduate Diploma in Computer Science offers knowledge on the concepts of computer technology and use of various programming languages as tools for designing and solving problems. This degree not only helps the students to pursue career in the IT industry or master's programme in the discipline but also opens up avenues in different domains of their interest as computer technology plays a vital role in almost all disciplines.

The understanding of concepts are enhanced with appropriate components which includes case studies, presentations and projects. The students are also given an opportunity to critically analyse an advanced technology of their interest.

Students completing postgraduate Diploma in Computer Science will be equipped in recent advances computer technology.

PROGRAMME SPECIFIC LEARNING OUTCOMES

On successful completion of this programme, it is expected that students will be able to

PSO1	Describe and define concepts in Computer Science
PSO2	Understand, analyse and interpret data
PSO3	Understand and analyse the current research issues
PSO4	Interpret concepts in the discipline and apply them to new areas
PSO5	Understand and analyse problems in different domains and develop solutions or strategies to solve those problems
PSO6	Communicate effectively in both oral and written contexts individually and in teams
PSO7	Cultivate skills for successful careers, entrepreneurship and higher studies

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086**POST GRADUATE DIPLOMA IN COMPUTER SCIENCE****COURSES OF STUDY**

(Effective from the academic year 2023-2024)

CHOICE BASED CREDIT SYSTEM

C-Credit, L-Lecture Hours, T-Tutorial Hours, P- Practical Hours, Ex-Exam Hours, CA- Continous Assessment Marks, ES-End Semester Marks, M-Maximum Marks									
Subject Code	Title of Course	C	L	T	P	Ex	CA	ES	M
SEMESTER-I									
23CS/DC/PP14	Programming with Python	4	3	0	2	3	50	50	100
23CS/DC/OS14	Operating Systems: Concepts and Applications	4	2	0	3	3	50	50	100
23CS/DC/SE14	Software Engineering	4	4	1	0	3	50	50	100
23CS/DC/RM14	Research Methodology	4	3	1	2	-	50	50	100
23CS/DC/DA14	Data Analytics	4	4	1	0	3	50	50	100
23CS/DC/DT13	Design Tools	3	2	0	2	3	50	50	100
SEMESTER - II									
23CS/DC/OO24	Object Oriented Programming	4	3	0	2	3	50	50	100
23CS/DC/CC23	Cloud Computing	3	3	1	0	3	50	50	100
23CS/DC/DB25	Database Management Systems	5	3	0	3	3	50	50	100
23CS/DC/CA21	Critical Analysis on an Advanced Technology	1	0	0	2	-	50	50	100
23CS/DC/DI28	Dissertation	8	0	0	10	-	50	50	100

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE

SYLLABUS

(Effective from the academic year 2023 - 2024)

PROGRAMMING WITH PYTHON

CODE: 23CS/DC/PP14

CREDITS : 4

L T P : 3 0 2

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To understand the elements of a program
- To structure simple Python programs for solving problems
- To understand modular programming
- To represent compound data using Python lists, tuples and dictionaries

COURSE LEARNING OBJECTIVES

On successful completion of the course, students will be able to

- comprehend the elements of a program
- understand the notion of data types, and higher order data structures such as lists, tuples, and dictionaries
- understand how Python can be used for application development
- identify and repair coding errors in a program

Unit 1

(15 Hours)

1.1 Introduction to Python Programming

History of Python-Getting Started with Python-Programming Style and Documentation-Programming Errors

1.2 Elementary Programming

Writing a Simple Program-Reading Input from Console-Identifiers-Variables-Assignment Statements and Expressions- Simultaneous Assignments-Named Constants-Numeric Data Types and Operators-Evaluating Expressions and Operator Precedence-Augmented Assignment Operators-Type Conversions and Rounding- Case Study-Displaying Current Time-Computing Distances

Unit 2 (16 Hours)

2.1 Mathematical Functions, Strings, And Objects

Common Python Functions-String and Characters-Case Study-Introduction to Object and Methods- Formatting Numbers and Strings-Drawing Various Shapes-Drawing with Colors and Fonts

2.2 Selections and Loops

Boolean Type, Values, Expressions-If Statements-Case Study-Two Way If Statements-Nested If-Common Errors in Selection Statement-Case Study-Logical Operators-Case Study-Conditional Expressions-Operator Precedence and Associativity -The While Loop-The For Loop-Nested Loops-Minimizing Numerical Errors-Case Study

Unit 3 (16 Hours)

3.1 Functions

Defining A Function- Calling A Function- Function With or Without Return Values- Positional and Keyword Arguments-Passing Argument by Reference- Modularizing The Code- Case Study-The Scope of the Variables-Default Arguments-Returning Multiple Values- Case Study-Function Abstraction-Recursion

3.2 Object and Classes

Defining Classes for Objects-Constructing Objects-Accessing the Member of the Objects-Self Parameters- Using Classes- Hiding Data Field- Immutable Objects Vs Mutable Objects-Class Abstraction and Encapsulation-Case Study

3.3 Strings and Special Methods

The STR Class-Creating Strings-Functions for Strings-Index Operator []-The Slicing Operator-Concatenations Operators-In and Not in Operators-Comparing, Iterating and Strings-Searching, Converting and Formatting Strings

Unit 4 (15 Hours)

4.1 List Processing

GUI Programming Using Tkinter-List Basics-Case Study-Copying the Lists-Passing Lists to Function-Returning List from Function-Case Study-Searching Lists-Sorting Lists-Case Study-Multidimensional Lists-Processing Two Dimensional List- Processing Two Dimensional List to Function-Case Study-Multidimensional Lists

Unit 5 (3 Hours)

5.1 Tuples, Sets and Dictionaries

Tuples- Sets-Comparing the Performances of Sets and Lists-Case Study-Dictionaries-Case Study

BOOK FOR STUDY

Y. Daniel Liang, *Introduction to Programming Using Python* , Prentice Hall, 2013.

BOOKS FOR REFERENCE

Allen B. Downey. *Think Python. How to Think Like a Computer Scientist*, 2nd edition, O'Reilly Publishers, 2016.

David Beazley, Brian K. Jones. *Python Cookbook: Recipes for Mastering Python 3*, 3rd Edition, 2013

Harsh Bhasin. *Python for Beginners*. New Age International Publishers, 2018.

Martin C. Brown. *Python: The Complete Reference*. McGraw Hill Education; Fourth edition, 2018.

WEB RESOURCES

http://en.wikibooks.org/wiki/Python_Programming

<http://docs.python.org>

<http://diveintopython.org/>

<https://realpython.com/start-here/>

<https://www.geeksforgeeks.org/python-programming-examples/>

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50 Duration: 90 minutes

Theory – 25 marks

Practical – 25 marks

Section A - 3 x 5 = 15 marks (3 out of 4)

Section B - 1 x 10 = 10 marks (1 out of 2)

Other Components: Total Marks: 50

Seminars/Group discussion/Assignments/Case studies/Mini Project

End Semester Examination: Total Marks: 100 Duration: 3 hours

Theory – 50 marks Duration – 1 ½ hrs

Practical – 50 marks Duration – 1 ½ hrs

Theory Pattern

Section A - 5 x 2 = 10 marks (Answer all the questions)

Section B - 4 x 5 = 20 marks (4 out of 6)

Section C - 2 x 10 = 20 marks (2 out of 3)

(Questions for forty marks towards Section B and Section C should be set such that equal weightage is given to all units)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE

SYLLABUS

(Effective from the academic year 2023 - 2024)

OPERATING SYSTEMS: CONCEPTS AND APPLICATIONS

CODE:23CS/DC/OS14

CREDITS : 4

L T P: 2 0 3

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To learn the fundamentals of Operating Systems
- To learn the mechanisms of OS to handle processes, scheduling algorithms
- To acquire the knowledge on the mechanisms involved in memory management
- To understand Mutual exclusion principles and deadlock detection algorithms
- To learn programmatically to implement simple OS mechanisms
- To learn about security

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- describe the basic components of an operating system and its services
- define the concepts of processes and competitive system resource allocation
- outline standard scheduling algorithms for multi-tasking
- describe process synchronization and understand process utilities
- describe memory management and File management concepts

Unit 1 (16 Hours)

1.1 Introduction to Operating System

Introduction to OS - Structure, Operations, Protection and Security, Kernel Data Structures, Computing Environments, Services, System Calls and its types, System Programs, OS Design and Implementation OS Debugging Operating, System Generation, System Boot

1.2 UNIX Operating System

History of UNIX, Shell, UNIX File System Structure

1.3 Basic UNIX Commands*

Commands for files and directories cd, cp, mv, rm, mkdir, more, less, creating and viewing files, using cat, date, who, pwd - filter commands –head tail, cut, paste, grep – regular expression - sort

Unit 2 (15 Hours)

2.1 Process Management

Process - Concept, Process Control Block, Process operations, Scheduling Algorithms - Short term and long term process scheduling policies - Scheduling Criteria - Multiple Processor Scheduling

2.2 CPU Scheduling

Scheduling Criteria – Scheduling Algorithms : FCFS, SJF, Priority and Round Robin Scheduling

2.3 Process Synchronization and Deadlocks

The Critical-section Problem – Petersons solution – Mutex locks - Semaphores – Monitors, Deadlock Prevention and Avoidance, Deadlock Detection and Deadlock Recovery

2.4 Process Utilities*

sh process, Parents and children, Process status, System process, Mechanism of process creation, Internal and external commands, running jobs in background, KILL, NICE, Job control, at and batch, cron - Case Study on Processes in LINUX

Unit 3 (16 Hours)

3.1 File Organisation

File organisation and Access methods - Logical and Physical File structure - File Allocation methods, -Linked and Index Allocation - File Protection and Security - Directory structure - Single level, Two level, Tree structure - Free Space Management - Allocation Methods - Efficiency and Performance – Recovery – FAT32 and NTFS

3.2 File System*

File Access Permission – chmod, chown, chgrp - File Comparisons - View Files – Listing files with attributes – Wildcards - Translating Characters - Links and its types - The File System – Partitions, File Systems, Kernel Accesses – Mounting – umask, ulimit - I/O redirection – Pipes - Case Study on LINUX File System

Unit 4 (10 Hours)

4.1 Memory Management

Memory Management Techniques, Single Partition Allocation, Multiple Partition Allocation – Swapping - Paging and Segmentation - Segmented-Paged Memory Management Techniques - Logical and Physical Address space – Address Mapping - Demand paging - Virtual memory, protection and address mapping hardware, Page fault, Page replacement and Page removal algorithms

4.2 Device Management

Classification of device according to speed, Disk structure - Disk scheduling – FCFS scheduling, SSTF scheduling - Access method and storage capacity

Unit 5 (8 Hours)

5.1 Disk Utilities*

Disk usage, disk free, dd, Backups- cpio, tar, System calls for file management, directory management - Case Study on Memory Management in LINUX

5.2 Security

The Security Environment – Operating System Security – Controlling Access to resources – Formal models of Secure systems - Basics of cryptography – Authentication – Exploiting Software – Insider Attacks – Malware - Defenses

***Only for Practicals**

Unit	1	1.3
Unit	2	2.4
Unit	3	3.2
Unit	5	5.1

BOOKS FOR STUDY

Silberschatz, Abraham, Peter Baer Galvin and Greg Gagne. *Operating System Concepts*. 10th ed. Addison Wesley. (Units 1 to 4 - Chapters 1-4, 6-13)

Sumitabha Das. *UNIX – Concepts & Applications*. 3rd ed. New Delhi: TataMcGraw Hill, 2000. (Chapters 4-13,15,16)

Tanenbaum S., Andrew, Herbert Bos. *Modern Operating Systems*. 4th ed. Pearson (Unit 5 - Chapter 7, 9, Case Studies – Chapter 10)

Yukun Liu, Yong Yue, Liwei Guo *UNIX Operating System The Development Tutorial via UNIX Kernel Services*. Beijing: Higher Education Press (Chapters 1,2, 6-10)

BOOKS FOR REFERENCE

Kanetkar Yashwant. *UNIX Shell Programming*. BPB.

Rosen Kenneth, Douglas Host, Rachel Klee and Richard Rosinski. *UNIX: The Complete Reference*. 2nd ed. McGraw Hill/Osborne, 2007.

Sobell M. G. *A Practical Guide to Linux Commands, Editors, and Shell Programming*. USA: Pearson Education

WEB RESOURCES

www.tutorialspoint.com/unix

www.unixtutorial.org/

www.guru99.com/unix-linux-tutorial.html

PATTERN OF ASSESSMENT

Continuous Assessment:

Total Marks:50

Duration: 90 minutes

Theory – 25 marks

Practical – 25 marks

Section A - 3 x 5 = 15 marks (3 out of 4)

Section B - 1 x 10 = 10 marks (1 out of 2)

Other Components:

Total Marks:50

Implementation of OS Concepts/ Case Study/Seminar/Assignment

End Semester Examination: Total Marks: 100 marks

Duration: 3 hours

Theory – 50 marks **Duration – 1 ½ hours**

Practical – 50 marks **Duration – 1 ½ hours**

Section A- 5 x 2 = 10 marks (Answer all the questions)

(1 question to be set from each unit)

Section B - 4 x 5 = 20 marks (4 out of 6)

Section C - 2 x 10 = 20 marks (2 out of 3)

(Questions for forty marks towards Section B and Section C should be set such that equal weightage is given to all units)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE

SYLLABUS

(Effective from the academic year 2023 – 2024)

SOFTWARE ENGINEERING

CODE: 23CS/DC/SE14

CREDITS: 4

L T P: 4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To understand software engineering principles
- To introduce software development life cycle models
- To introduce software estimation techniques
- To understand the need for software quality and ways to ensure it
- To understand project management techniques such as Configuration management, Scheduling, Training plan and Risk management

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- know software engineering principles
- apply software life cycle models for software development
- apply estimation techniques
- model a software application
- implement project management techniques

Unit 1

(14 Hours)

1.1 Software and Software Engineering

Nature of Software - Defining Software Engineering - Software Process - Process, Activities, Work Product - Process Framework - Categories of Activities (Framework, Umbrella)

1.2 Process Models

SDLC - Waterfall Model - Prototyping - Agile Philosophy - Agility, Agility and Cost Change, Agile Process - Agility Principles - Scrum - Test driven development - continuous integration - Impact of Process on End Product - Process Assessment and Improvement

1.3 Software Engineering Principles

Planning - Separation of Concerns - Modularity - Modeling - Abstraction - Anticipation of change - Reusability - Incrementality - Measurement – Tools

Unit 2

(13 Hours)

2.1 Requirements Gathering

Requirements Engineering Tasks - Software Requirements Specification - Types of Requirements (Normal, Expected) - Traceability Matrix

2.2 Modeling

Significance of requirement analysis - Arlow and Neustadt rules of thumb -

application domain analysis - Writing Use Cases - Use Case Diagram - Activity Diagram - Swimlane Diagram - Identifying classes – Attributes – Operations - associations and dependencies - Class diagram - - packaging classes - State Diagram - Sequence Diagram - Agile Requirements Elicitation (User Stories) - Agile Requirements Engineering

Unit 3 (12 Hours)

3.1 Software Designing

Design Concepts (Abstraction, Architecture, Patterns, Separation of Concerns, Modularity, Information Hiding, Functional Dependence, Refinement, Aspects, Refactoring)

3.2 Basic Design Principles

Open Closed - Liskov Substitution - Dependency Inversion - Interface Segregation - Release Reuse Equivalency- Common Closure - Common Reuse

3.3 Software Quality and Assurance

McCall's quality factors - ISO 9126 Quality factors -Cost of Quality - Defect - Defect Amplification and removal -

Reviews – Informal, Formal Technical Reviews - Inspection - Walkthroughs - Audits – Testing

Unit 4 (14 Hours)

4.1 Software Testing

Levels of Testing - Unit Testing, Integration Testing, Validation Testing, System Testing - Test Cases - Test Case Template -Types of Testing - White Box, Basis Path Testing , Control Structure Testing

4.2 Software Configuration Management

Need - Baselines - Software Configuration Items - SCM Repository - SCM Process

4.3 Metrics

Terms (Metrics, Measurement, Indicators) - Function Points - Deriving Function points - Metrics - CK Metrics - Defects per KLOC - FP per Person-Month - McCabe Cyclomatic Complexity - code coverage

Unit 5 (12 Hours)

5.1 Software Project Estimation

Software sizing- LOC Based Estimation - FP based estimation - COCOMO Model II - Estimation for WebApp Projects

5.2 Project Management and Scheduling

Training plan - Defect prevention meeting

Root causes for delays - Principles (Compartmentalization, Interdependence, Effort Validation, Time Allocation, Responsibilities, Outcomes, Milestones) - Relationship between People and Effort - Effort Distribution (40-20-40 rule) - Scheduling Tools and Techniques (Time- Line charts, Tracking the schedule)

5.3 Risk Management

Term - Proactive Vs Reactive Risk Strategies - Risk Identification - Risk Projection (Risk Table, Assessing Risk Impact) - Risk Mitigation, Monitoring, Management - RMMM Plan

BOOKS FOR STUDY

Ghezzi, Carlo, Mehdi Jazayeri, and Dino Mandrioli. *Fundamentals of software engineering*. Prentice Hall PTR, 2002.

Pressman, Roger S., and Bruce R. Maxim. *Software Engineering: A Practitioner's Approach*., 2015.

BOOKS FOR REFERENCE

Berenbach, Brian, et al. *Software & systems requirements engineering: in practice*. McGraw-Hill, Inc., 2009.

Brooks Jr, Frederick P. *The Mythical Man-Month: Essays on Software Engineering, Anniversary Edition*, 2/E. Pearson Education India, 1995

Cha, Sungdeok, Taylor, Richard N., Kang, Kyo C. *Handbook of Software Engineering*. Springer 2019

Galorath, Daniel D., and Michael W. Evans. *Software sizing, estimation, and risk management: when performance is measured performance improves*. Auerbach Publications, 2006

Martin, Robert C. *Agile software development: principles, patterns, and practices*. Prentice Hall, 2002.

Schach, Stephen R. *Object-oriented software engineering*. McGraw-Hill, 2008.

Sommerville, Ian. "Software engineering 9th Edition." *ISBN-10* 137035152 (2011).

WEB RESOURCES

<https://www.d.umn.edu/~gshute/softeng/principles.html>

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Duration: 90 minutes

Section A - $5 \times 2 = 10$ marks (Answer all the questions)

Section B - $4 \times 5 = 20$ marks (4 out of 5)

Section C - $2 \times 10 = 20$ marks (2 out of 3)

Other Components: Total Marks: 50

Seminars/Group discussion/Assignments/Case study

End Semester Examination: Total Marks: 100

Duration: 3 hours

Section A - $10 \times 2 = 20$ marks (Answer all the questions)
(2 questions to be set from each unit)

Section B - $6 \times 5 = 30$ marks (6 out of 8)
(At least 1 question from each unit)

Section C - $5 \times 10 = 50$ marks (5 out of 7)
(At least 1 question from each unit)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE

SYLLABUS

(Effective from the academic year 2023 – 2024)

RESEARCH METHODOLOGY

CODE: 23CS/DC/RM14

CREDITS: 4

L T P: 3 1 2

TOTAL TEACHING HOURS:78

OBJECTIVES OF THE COURSE

- To develop an understanding of the research methods relevant to effectively address a research problem
- Understand research problem formulation
- Analyze research related information
- To understand about data and its analysis in research
- To learn and understand the importance of writing skills and the method of documentation

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- develop an understanding of research methods
- formulate a research problem
- collect and analyse data
- effectively write a research paper
- present the Paper more professionally.

Unit 1 (16 Hours)

1.1 Introduction to Research

Meaning, Objectives and Characteristics of research - Research Methods Vs. Methodology - Types of research- Research process - Criteria of good research

1.2 Research Project

Shaping a Research Project-Research Planning-Students and Advisors - Checklist

Unit 2 (15 Hours)

2.1 Literature Review

Reading and Reviewing - Hypotheses, Questions, and Evidence

Unit 3 (16 Hours)

3.1 Experiments for Computing

Experimentation-Statistical Principles

3.2 Writing a Paper

Organization-Good Style-Style Specifics-Punctuation-Mathematics-Algorithms-Graphs, Figures, and Tables -Other Professional Writing

Unit 4 (16 Hours)
4.1 Presentation
Editing- Presentations-Slides-Posters-Ethics

Unit 5 (15 Hours)
5.1 Report writing
Report writing using LATEX for a research problem

BOOKS FOR STUDY

Kothari C. R. *Research Methodology Methods and Techniques*. 2nd ed. New Delhi: New Age, 2004. (Unit 1.1)
Justin Zobel. *Writing for Computer Science*. 3rd ed. Springer-Verlag, 2014

BOOKS FOR REFERENCE

Ranjit Kumar. *Research Methodology -a step-by-step guide for beginners*. 3rd ed. SAGE Publications India Pvt Ltd, 2011.

Panneerselvam R. *Research Methodology*. 2nd ed. New Delhi: Prentice Hall, 2014.

WEB RESOURCES

<https://www2.le.ac.uk/offices/red/rd/research-methods-and-methodologies>
<http://www.socscidiss.bham.ac.uk/methodologies.html>

PATTERN OF ASSESSMENT:

Other Components: **Total Marks: 50**

Component 1: Slides preparation and Seminar of Research Paper

Component 2: Poster presentation

All K-levels will be evaluated

Research paper writing

Topic / Domain Selection
Abstract and Infographics
Introduction and Motivation
Literature Survey and Identifying Research Gaps
Results / Comparative Study
Inferences
Conclusion

End Semester Examination **Total Marks: 50**

Paper, Poster Presentation and LaTeX document submission

Document must be submitted at the end of the semester. The student must present the completed work. A viva-voce based on the work will also be conducted. Mark will be allotted based on the review paper / implementation.

Rubrics for Evaluation	Marks	Cognitive Level
Documentation	10	K1
Formulating topic statement	5	K2
Motivation and Background Study	10	K3
Documentation in LaTeX and Poster Presentation	20	K4
Results, Inferences and Conclusions	5	K5,K6

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE

SYLLABUS

(Effective from the academic year 2023-2024)

DATA ANALYTICS

CODE : 23CS/DC/DA14

CREDITS: 4

L T P:4 1 0

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To enable the students to understand the types of data
- To enable a comprehensive and detailed understanding of the data formats and data analysis
- To explore different machine learning techniques
- To explore advanced analytic tools
- To understand and practice Data Analytics and Machine Learning approaches

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- recall the steps and methods involved in the data analysis process
- illustrate the different methods involved in Machine Learning process
- identify Machine Learning techniques to extract actionable value from data
- analyze the given dataset and train them using appropriate Machine Learning techniques
- adapt a better Machine Learning technique on a preprocessed dataset, derive insight from results, and investigate the accuracy

Unit 1

(12 Hours)

1.1 Fundamentals of Data Analysis

Introduction - The Process of Data Analysis –Types of Analytics- Descriptive Analytics - Predictive Analytics - Prescriptive Analytics - Applications- Quantitative Messages - Techniques for Analyzing Quantitative Data –Barriers to Effective Analysis-Initial Data Analysis - Main Data Analysis

1.2 Types of Data

Different Types of Data- Quantitative and Qualitative Data - Numerical, Categorical Data - Loading, Storage and File Formats – Reading and Writing Data In Text Format, binary Data Formats - Interacting with Web API -Interacting with Databases - Getting Started with Pandas

Unit 2

(13 Hours)

2.1 Data Cleaning

Data Cleaning and Preparation - Handling Missing Data -Data Transformation -String Manipulation

2.2 Data Wrangling

Join, Combine and Reshape -Hierarchical Indexing –Combining and Merging Datasets - Reshaping and Pivoting - Data Aggregation and Group Functions-Group By Mechanics - Data Aggregation-General Split-Apply-Combine - Pivot Tables and Cross Tabulation - Numpy Basics

Unit 3 (13 Hours)

3.1 Plotting and Visualization

Matplotlib - Figures – Subplots - Colors, Markers and Line Styles - Ticks, Labels and Legends, Annotations and Drawing On Subplot - Plotting with Pandas and Seaborn

3.2 Data Analysis Examples

Unit 4 (13 Hours)

4.1 Machine Learning

Introduction to Machine Learning - Need for Machine Learning – Supervised Learning – Unsupervised Learning -Classifications and Regression – Generalization –Overfitting - Underfitting

4.2 Supervised Machine Learning Algorithms

K-Nearest Neighbor-Linear Models - Naive Bayes Classifiers - Decision Tree

4.3 Unsupervised Learning Algorithms

Types - Dimensionality Reduction, Feature Extraction –Clustering - K-Means Clustering

Unit 5 (14 Hours)

5.1 Model Evaluation and Improvement

Cross-Validation - Benefits of Cross-Validation - Stratified K-Fold Cross-Validation and Other Strategies - More Control Over Cross-Validation - Grid Search - Evaluation Metrics and Scoring - Using Evaluation Metrics in Model Selection

5.2 Working with Text Data

Types of Data Represented as Strings - Rescaling the Data with TF/IDF - Topic Modeling and Document Clustering

BOOKS FOR STUDY

Andreas C. Mueller, Sarah Guido. Introduction to Machine Learning with Python. O'Reilly Media, Inc., 2016. (Unit 4,5)

Wes McKinney. Python for Data Analysis. O'Reilly Media, Inc., 1005 Gravenstein Highway North, Sebastopol, second edition, 2018. (Unit 1,2,3)

BOOKS FOR REFERENCE

Aurelien Geron. Hands-On Machine Learning with Scikit-Learn and Tensor Flow: Concepts, Tools, and Techniques to Build Intelligent Systems. USA: O'Reilly Media, 2019.

Brian K. Jones. David Beazley. Python Cookbook. USA: O'Reilly Media, Incorporated, 2013.

Sanjeev J. Wagh, Manisha S. Bhende, and Anuradha D. Thakare. Fundamentals of Data Science. CRC Press, 2022.

WEB RESOURCES

<https://www.coursera.org/learn/machine-learning>

<https://archive.nptel.ac.in/courses/106/106/106106139/>

<https://scikit-learn.org/stable/>

<http://docs.python.org>

PATTERN OF ASSESSMENT

Continuous Assessment Test

Total Marks: 50

Duration: 90 minutes

Section A - $5 \times 2 = 10$ marks (Answer all the questions)

Section B - $4 \times 5 = 20$ marks (4 out of 5)

Section C - $2 \times 10 = 20$ marks (2 out of 3)

Other Components: Total Marks:50

Seminars/Group discussion/Assignments/Case study

End Semester Examination:

Total Marks: 100

Duration: 3 hours

Section A - $10 \times 2 = 20$ marks (Answer all the questions)

(2 questions to be set from each unit)

Section B - $6 \times 5 = 30$ marks (6 out of 8)

(At least 1 question from each unit)

Section C - $5 \times 10 = 50$ marks (5 out of 7)

(At least 1 question from each unit)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE

SYLLABUS

(Effective from the academic year 2023 – 2024)

DESIGN TOOLS

CODE: 23CS/DC/DT13

CREDITS: 3

L T P: 2 0 2

TOTAL TEACHING HOURS: 52

OBJECTIVES OF THE COURSE

- To pursue practical skills in image editing and animation using GIMP
- To know how to use transformation tools
- To know to use the advanced tools in GIMP
- To impart creativity through logo design and 2D animation in GIMP
- To learn about the animation tools in GIMP

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- edit images using GIMP
- use transformation tools locally and globally
- design pictures using advanced tools in GIMP
- design their own textures, logos and also to create animations using GIMP
- create their own animations

Unit 1 (12 Hours)

1.1 Photo Editing

GIMP Basics – Image Handling Basics – Working with Images - Photograph Retouching

Unit 2 (7 Hours)

2.1 Transformation Tools

Global Transformations – Local Transformations

Unit 3 (12 Hours)

3.1 Painting and Drawing

Painting and Drawing - Dodging, Burning and Smudging – Selections, Overlaying and Blending Modes – Digital Collage

Unit 4 (9 Hours)

4.1 Textures, Logos and 2D Animation

Creating Textures - Logos – Animation

Unit 5

5.1 Animation Tools

(12 Hours)

Building an Animated GIF by Hand – Using Animation Tools – Using GAP

BOOKS FOR STUDY

Olivier Lecarme, Karine Delvare, *The Book of GIMP: A Complete Guide to Nearly Everything*, No Starch Press, 2013

BOOKS FOR REFERENCE

Jason van Gumster Robert Shimonski, *GIMP Bible*, Wiley Publishing, 2010.
Karin Kylander & Olof S Kylander The Complete Guide to Gimp.

WEB RESOURCES

<https://docs.gimp.org/2.10/en/>

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Duration: 90 minutes

Theory – 25 marks

Practical – 25 marks

Section A - 3 x 5 = 15 marks (3 out of 4)

Section B - 1 x 10 = 10 marks (1 out of 2)

Other Components

Quiz/Assignments/Mini Project/Case study

End Semester Examination Total Marks:100

Duration: 3 hours

Theory – 50 marks Duration – 1 ½ hours

Practical – 50 marks Duration – 1 ½ hours

Section A- 5 x 2 = 10 marks (Answer all the questions)

(1 question to be set from each unit)

Section B - 4 x 5 = 20 marks (4 out of 6)

Section C - 2 x 10 = 20 marks (2 out of 3)

(Questions for forty marks towards Section B and Section C should be set such that equal weightage is given to all units)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE

SYLLABUS

(Effective from the academic year 2023 – 2024)

OBJECT ORIENTED PROGRAMMING

CODE: 23CS/DC/0024

CREDITS: 4

L T P: 3 0 2

TOTAL TEACHING HOURS: 65

OBJECTIVES OF THE COURSE

- To understand the significance of Object-Oriented Programming
- To introduce the basic concepts of Object-Oriented Programming
- To understand and demonstrate the concepts of object-oriented design, polymorphism, and inheritance
- To implement Object-Oriented Programming concepts
- To design interfaces and abstract classes

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- justify the use of Object-Oriented Programming
- use the right access specifiers to protect the data
- apply the different Object-Oriented features
- develop applications using Object-Oriented concepts
- create applications that are reusable

Unit 1 (11 Hours)

1.1 Introduction to Object-Oriented Concepts

Procedural versus OO Programming- Moving from Procedural to Object-Oriented Development- What Exactly is an Object? - What Exactly Is a Class? - Using UML to Model a Class Diagram- Encapsulation and Data Hiding- Interfaces- A Real-World Example of the Interface/Implementation Paradigm- Inheritance -Superclasses and Subclasses -Abstraction -Is-a Relationships -Polymorphism - Composition - Abstraction - Has-a Relationships

Unit 2 (13 Hours)

2.1 How to Think in Terms of Objects

Using Abstract Thinking When Designing Interfaces - Giving the User the Minimal Interface Possible - Determining the Users - Object Behavior - Environmental Constraints -Identifying the Public Interfaces - Identifying the Implementation

2.2 Advanced Object-Oriented Concepts

Constructors- Error Handling- The Concept of Scope- Operator Overloading- Multiple Inheritance - Object Operations

Unit 3 (13 Hours)

3.1 The Anatomy of a Class

The Name of the Class - Comments - Attributes - Constructors - Accessors - Public Interface Methods - Private Implementation Methods

3.2 Class Design Guidelines

Modeling Real World Systems - Identifying the Public Interfaces - The Minimum Public Interface -Hiding the Implementation -Designing Robust Constructors (and Perhaps Destructors) - Designing Error Handling into a Class - Documenting a Class and Using Comments

Unit 4

(15 Hours)

4.1 Designing with Objects

Design Guidelines - Performing the Proper Analysis - Developing a Statement of Work -Gathering the Requirements - Developing a Prototype of the User Interface - Identifying the Classes - Determining the Responsibilities of each Class - Determining How the Classes Collaborate with each Other - Creating a Class Model to Describe the System

4.2 Mastering Inheritance and Composition

Reusing Objects - Inheritance - Generalization and Specialization - Design Decisions -Composition - Types of Composition - Aggregations – Associations- Using Associations and Aggregations Together-Representing Composition with UML - Why Encapsulation Is Fundamental to OO - How Inheritance Weakens Encapsulation - A Detailed Example of Polymorphism - Object Responsibility

Unit 5

(13 Hours)

5.1 Frameworks and Reuse: Designing with Interfaces and Abstract Classes

Code: To Reuse or Not to Reuse? - What Is a Framework? -What is a Contract? Abstract Classes - Interfaces -Tying It All Together - The Compiler Proof - Making a Contract -System Plug-in-Points - An E-Business Example - An E-Business Problem - The Non-Reuse Approach - An E-Business Solution - The UML Object Model

BOOKS FOR STUDY

Matt Weisfeld, *The Object-Oriented Thought Process*. 3rd Ed.,2009

BOOKS FOR REFERENCE

Schildt, Herbert. *Java: The Complete Reference*. McGraw-Hill Education Group, 2014

Liang, Y. Daniel. *Intro to Java Programming, Brief Version*. Pearson Higher Ed, 2015.

Eckel, Bruce. *Thinking in Java*. 4th ed. Pearson Education, 2006.

WEB RESOURCES

<http://people.cs.aau.dk/~torp/Teaching/E03/OOP/handouts/introduction.pdf>

<https://www.cl.cam.ac.uk/teaching/0910/OOProg/OOP.pdf>

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Duration: 90 minutes

Theory – 25 marks

Practical – 25 marks

Section A - 3 x 5 = 15 marks (3 out of 4)

Section B - 1 x 10 = 10 marks (1 out of 2)

Other Components: Total Marks:50

Seminars/Group discussion/Assignments/Case studies/ Mini Project

End Semester Examination: Total Marks: 100

Duration: 3 hours

Theory – 50 marks Duration – 1 ½ hours

Practical – 50 marks Duration – 1 ½ hours

Section A - 5 x 2 = 10 marks (Answer all the questions)

(1 question to be set from each unit)

Section B - 4 x 5 = 20 marks (4 out of 6)

Section C - 2 x 10 = 20 marks (2 out of 3)

(Questions for forty marks towards Section B and Section C should be set such that equal weightage is given to all units)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE

SYLLABUS

(Effective from the academic year 2023-2024)

CLOUD COMPUTING

CODE: 23CS/DC/CC23

CREDITS: 3

L T P: 3 1 0

TOTAL TEACHING HOURS: 52

OBJECTIVES OF THE COURSE

- To introduce the concepts of cloud computing and its essential terminology associated with case studies.
- To enable the students to understand the need of cloud models and the working framework of cloud architectures.
- To equip the students in understanding the concepts of virtualization, load balancing and resource pooling with scaling principles of cloud computing.
- To familiarize advanced concepts in cloud Computing with exposure of open-source tools in cloud.
- To develop an active interpretation of associating modern application environments and understanding various customer service providers (CSPs)

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- define the core foundational concepts and terminologies of cloud computing paradigm
- outline the various working frameworks of cloud anatomy and architecture
- identify various storage and resource utilization methods in cloud computing
- analyze cloud software programming models to implement on working cloud environments
- adapt the demonstrations of cloud storage systems through cloud

Unit 1

(16 Hours)

Cloud computing foundations

1.1 Motivation for Cloud Computing - Defining Cloud Computing - NIST Definition of Cloud Computing - Cloud Computing is a Service - Cloud Computing is a Platform - Principles of Cloud computing - Essential Characteristics - Cloud Deployment Models- Cloud Service Models

1.2 Cloud Ecosystem - Requirements for Cloud Services - Cloud Application - Cloud Vulnerabilities - Cloud Architecture - Anatomy of the Cloud - Applications on the Cloud - Managing the Cloud - Migrating Application to Cloud - Responsibility Sharing Between User and Cloud Service Provider - User Experience - Software Licensing

Unit 2

(10 Hours)

Paradigms and Technological Drivers for Cloud Computing

2.1 SOA and Cloud - Existing Cloud Applications and New Application Opportunities - Architectural Styles for Cloud Applications - Coordination Based on a State Machine Model: The ZooKeeper - The MapReduce Programming Model - Case

Study: The GrepTheWeb Application

2.2 High Performance Computing on a Cloud- Cloud Computing Interoperability: The Intercloud - Web standards: Web 2.0 - Characteristics of Web 2.0 –Web 2.0 and Cloud Computing - Web 3.0 - Components of Web 3.0

Unit 3

(10 Hours)

Virtualization and Load balancing

Layering and Virtualization – Virtual Machine Monitors- Virtual Machines- Types of virtualizations – Approaches to virtualization – Hypervisors – Types of hypervisors - Resource Pooling, Sharing and Provisioning - Scaling in the Cloud – Load balancing – Goals of Load balancing - Load Balancing in Cloud – Load balancing algorithm - Multicore Technology: Multicore Processors and VM Scalability - Multicore Technology and the Parallelism

Unit 4

(10 Hours)

Cloud Application Development

Amazon web services understanding and requirements – Working with the Elastic Compute Cloud (EC2) - Working with Amazon Storage Systems (S3) - Amazon Elastic Block Store (EBS) – Understanding CloudFront - Amazon SimpleDB - Amazon Relational Database Service (RDS)- Cloud simulation tools: Cloud analyst and CloudSim - Google Web Services: Working with the Google App Engine

Unit 5

(6 Hours)

Cloud Storage, SLA and Security

The Evolution of Storage Technology - Memory and Storage Technologies - Cloud Storage Requirements - Storage as a Service (STaaS) - Emerging Trends and Technologies in Cloud Storage - Google File System - Apache Hadoop - Transaction Processing and NoSQL Databases – Service level agreement (SLA)– Types of SLA - Life Cycle of SLA - SLA Management in Cloud - Virtualization Security - Network Security - Data Security

BOOKS FOR STUDY

Cloud Computing Bible. John Wiley & Sons, 2011. Dan C Marinescu, “*Cloud Computing: Theory and Practice*”.

K Chandrasekaran. (2015). “*Essentials of Cloud Computing*” [English]. CRC Press Taylor & Francis Group.

Bhowmik, Sandeep. “*Cloud Computing*”. Cambridge University Press, 2017

BOOKS FOR REFERENCE

Buyya, Rajkumar, Christian Vecchiola, and S. Thamarai Selvi. “*Mastering cloud computing: foundations and applications programming* “. Elsevier, 2013. Sosinsky, Barrie.

Dan C Marinescu, “*Cloud Computing: Theory and Practice*”. Morgan Kaufmann, Elsevier, 2017

Michael J. Kavis, “*Architecting the Cloud: Design Decisions for Cloud Computing Service Models (SaaS, PaaS, and IaaS)*”. John Wiley & Sons, 2014.

WEB RESOURCES

https://docs.aws.amazon.com/ec2/?nc2=h_q1_doc_ec2

<https://www.ibm.com/automation?lnk=flathl>

<https://www.ibm.com/docs/en/products>

[https://download.microsoft.com/download/6/6/2/662DD05E-BAD7-46EF-9431-](https://download.microsoft.com/download/6/6/2/662DD05E-BAD7-46EF-9431-135F9BAE6332/9781509302963_Microsoft%20Azure%20Essentials%20Fundamentals%20of%20Azure%202nd%20ed%20mobile.pdf)

[135F9BAE6332/9781509302963_Microsoft%20Azure%20Essentials%20Fundamentals%20of%20Azure%202nd%20ed%20mobile.pdf](https://download.microsoft.com/download/6/6/2/662DD05E-BAD7-46EF-9431-135F9BAE6332/9781509302963_Microsoft%20Azure%20Essentials%20Fundamentals%20of%20Azure%202nd%20ed%20mobile.pdf)

PATTERN OF ASSESSMENT

Continuous Assessment: **Total Marks: 50** **Duration: 90 minutes**

Section A - 5 x 2 = 10 marks (Answer all the questions)

Section B - 4 x 5 = 20 marks (4 out of 5)

Section C - 2 x 10 = 20 marks (2 out of 3)

Other Components: **Total Marks: 50**

Seminars/Group discussion/Assignments/Case study

End Semester Examination: **Total Marks: 100** **Duration: 3 hours**

Section A - 10 x 2 = 20 marks (Answer all the questions)

(2 questions to be set from each unit)

Section B - 6 x 5 = 30 marks (6 out of 8)

(At least 1 question from each unit)

Section C - 5 x 10 = 50 marks (5 out of 7)

(At least 1 question from each unit)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE

SYLLABUS

(Effective from the academic year 2023 - 2024)

DATABASE MANAGEMENT SYSTEMS

CODE: 23CS/DC/DB25

CREDITS: 5

L T P: 3 0 3

TOTAL TEACHING HOURS: 78

OBJECTIVES OF THE COURSE

- To learn the fundamentals of data models, database storage and Querying
- To convert from ER diagram into normalized table
- To study SQL and relational database design
- To learn SQL functions and PL/SQL Blocks
- To study cursors and triggers
- To know the fundamental concepts of transaction processing- concurrency control techniques and recovery procedure
- To study NOSQL and its applications

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- define the features and Queries of database systems
- normalize database effectively from ER Diagrams
- understand and discuss the importance of relational data modeling and conceptual modeling
- apply knowledge to new situations
- describe the transaction processing, concurrency control and recovery control
- understand the use of NOSQL and its approach to the database

Unit 1

(16 Hours)

1.1 Database Basics

Introduction - Database-System Applications- Purpose of Database Systems- View of Data - Database Languages - Relational Databases - Database Design - Data Storage and Querying - Transaction Management - Database Architecture - Data Mining and Information Retrieval - Specialty Databases - Database Users and Administrators - Database Users and Administrators - History of Database Systems

1.2 Introduction to the Relational Model

Structure of Relational Databases - Database Schema – Keys - Schema Diagrams - Relational Query Languages - Relational Operations

Unit 2	(16 Hours)
2.1 Introduction to SQL Overview of the SQL Query Language- SQL Data Definition- Basic Structure of SQL Queries - Additional Basic Operations - Set Operations - Null Values - Aggregate Functions- Nested Subqueries - Modification of the Database	
2.2 Intermediate SQL Join Expressions- Views- Transactions- Integrity Constraints - SQL Data Types and Schemas- Authorization	
2.3 Advanced SQL Accessing SQL from a Programming Language - Functions and Procedures – Triggers - Recursive Queries- Advanced Aggregation Features – OLAP	
2.4 Formal Relational Query Languages The Relational Algebra - Fundamental Operations - Formal Definition of the Relational Algebra - Additional Relational-Algebra Operations - Extended Relational-Algebra Operations	
Unit 3	(16 Hours)
3.1 Database Design and the E-R Model Overview of the Design Process - The Entity-Relationship Model – Constraints - Removing Redundant Attributes in Entity Sets - Entity-Relationship Diagrams - Reduction to Relational Schemas - Entity-Relationship Design Issues - Extended E-R Features - Alternative Notations for Modeling Data - Other Aspects of Database Design	
3.2 Relational Database Design Features of Good Relational Designs - Atomic Domains and First Normal Form - Decomposition Using Functional Dependencies - Functional-Dependency Theory - Algorithms for Decomposition - Decomposition Using Multivalued Dependencies - More Normal Forms - Database-Design Process - Modeling Temporal Data	
Unit 4	(15 Hours)
4.1 PL/SQL Blocks PL/SQL- Predefined Exceptions- User Defined Exceptions	
4.2 Cursors and Triggers Cursors and Cursor Management- Implicit and Explicit Cursors- Advanced Cursors- Procedures and Functions- Database triggers- Parts of a Trigger- Types of Triggers	
Unit 5	(15 Hours)
5.1 Transactions and Concurrency Control Transaction Concept - A Simple Transaction Model - Storage Structure – Transaction Atomicity and Durability - Transaction Isolation – Serializability - Transaction Isolation and Atomicity - Transaction Isolation Levels - Implementation of Isolation Levels - Transactions as SQL Statements – Lock-Based Protocols- Deadlock Handling -Multiple Granularity-Timestamp-Based Protocols - Validation-Based Protocols	
5.2 NoSQL Definition and Introduction – Sorted Ordered Column – Oriented Stores –Key/Value Stores- Document Databases – Graph Databases – Working with Examples - Working with Language Bindings – Interfacing and Interacting with NoSQL: Storing and accessing Data – Querying Database - Language Bindings for NoSQL Data Stores	

BOOK FOR STUDY

Silberschatz, A., Henry F.Korth and Sudarshan S. Database System Concepts. 7th ed. McGraw Hill, 2019.

Korry Douglas, Susan P. Douglas. PostgreSQL: The Comprehensive Guide to Building, Programming, and Administering PostgreSQL Databases. 3rd edition. Sams Pub, 2006.

Tiwari, Shashank. Professional NoSQL. John Wiley & Sons, 2011. (Unit 5.2)

Rully Yulian MF. Learning SQL & PL/pgSQL Programming in PostgreSQL. 2020

BOOKS FOR REFERENCE

Date, C. J., Introduction to Database Systems. 8th ed. New Delhi: Pearson Education, 2009.

Elmasri, Navathe, Fundamentals of Database Systems, 7th edition, Pearson Education Ltd, 2017.

Ewald Geschwinde, Hans-Jürgen Schöning. PostgreSQL Developer's Handbook. Sams Pub 2002

Ramakrishna,Raghu and Johannes Gerhke. Database Management Systems. New Delhi: Tata McGraw Hill, 2003.

WEB RESOURCES

<https://www.db-book.com/db6/>

<https://www.postgresql.org/>

<https://learn.mongodb.com/>

PATTERN OF ASSESSMENT

Continuous Assessment: Total Marks: 50

Duration: 90 minutes

Theory – 25 marks

Practical – 25 marks

Section A - 3 x 5 = 15 marks (3 out of 4)

Section B - 1 x 10 = 10 marks (1 out of 2)

Other Components: Total Marks:50

Seminar/Quiz/Group discussion/Assignment/Case Study - Normalizing tables and Extracting relevant data/Query analysis and optimization

End Semester Examination: Total Marks:100 Duration: 3 hours
Theory – 50 marks Duration – 1 ½ hours
Practical – 50 marks Duration – 1 ½ hours

Section A- $5 \times 2 = 10$ marks (Answer all the questions)
(1 question to be set from each unit)

Section B - $4 \times 5 = 20$ marks (4 out of 6)

Section C - $2 \times 10 = 20$ marks (2 out of 3)

(Questions for forty marks towards Section B and Section C should be set such that equal weightage is given to all units)

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE

SYLLABUS

(Effective from the academic year 2023-2024)

CRITICAL ANALYSIS ON AN ADVANCED TECHNOLOGY

CODE: 23CS/DC/CA21

CREDITS:1

L T P:0 0 2

TOTAL TEACHING HOURS:26

OBJECTIVES OF THE COURSE

- To enable students to explore and critically analyse the selected technology
- To enable students to adapt to changes in the technological landscape
- To train students with the skills and knowledge of the process of writing
- To enable students to present ideas clearly and firmly, both orally and in writing
- To equip them with skills to describe and synthesise new ideas
- To train students to work with academic integrity
- To train students to work in a group

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- demonstrate clear, precise, ethically sound ideas on the chosen topic
- find, evaluate and use information from varied sources effectively
- critically analyse, argue and counter argue on the topic chosen
- understand the significance, bias and applications of the technology chosen
- formulate and synthesise new ideas and opinions in the form of projects /and papers
- create clear, grammatically correct, ethically sound, well-organised pieces of writing

Students will be formed into groups. The groups will have to select a topic related to the Emerging /Advanced Trends and Technologies in the field of Computer Science. Each group has to give three presentations to their fellow classmates and their guide. They need to prepare the synopsis and detailed report in consultation with their guide.

PATTERN OF ASSESSMENT

Internal Assessment

50 marks

Presentation / Review

End-Semester Examination

100 marks

Documentation - 50 marks

Presentation - 30 marks

Viva - 20 marks

Format of the report

Abstract

Short description of the paper. Describe what the technology is, why it is significant or interesting, and your conclusion.

Introduction

- What is the technology?
- Literature review: what is the current thinking, findings, and approaches on the technology?
- What is the significance of the technology?
- How do you plan to use the technology?

Methods/ Approaches

- What is your opinion of the utility, relevance, challenges or quality of the technology you have selected?

Results

- What are your conclusions?
- What do your conclusions mean?
- How do your results fit into a broader context?

STELLA MARIS COLLEGE (AUTONOMOUS) – CHENNAI – 600 086

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE

SYLLABUS

(Effective from the academic year 2023 - 2024)

DISSERTATION

CODE: 23CS/DC/DI28

CREDITS: 8

OBJECTIVES OF THE COURSE

- To enable the students to understand and analyse a problem
- To understand the need of literature reviews formulating a problem and in problem solving
- To enable students to select an appropriate tool to solve the problem
- To help students to develop an application to suit the business needs/implement a research problem
- To enable the students to test the accuracy
- To enable students to document the process and the implementation

COURSE LEARNING OUTCOMES

On successful completion of the course, students will be able to

- understand and analyse a problem
- review necessary literatures to define a problem and to understand the problem better
- select an appropriate tool based on the need
- develop an application/implement a research problem effectively
- test the accuracy of the result
- document the process in an efficient manner

GUIDELINES

One of the important stipulations regarding Dissertation for PGDCS is that it should be in the area of Computer Science. Students are required to develop an application/implement a research problem.

The Dissertation must include the following. These are general guidelines which may differ slightly as per the demand of the study topic.

Introduction

- Existing System
- Proposed System
- Create a set of Design principles to implement the proposed system

System Analysis

- Development Environment
- Requirement Specification
- Software Requirements Specification

System Design

- Logical Design of the System
- Database Design
- Screen Design
- Report Design

Implementation

- Database creation
- Coding

Code Review and Testing

- Code Review
- Testing Process
 - Front-end Validation
 - Back-end Validation

Deployment

Conclusion

- Summary of findings, conclusions for future enhancement
- Suggestions

Bibliography

Appendix

PATTERN OF ASSESSMENT

Internal Assessment – 50 marks

Based on the criteria listed below, internal marks will be awarded.

1. Timely completion of assigned tasks
2. Individual Involvement and team work
3. Quality of the Application and documentation (Design, Workflow, Testing, Precision, Relevance)
4. Achievement of Dissertation deliverables
5. Presentation of Completed work
6. Viva-Voce

End Semester Examination – 100 marks

Dissertation Document must be submitted at the end of the semester. The student must present the completed work. A viva–voce based on the work will also be conducted.

Mark will be allotted based on the following criteria which may differ slightly as per the demand of the study topic.

Requirement Analysis	– 10 marks
Database Design	– 10 marks
Screen Design	– 10 marks
Coding	– 10 marks
Validation	– 10 marks
Testing	– 10 marks
Reports	– 5 marks
Documentation	– 20 marks
Special Features	– 5 marks
Viva – Voce	– 10 marks