



MOTHER TERESA WOMEN'S UNIVERSITY

KODAIKANAL – 624 102



DEPARTMENT OF COMPUTER SCIENCE WITH AI AND ML

B.Sc. COMPUTER SCIENCE with AI and ML

Curriculum Framework, Syllabus, and Regulations

(Choice Based Credit System –CBCS)



(For the candidates to be admitted from the Academic Year 2026-2027 onwards)

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Mother Teresa Women's University, Kodaikanal
Department of Computer Science

B.Sc. Computer Science with AI & ML

1. About the Department

The Department of Computer Science with Artificial Intelligence & Machine Learning (AI & ML) is dedicated to providing quality education and training in the rapidly evolving fields of computing, artificial intelligence, and data-driven technologies. The department aims to equip students with strong theoretical foundations and practical skills required to design, develop, and deploy intelligent computing solutions for real-world challenges. The department offers a comprehensive curriculum that integrates core Computer Science subjects with emerging technologies such as Artificial Intelligence, Machine Learning, Deep Learning, Data Science, Natural Language Processing, Computer Vision, and Cloud Computing. Through a combination of classroom learning, laboratory practice, industry-oriented projects, internships, and research activities, students gain hands-on experience in developing innovative AI-enabled applications. The department is committed to fostering critical thinking, problem-solving abilities, creativity, and ethical responsibility among students. It encourages participation in seminars, workshops, hackathon, certification programs, and collaborative research initiatives to enhance professional competencies and industry readiness. With a focus on academic excellence, innovation, and lifelong learning, the Department of Computer Science with AI & ML strives to produce competent graduates who can contribute effectively to the advancement of technology, society, and sustainable development while pursuing successful careers in software development, data analytic, artificial intelligence, machine learning, research, and entrepreneurship.

2. Programme Educational Objectives (PEOs)

PEO1	Professional Competence : Graduates will apply the fundamental principles of Computer Science, Artificial Intelligence, and Machine Learning to develop innovative and efficient solutions for real-world problems.
PEO2	Career Development : Graduates will pursue successful careers in software development, AI/ML engineering, data science, research, entrepreneurship, and related fields through continuous learning and professional growth.
PEO3	Lifelong Learning and Adaptability: Graduates will engage in lifelong learning, adapt to emerging technologies, and pursue higher education, certifications, and research opportunities in advanced computing domains.

3. Programme Outcomes (PO)

Upon successful completion of the **B.Sc. Computer Science with Artificial Intelligence & Machine Learning** program, graduates will be able to

PO1	Apply the fundamental concepts of Computer Science, mathematics, and computational techniques to analyze and solve complex computing problems.
PO2	Design, develop, and implement efficient software applications using appropriate programming languages, tools, and modern technologies.
PO3	Demonstrate logical reasoning, analytical thinking, and problem-solving skills in the development of computing solutions.
PO4	Communicate effectively, collaborate productively in multidisciplinary teams, and uphold professional ethics and social responsibility.
PO5	Engage in lifelong learning and adapt to emerging trends, technologies, and innovations in the field of Computer Science.

4. Programme Specific Outcomes (PSOs)

On completion of B.Sc. Computer Science Programme, students will be able to

PSO1	Apply fundamental concepts of Computer Science, programming, data structures, algorithms, and software development techniques to design and develop efficient computing solutions.
PSO2	Develop and deploy Artificial Intelligence and Machine Learning models using appropriate tools, frameworks, and techniques to solve real-world problems and support intelligent decision-making.
PSO3	Utilize data analytic, emerging technologies, and research methodologies to innovate, adapt to technological advancements, and contribute effectively to industry and society.

5. Alignment of Programme Outcomes with the Vision and Mission of Mother Teresa Women's University

University Vision

“Holistic Empowerment of Women through Education”

Programme Outcome	Contribution to the University Vision
PO1: Apply fundamental knowledge of computer science, mathematics, statistics, Artificial Intelligence, and Machine Learning to analyze and solve complex computing problems.	Empowers women with a strong foundation in Computer Science, Mathematics, Statistics, Artificial Intelligence, and Machine Learning, enabling them to analyze complex problems and develop intelligent computing solutions with confidence and competence.
PO2: Design, develop, and implement intelligent systems, machine learning models, and software applications using modern programming languages, AI frameworks, and data analytics tools.	Enhances technical expertise, innovation, and practical problem-solving skills by enabling women to develop intelligent systems and AI-driven applications that address real-world challenges using emerging technologies.
PO3: Collect, process, analyze, and interpret data effectively while applying	Promotes responsible and ethical use of Artificial Intelligence by fostering data literacy, ethical decision-

ethical principles, data privacy, and responsible AI practices for societal and sustainable development.	making, privacy awareness, and sustainable technological solutions that contribute positively to society.
PO4: Communicate technical ideas effectively and work efficiently as an individual, team member, or leader in multidisciplinary environments.	Supports holistic empowerment by developing communication, teamwork, leadership, interpersonal skills, professional ethics, and collaborative abilities essential for multidisciplinary and global work environments.
PO5: Demonstrate professional competence, creativity, innovation, entrepreneurial skills, and a commitment to lifelong learning to pursue successful careers or higher studies in AI and Machine Learning.	Encourages lifelong learning, innovation, entrepreneurship, adaptability, and continuous professional development, empowering women to pursue successful careers, higher education, and leadership roles in Artificial Intelligence and Machine Learning.

Mapping of Programme Outcomes with University Vision

Vision Components	PO1	PO2	PO3	PO4	PO5
Knowledge Empowerment	√	√	√		√
Technical Empowerment	√	√	√		√
Professional & Social Empowerment		√	√	√	√
Holistic Development			√	√	√
Lifelong Learning & Leadership				√	√

University Mission

M1: To promote a society of equal status between women and men.

M2: To empower women through education at all levels.

M3: To impart education of global standards.

Mapping Scale

Value	Level of Correlation
3	High
2	Moderate
1	Low
–	No Correlation

Mission–PO Mapping Matrix

Mission Statements / Pos	PO1	PO2	PO3	PO4	PO5
M1: Promote a society of equal status between women and men	1	2	3	3	3
M2: Empower women through education at all levels	3	3	3	3	3
M3: Impart education of global standards	3	3	3	3	3

6. Eligibility

- Should have studied Mathematics in 12th Standard
- 2/3 of seats reserved for students who have studied Computer Science as a subject in plus two and 1/3 of seats are for students who have not studied computer science in plus two.
- Ranking based on marks in Part III out of 400

7. General Guidelines for UG Programme

- Duration: 3 Years
- Medium of Instruction: English

8. Evaluation (40+60): Evaluation of the candidates shall be through Internal Assessment and External Examination for Theory and Practical.

8.1 Evaluation Pattern

EVALUATION PATTERN		Maximum Marks (Theory & Practical)	Minimum Marks (Theory & Practical)
Internal Evaluation	Continuous Internal Assessment	40 Marks	16 Marks
External Evaluation	End Semester Examination	60 Marks	24 Marks
Total		100 Marks	40 Marks

8.2 Internal Assessment - CIA (40 Marks)

The Continuous Internal Assessment (CIA) for each course includes written test and assignments for a maximum of 40 marks.

Assignment (any type): 10 Marks

Seminar / Presentation: 10 Marks

Test (Best 2 out of 3): 15 Marks

Quiz/MCQ: 5 Marks

8.3 End Semester Examination (Theory): Max. Marks: 60 Time: 3hrs.

Part-A (5x2=10 Marks) - Answer ALL questions - Each Question carries 2marks

Part-B (5x4=20 Marks) - Answer ALL questions - Each question carries 4 Marks - Either or Type

Part-C (3x 10 = 30 Marks) - Answer ALL questions - Each question carries 10 Marks - Either or Type

8.4 Written Examination Question Paper Pattern

Intended Learning Skills	Maximum 60 Marks Passing Minimum: 50% Duration: Three Hours
Memory Recall/Example/ Counter Example / Knowledge about the Concepts/Understanding K1& K2	Part-A (5x2=10 Marks) Answer ALL questions Each Question carries 2marks One questions from each Unit Question 1 to 5

Descriptions/Application / Analysis/Synthesis / Evaluation K3, K4, K5	Part-B (5x4=20 Marks) Answer
	ALL questions Each question carries 4 Marks Either - or Type Both parts of each question from the same Unit and K Level Question 6(a) or 6(b) To Question 10(a) or 10(b)
Analysis/Synthesis / Evaluation K4, K5	Part-C (3x 10 = 30 Marks)
	Answer ALL questions Each question carries 10 Marks From any unit based on weightage Either - or Type Both parts of each question from the same K Level Question 11(a) or 11(b) To Question 13(a) or 13(b)

Sample UG Question Paper Pattern (End Semester Written Examination)

Q. NO	QUESTIONS	K LEVEL	UNIT NO.	COUSE OUTCOME NO.	PROBLEM OR THEORY QUESTION (P/T)
SECTION A ANSWER THE FOLLOWING (5*2=10)					
1.		K1/K2	1	CO1	(P/T)
2.		K1/K2	2	CO1	(P/T)
3.		K1/K2	3	CO1	(P/T)
4.		K1/K2	4	CO1	(P/T)
5.		K1/K2	5	CO1	(P/T)
SECTION B ANSWER THE FOLLOWING (5*4=20)					
6A		K3	1	CO2	(P/T)
	(OR)				

6B		K3	1	CO2	(P/T)
7A		K3	2	CO2	(P/T)
	(OR)				
7B		K3	2	CO2	(P/T)
8A		K4	3	CO3	(P/T)
	(OR)				
8B		K4	3	CO3	(P/T)
9A		K5	4	CO4	(P/T)
	(OR)				
9B		K5	4	CO4	(P/T)
10A		K5	5	CO4	(P/T)
	(OR)				
10B		K5	5	CO4	(P/T)
SECTION C ANSWER THE FOLLOWING (3*10=30)					
11A		K4	1	CO3	(P/T)
	(OR)				
11B		K4	2	CO3	(P/T)
12A		K4	3	CO3	(P/T)
	(OR)				
12B		K4	4	CO3	(P/T)
13A		K5	5	CO4	(P/T)
	(OR)				
13B		K5	(optional)*	CO4	(P/T)
• From any unit based on weightage					

WEIGHTAGE

Lower Level	- K1, K2 Level	- 10 Marks	- 17%
Intermediate Level	- K3, K4 Level	- 32 Marks	- 53%

Higher Level
30%

- K5

Internal Written Examination Pattern

Intended Learning Skills	Maximum 60 Marks Passing Minimum: 50% Duration: Three Hours
Memory Recall/Example/ Counter Example / Knowledge about the Concepts/Understanding K1& K2	Part–A (4x2=08 Marks)
	Answer ALL questions Each Question carries 2marks Internal Test Portion Question 1 to 4
Application / Analysis/Synthesis / Evaluation K3, K4, K5	Part–B (3x4=12 Marks)
	Answer ALL questions Each question carries 4 Marks Either - or Type Both parts of each question from the same K Level / Internal Test Portion Question 5(a) or 5(b) To Question 7 (a) or 7 (b)
Analysis/Synthesis / Evaluation/Create K5	Part-C (1x 10 = 10 Marks)
	Answer ALL questions Each question carries 10 Marks From any unit based on weightage Either - or Type Both parts of each question from the same K Level / Internal Test Portion Question 8 (a) or 8 (b)

Sample Question Paper Pattern (Internal Written Examination)

Q. NO	QUESTIONS	K LEVEL	UNIT NO.	COUSE OUTCOME NO.	PROBLEM OR THEORY QUESTION (P/T)
SECTION A ANSWER THE FOLLOWING (4*2=8)					
1.		K1/K2	Internal Test Portion	CO1	(P/T)
2.		K1/K2		CO1	(P/T)
3.		K1/K2		CO1	(P/T)
4.		K1/K2		CO1	(P/T)
SECTION B ANSWER THE FOLLOWING (3*4=12)					
5A		K3	Internal Test Portion	CO2	(P/T)
	(OR)				
5B		K3		CO2	(P/T)
6A		K4		CO3	(P/T)
	(OR)				
6B		K4		CO3	(P/T)
7A		K5		CO4	(P/T)
	(OR)				
7B		K5		CO4	(P/T)
SECTION C ANSWER THE FOLLOWING (1*10=10)					
8A		K5	Internal Test Portion	CO4	(P/T)
	(OR)				
8B		K5		CO4	(P/T)

WEIGHTAGE

Lower Level	- K1, K2 Level	- 08 Marks	- 27%
Intermediate Level	- K3, K4 Level	- 08 Marks	- 27%
Higher Level	- K5, K6 Level	- 14 Marks	- 46%

Total - 30 marks - 100%

8.5 Methods of Assessment

METHODS OF ASSESSMENT	
Remembering (K1)	• The lowest level of questions requires students to recall information from the course content • Knowledge questions usually require students to identify information in the textbook.
Understanding (K2)	• Understanding of facts and ideas by comprehending organizing, comparing, translating, interpolating and interpreting in their own words. • The questions go beyond simple recall and require students to combine data together
Application (K3)	• Students have to solve problems by using / applying a concept learned in the classroom. • Students must use their knowledge to determine a exact response.
Analyze (K4)	• Analyzing the question is one that asks the students to break down something into its component parts. • Analyzing requires students to identify reasons causes or motives and reach conclusions or generalizations.
Evaluate (K5)	• Evaluation requires an individual to make judgment on something. • Questions to be asked to judge the value of an idea, a character, a work of art, or a solution to a problem. • Students are engaged in decision-making and problem –solving. • Evaluation questions do not have single right answers.
Create (K6)	• The questions of this category challenge students to get engaged in creative and original thinking. • Developing original ideas and problem solving skills

9. Project

9.1 Project Report

A student should select a topic for the Project Work at the end of the Sixth semester itself and submit the Project Report at the end of the fourth semester. The Project Report shall not be less than 30 typed pages in Times New Roman font with 1.5 line space.

9.2 Project Evaluation

There is a Viva Voce Examination for Project Work. The Guide and an External Examiner shall evaluate and conduct the Viva Voce Examination. The Project Work carries 100 marks (Internal: 40 Marks; External (Viva): 60 Marks).

10. Conversion of Marks to Grade Points and Letter Grade (Performance in a Course/Paper)

Range of Marks	Grade Points	Letter Grade	Description
90 – 100	9.0 – 10.0	O	Outstanding
80-89	8.0 – 8.9	D+	Excellent
75-79	7.5 – 7.9	D	Distinction
70-74	7.0 – 7.4	A+	Very Good
60-69	6.0 – 6.9	A	Good
50-59	5.0 – 5.9	B	Average
40-49	4.0 - 4.9	C	Satisfactory
00-39	0.0	U	Re-appear
ABSENT	0.0	AAA	ABSENT

11. Attendance

Students must have earned 75% of attendance in each course for appearing for the examination. Students with 71% to 74% of attendance must apply for condonation in the Prescribed Form with prescribed fee. Students with 65% to 70% of attendance must apply for condonation in the Prescribed Form with the prescribed fee along with the Medical Certificate. Students with attendance less than 65% are not eligible to appear for the examination and they shall re-do the course with the prior permission of the Head of the Department, Principal and the Registrar of the University.

12. Any Other Information

In addition to the above mentioned regulations, any other common regulations pertaining to the UG Programmes are also applicable for this Programme.

13. Academic Documentation

a.	Academic Schedule	q.	Laboratory Experiments related to the Courses
b.	Students Name List	r.	Internal Question Paper
c.	Time Table	s.	External Question Paper
d.	Syllabus	t.	Sample Home Assignment Answer Sheets
e.	Lesson Plan	u.	Three best, three middle level and three average Answer

			sheets
f.	Staff Workload	v.	Result Analysis
g.	Course Design (content, Course Outcomes (COs), Delivery method, mapping of COs with Programme Outcomes (POs), Assessment Pattern interms of Revised Bloom's Taxonomy).	w.	Question Bank Preparation (Semester / Competitive exams- NET, SET, GATE)
h.	Sample CO Assessment Tools	x.	List of mentees and their academic achievements
i.	Faculty Course Assessment Report(FCAR)		
j.	Course Evaluation Sheet		
k.	Teaching Materials (PPT, OHP etc)		
l.	Lecture Notes		
m.	Home Assignment Questions		
n.	Tutorial Sheets		
o.	Remedial Class Record, if any		
p.	Projects related to the Course		

14. CURRICULUM STRUCTURE FOR UG PROGRAMME

SEMESTER-1

Part	Subject Code	List of Courses	Credits	Hrs	Internal	External	Marks
I	U26TAL101	Language-1–Tamil	3	6	40	60	100
II	U26ENL101	Language-2–English	3	6	40	60	100
III	U26AIT101	Core-1: Theory- Object Oriented Programming in C++	4	5	40	60	100
	U26AIP102	Core-2: Programming in C++ Lab	3	5	40	60	100
	U26AIA11	Allied-1 : Mathematical Statistics – I	3	4	40	60	100
IV	U26AIAE11	Ability Enhancement Course – 1 : Problem Solving Techniques- Structured Programming in C	2	2	40	60	100
	U26AIS101	SEC 1- Computer Applications Lab (Common Paper)	2	2	40	60	100
			20	30			700

SEMESTER-II

Part	Subject Code	List of Courses	Credits	Hrs	Internal	External	Marks
I	U26TAL202	Language-1–Tamil	3	6	40	60	100
II	U26ENL202	Language-2–English	3	6	40	60	100
III	U26AIT203	Core-3: Database Management System	4	5	40	60	100
	U26AIP204	Core-4: Database Management System lab	3	5	40	60	100
	U26AIA22A U26AIA22B	Allied 2: A. Operational Research B. Digital Logic Fundamentals	3	4	40	60	100
IV	U26VAE201	Value Education	2	2	40	60	100

	U26AINM21	Naan Mudhalvan-1 / Skill Enhancement Course (SEC-2) Soft skills	2	2	40	60	100
			20	30			700

SEMESTER-III

Part	Subject Code	List of Courses	Credits	Hrs	Internal	External	Marks
I	U26TAL303	Language-1–Tamil	3	6	40	60	100
II	U26ENL303	Language-2–English	3	6	40	60	100
III	U26AIT305	Core- 5:Theory- Programming in Python	4	5	40	60	100
	U26AIP306	Core-6: Practical-Python Programming Lab	3	5	40	60	100
	U26AIA33A/ U26AIA33B	Allied 3 : A. Mathematical Statistics – II B. Introduction to Linear Algebra	3	4	40	60	100
IV	U26AINM32	Naan Mudhalvan-2 / Skill Enhancement Course (SEC-3) E-Commerce	2	2	40	60	100
	U26EVS301	EVS	2	2	40	60	100
	U26AIV301	Value Added Course – 1 (Additional Credit)-Web Designing Lab	1*		100		100
			20+1*	30			700

SEMESTER-IV

Part	Subject Code	List of Courses	Credits	Hrs	Internal	External	Marks
I	U26TAL404	Language-1–Tamil	3	6	40	60	100
II	U26ENL404	Language-2–English	3	6	40	60	100
III	U26AIT407	Core-7:Theory- Artificial Intelligence	4	5	40	60	100
	U26AIP408	Core -8 : Practical – Data Analytics Using R lab	3	5	40	60	100

	U26AIA44	Allied 4 : A. Cloud computing	3	4	40	60	100
IV	U26AINM43	Naan Mudhalvan-3 / Skill Enhancement Course (SEC-4) – AI tools	2	2	40	60	100
	U26AIN401	Non Major Elective -1 (Photoshop Lab)	2	2	40	60	100
			20	30			700

SEMESTER-V

Part	Subject Code	List of Courses	Credits	Hrs	Internal	External	Marks
III	U26AIT509	Core- 9:Theory- Machine Learning techniques	3	6	40	60	100
	U26AIT510	Core- 10:Theory- Software Engineering	3	6	40	60	100
	U26AIP511	Core-11:Practical- Machine Learning Lab	4	5	40	60	100
	U26AIP512	Core 12: Practical-IOT and its Application Lab	3	5	40	60	100
	U26AIE51A/ U26AIE51B/ U26AIE51C	Department Specific Elective A. Financial Analytics B. Marketing Analytics C. Data Communication and Computer Networks	3	4	40	60	100
	U26AII501	Internship	1	-	40	60	100
IV	U26DMG501	Generic Course I–Disaster Management	2	2			100
	U26AINM54	Naan Mudhalvan-4 / Skill Enhancement Course (SEC-4) Yoga for Human Excellence	2	2			100
			20	30			700

SEMESTER-VI

Part	Subject Code	List of Courses	Credits	Hrs	Internal	External	Marks
III	U26AIT613	Core- 13:Theory- Natural Language Processing	4	6	40	60	100
	U26AIT614	Core- 14:Theory- Deep Learning	4	6	40	60	100
	U26AIP615	Core- 15:Practical- Natural Language Processing Lab	3	6	40	60	100
	U26AIPR61	Core- 16: Project	3	10	40	60	100
IV	U26AINM65	Naan Mudhalvan-5 / Skill Enhancement Course (SEC-5) Employability Readiness	2	2	40	60	100
V	U26EAS601	Extension Activity ((NSS/NCC/YRC /RRC/ CLUB ACTIVITIES / SCIENCE FORUM/ PHYSICAL EDUCATION)	2	-	100	-	100
	U26AIO601	Online /SWAYAM MOOCs /NPTEL/ Professional Certificate Course(Additional Credit)*	2*	-	-	100	100
Total			18+2*	30			700
Grand Total			120				4400

*** Additional credit papers**

- VAC in the third semester is mandatory.
- Online / SWAYAM/ MOOC / NPTEL course is mandatory. It can be done anytime during the course but will be reflected in the 6th semester only.

* Extension Activity:

Extension activity includes participation in NSS/NCC/RRC/ Science Forum/Physical Education

Total marks: 100 (Purely internal)

Credits: 2

[illegible]

	• Bjarne Stroustrup, <i>The C++ Programming Language</i> , 4th Edition, Addison-Wesley.											
E-Reference	1. cplusplus.com – C++ Language Tutorial 2. The C++ Resources Network (isocpp.org)											
Course learning outcomes	On successful completion of the course, the students will be able to:											
	COs	Course Outcomes						K Level			Learning Outcomes (LO1–LO15)	
	CO1	Explain the fundamental concepts of Object-Oriented Programming and C++ programming constructs.						K2 (Understand)			LO1, LO2, LO3	
	CO2	Apply classes, objects, constructors, destructors, and member functions to develop C++ programs.						K3 (Apply)			LO4, LO5, LO6	
	CO3	Analyze inheritance, polymorphism, function overloading, and operator overloading in software development.						K4 (Analyze)			LO7, LO8, LO9	
	CO4	Evaluate exception handling, file processing, and templates for developing robust and reusable applications.						K5 (Evaluate)			LO10, LO11, LO12	
	CO5	Design and implement object-oriented solutions for real-world problems using advanced C++ programming techniques.						K6 (Create)			LO13, LO14, LO15	
Mapping of Cos with Pos & PSOs	Programme Outcomes						Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.42
	CO1	3	2	2	1	1	1.80	3	1	1	1.67	
	CO2	3	3	3	1	1	2.20	3	2	1	2.00	
	CO3	3	3	3	1	2	2.40	3	2	2	2.33	
	CO4	3	3	3	2	2	2.60	3	2	3	2.67	

	CO5	3	3	3	2	3	2.80	3	2	3	2.67		
	Avg	3.00	2.80	2.80	1.40	1.80	2.36	3.00	1.80	2.00	2.27		
	Overall score for PO					2.36	Overall score for PSO	2.27					
	Strongly Correlating (S)					-	3 Marks						
	Moderately Correlating (M)					-	2 Marks						
Weakly Correlating (W)					-	1 Mark							
No Correlation (N)					-	0 Mark							
Teaching–Learning & Assessment Framework													
Teaching Methodology						Assessment Types							
Interactive Lectures						• Class Test – I							
Demonstration Method						• Programming Exercises							
						• Seminar / Presentation							

[illegible]

Course learning outcomes	COs	Course Outcomes						K Level		Learning Outcomes (LO1–LO15)			
	CO1	Demonstrate the use of basic C++ programming constructs, data types, operators, control structures, and functions to solve simple computational problems.						K3 (Apply)		LO1, LO2, LO3			
	CO2	Develop programs using classes, objects, constructors, destructors, and member functions to implement object-oriented solutions.						K3 (Apply)		LO4, LO5, LO6			
	CO3	Implement inheritance, polymorphism, function overloading, and operator overloading in C++ applications.						K4 (Analyze)		LO7, LO8, LO9			
	CO4	Apply exception handling, file processing, and templates to create robust and reusable programs.						K5 (Evaluate)		LO10, LO11, LO12			
	CO5	Design, develop, test, and debug real-world applications using advanced object-oriented programming concepts in C++.						K6 (Create)		LO13, LO14, LO15			
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes			Mapping Score of Cos with POs & PSOs		
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.54	
	CO1	3	2	2	2	2	2.20	3	2	1	2.00		
	CO2	3	2	3	2	2	2.40	3	3	2	2.67		
	CO3	3	3	2	2	2	2.40	3	3	2	2.67		
	CO4	3	2	3	2	2	2.40	3	3	3	3.00		
	CO5	3	3	3	3	3	3.00	3	3	2	2.67		
	Avg	3.00	2.40	2.60	2.20	2.20	2.48	3.00	2.80	2.00	2.60		
	Overall score for PO						2.48	Overall score for PSO		2.60			
	Strongly Correlating (S)						-	3 Marks					
Moderately Correlating (M)						-	2 Marks						

	Weakly Correlating (W) - 1 Mark
	No Correlation (N) - 0 Mark

Teaching–Learning & Assessment Framework

Teaching Methodology Blended Learning, Participative Learning	Assessment Types Practical Mode – Lab Work
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[illegible]

Text book	1. Elementary Mathematical Statistics Madras by Kapoor V.K. Gupta S.C. (Author)			
Reference Book	1. N. P. Bali, P. N. Gupta, C. P. Gandhi, “A Textbook of Quantitative Techniques”, First Edition, Laxmi Publications, 2008. 2. U. K. Srivastava, G. V. Shenoy, S. C. Sharma, “Quantitative Techniques for Managerial Decisions”, Second Edition, New Age International Publishers, 2005. 3. David Makinson, “Sets, Logic and Maths for Computing”, Springer, 2011. 4. Operating System Concepts (2nd Ed) by James L. Peterson, Abraham Silberschatz, Addison – Wesley. 5. Mathematical Statistics by Dr. P.R. Vittal			
E-Reference	1. https://www.scribd.com/document/611619359/mathematical-statistics-iqra-liaqat 2. https://ocw.mit.edu/courses/18-655-mathematical-statistics-spring-2016/pages/lecture-notes/			
Course learning outcomes	On successful completion of the course, the students will be able to			
	COs	Course Outcomes	K Level	Learning Outcomes (LO1–LO15)
	CO1	Explain the scope, importance, limitations, classification, tabulation, and graphical representation of statistical data.	K2 (Understand)	LO1, LO2, LO3
	CO2	Apply measures of location such as Arithmetic Mean, Median, Mode, Geometric Mean, and Harmonic Mean to summarize data.	K3 (Apply)	LO4, LO5, LO6
	CO3	Analyze measures of dispersion and their relative measures to assess variability in data.	K4 (Analyze)	LO7, LO8, LO9
	CO4	Evaluate skewness and kurtosis using appropriate statistical measures and interpret distribution characteristics.	K5 (Evaluate)	LO10, LO11, LO12
	CO5	Apply correlation techniques to determine and interpret relationships between variables in real-world datasets.	K5 (Evaluate)	LO13, LO14, LO15
Mapping of Cos	Programme Outcomes	Programme Specific Outcomes	Mapping Score of Cos with	

with Pos & PSOs											POs & PSOs	
	COs	PO 1	PO2	PO3	PO4	PO5	Mean Score	PSO 1	PSO2	PSO 3	Mean Score	2.65
	CO1	3	2	2	2	2	2.40	3	3	2	2.67	
	CO2	3	3	2	2	2	2.40	3	2	2	2.33	
	CO3	3	2	3	2	2	2.40	3	3	2	2.67	
	CO4	3	3	3	3	2	2.80	3	3	3	3.00	
	CO5	3	3	3	3	3	3.00	3	3	3	3.00	
	Avg	3.00	2.60	2.60	2.40	2.20	2.56	3.00	2.80	2.40	2.73	
	Overall score for PO						2.56	Overall score for PSO	2.73			
Strongly Correlating (S)						-	3 Marks					
Moderately Correlating (M)						-	2 Marks					
Weakly Correlating (W)						-	1 Mark					
No Correlation (N)						-	0 Mark					
Teaching–Learning & Assessment Framework												
Teaching Methodology Blended Learning, Participative Learning						Assessment Types Written Mode – Class Test, Home Assignment, Exam Integrated Mode - seminars						

[illegible]

Book	Byron Gottfried, (2010), — Programming with C, Schaums Outline Series, Tata McGraw Hill Publications											
E-Reference	1. http://www.tutorialspoint.com/cprogramming 2. http://www.cprogramming.com 3. http://www.programmingsimplified.com/c-program-examples/ 4. http://www.programiz.com/c-programming											
Course learning outcomes	On successful completion of the course, the students will be able to:											
	COs	Course Outcomes						K Level		Learning Outcomes (LO1–LO15)		
	CO1	Explain problem-solving techniques, algorithm development, flowcharts, and structured programming concepts in C.						K2 (Understand)		LO1, LO2, LO3		
	CO2	Apply control structures, operators, and decision-making statements to develop structured C programs.						K3 (Apply)		LO4, LO5, LO6		
	CO3	Develop modular programs using functions, arrays, and strings to solve computational problems.						K3 (Apply)		LO7, LO8, LO9		
	CO4	Analyze and implement structured data types such as structures, unions, and pointers for efficient programming.						K4 (Analyze)		LO10, LO11, LO12		
	CO5	Design and implement complete C programs for real-world problem-solving using structured programming techniques.						K5 (Evaluate)		LO13, LO14, LO15		
Mapping of Cos with Pos & PSOs	Programme Outcomes						Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PS O1	PS O2	PS O3	Mean Score	2.60
	CO1	3	3	2	2	2	2.40	3	3	2	2.67	
	CO2	3	2	2	2	1	2.00	3	2	1	2.00	

	CO3	3	3	3	2	2	2.60	3	3	2	2.67	
	CO4	3	3	3	3	2	2.80	3	3	3	3.00	
	CO5	3	2	3	3	3	3.00	3	3	3	3.00	
	Avg	3.00	2 . 6 0	2.60	2 . 4 0	2.00	2.52	3.0 0	2.8 0	2.2 0	2.67	
	Overall score for PO					2.52	Overall score for PSO	2.67				
Strongly Correlating (S)					-	3 Marks						
Moderately Correlating (M)					-	2 Marks						
Weakly Correlating (W)					-	1 Mark						
No Correlation (N)					-	0 Mark						
Teaching–Learning & Assessment Framework												
Teaching Methodology - Laboratory Practice - ICT-Enabled Learning - To utilize e-content, LMS, online tutorials, and coding platforms.						Assessment Types - Assignment / Coding Exercise - Seminar / Quiz						

(Common Paper for all UG Courses)

[illegible]

	2. <i>Fundamentals of Computers</i> , V. Rajaraman, PHI Learning, Latest Edition.			
Reference Book	1. <i>Fundamentals of Information Technology</i> , Alexis Leon & Mathews Leon, Vikas Publishing House, Latest Edition. 2. <i>Computer Fundamentals</i> , Anita Goel, Pearson Education, Latest Edition.			
E-Reference	https://www.gcfglobal.org https://www.w3schools.com https://nptel.ac.in			
	COs	Course Outcomes At the end of the course, students will be able to	K Level	Learning Outcomes (LO1-LO15)
	CO1	Understand and explain the fundamental concepts of computer systems and information technology.	K1 & K2	LO1
	CO2	Use office productivity tools to create professional documents and presentations.	K3	LO2
	CO3	Apply spreadsheet functions and techniques for data management and analysis.	K3 & K4	LO4
	CO4	Demonstrate safe and responsible use of internet technologies and cybersecurity practices.	K 3	LO3
	CO5	Explain the significance and applications of emerging technologies in various sectors.	K2 & K4	LO5
	CO6	Utilize computer applications effectively to solve academic and workplace problems.	K5 & K6	LO1

LAB LIST

- **Identification of Computer Hardware and Peripheral Devices**

Identify and document the functions of system-unit components, input devices, output devices, memory units, and storage devices.

- **Windows Operating System and File Management**

Create folders and subfolders; copy, move, rename, search, sort, compress, restore, and delete files using Windows File Explorer and Recycle Bin.

- **Windows Accessories and Utility Applications**

Perform basic tasks using Notepad, Calculator, Paint, Snipping Tool, Character Map, and other Windows utilities.

- **Creating and Formatting a Document in MS Word**

Create a document containing headings, paragraphs, lists, borders, shading, headers, footers, page numbers, symbols, and special characters.

- **Page Layout and Advanced Document Formatting**

Design a multi-page document using margins, orientation, page size, columns, section breaks, ruler settings, tabs, indentation, line spacing, and paragraph spacing.

- **Table Creation and Manipulation in MS Word**
Create and format a student mark statement or employee information table using cell merging, splitting, alignment, borders, shading, sorting, and basic calculations.
- **Mail Merge Application**
Prepare personalized appointment letters, invitations, certificates, or notices for multiple recipients using Mail Merge and an external recipient list.
- **Find and Replace, Equation Editor, and WordArt**
Create an academic document containing mathematical equations, WordArt, text boxes, shapes, Find and Replace operations, spelling checks, and page formatting.
- **Workbook and Worksheet Management in MS Excel**
Create a workbook with multiple worksheets; rename, insert, delete, move, copy, hide, protect, and format worksheets.
- **Student Mark Analysis Using Formulas and Functions**
Prepare a student mark sheet and calculate total, average, percentage, grade, result, highest mark, lowest mark, and class rank using formulas and functions.
- **Employee Payroll Preparation Using Spreadsheet Functions**
Create a payroll worksheet and calculate basic pay, allowances, deductions, gross salary, and net salary using arithmetic, logical, and conditional functions.
- **Sorting, Filtering, and Data Analysis in MS Excel**
Create a dataset and perform single-level and multi-level sorting, AutoFilter, custom filtering, conditional formatting, subtotal calculation, and data validation.
- **Charts and Graphical Data Presentation**
Prepare a dataset and generate suitable column, bar, line, pie, and area charts. Add chart titles, legends, labels, axes, and appropriate formatting.
- **Internet, E-mail, Cloud Computing, and Cyber security Practices**
Perform an effective web search using search operators, create and send an e-mail with attachments and CC/BCC and upload and share a file through cloud storage.
- **Creating an Effective Multimedia Presentation**
Create a presentation on an emerging technology such as Artificial Intelligence, Machine Learning, IoT, Big Data, Mobile Computing, or Digital Transformation. Include themes, layouts, SmartArt, tables, charts, images, audio/video, animations, transitions, hyperlinks, speaker notes, and slide-show settings.

[illegible]

	Cursors and Attributes – Cursor FOR loops – SELECT...FOR UPDATE – WHERE CURRENT OF clause – Cursor with Parameters – Cursor Variables – Exceptions – Types of Exceptions.			
Question paper Coverage - 100% theory				
Text book	Coronel, Morris, Rob, "Database Systems, Design, Implementation and Management", Ninth Edition			
	Nilesh Shah, "Database Systems Using Oracle", 2nd edition, Pearson Education India, 2016			
Reference Book	Abraham Silberschatz, Henry F.Korth and S.Sudarshan,“Database System Concepts”, McGraw Hill International Publication ,VI Edition			
	Shio Kumar Singh , “Database Systems “,Pearson publications ,II Edition			
E-Reference	1. Oracle Database Documentation Comprehensive resource for SQL, PL/SQL, database administration, and advanced database concepts. 2. MySQL Documentation Official documentation covering relational database design, SQL, and database management. 3. PostgreSQL Documentation Detailed guides on SQL, database development, and administration.			
Course learning outcomes	On successful completion of the course, the students will be able to:			
	COs	Course Outcomes	K Level	Learning Outcomes (LO1–LO12)
	CO1	Explain the concepts of database systems, data models, data abstraction, and the role of DBMS in managing organizational data.	K2 (Underst and)	LO1, LO2
	CO2	Design relational databases using keys, integrity constraints, ER models, and normalization techniques.	K3 (Apply)	LO3, LO4, LO5
	CO3	Develop SQL queries for database creation, manipulation, retrieval, and management of relational data.	K3 (Apply)	LO6, LO7
	CO4	Analyze and implement advanced SQL features including joins, set operators, subqueries, and built-in functions.	K4 (Analyz e)	LO8, LO9
	CO5	Construct PL/SQL programs using control structures, cursors, exception handling, and transaction control	K5 (Evaluat	LO10, LO11,

		mechanisms.							e)		LO12	
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.48
	CO1	3	2	1	1	1	1.60	3	2	1	2.00	
	CO2	3	3	2	1	2	2.20	3	3	2	2.67	
	CO3	3	3	3	2	2	2.60	3	3	2	2.67	
	CO4	3	2	3	3	2	2.60	3	2	3	2.67	
	CO5	3	3	2	3	3	2.80	3	3	3	3.00	
	Avg	3.00	2.60	2.20	2.00	2.00	2.36	3.00	2.60	2.20	2.60	
	Overall score for PO						2.36	Overall score for PSO			2.60	
	Strongly Correlating (S)							-				
Moderately Correlating (M)							-					2 Marks
Weakly Correlating (W)							-					1 Mark
No Correlation (N)							-					0 Mark
Teaching–Learning & Assessment Framework												
Teaching Methodology							Assessment Types					
Blended Learning, Participative Learning							Written Mode – Class Test, Home Assignment, Exam					
							Integrated Mode - seminars					

Course Code	U26AIP204	Semester II	Year I	Credits	L	T	P	Hrs
Core	DATABASE MANAGEMENT SYSTEM LAB			3	-	-	5	5
Nature of the Course	Employability / Skill Enhancement /Entrepreneurship							
Learning objectives	- Understand and apply DDL, DML, DCL, and TCL commands to create, modify, manipulate, and manage database objects while maintaining data integrity through constraints. - Develop and execute SQL queries using operators, joins, subqueries, set operators, and aggregate functions to retrieve and analyze data effectively. - Design and implement advanced database objects such as Views, Assertions, Procedures, Functions, Packages, Triggers, and Cursors using PL/SQL. - Apply PL/SQL programming constructs, including conditional statements, loops, exception handling, and cursor management, to automate database operations. - Design, develop, and test real-world database applications such as Library Management, Student Mark Analysis, User Identification Systems, and Time Table Management Systems using SQL and PL/SQL.							
Units	List of Programs:							
	- Creating Database table, add constraints (Primary key, Unique, Check, Not Null),delete the table using DDL Commands. - Performing DML Commands like Insertion, Deletion, Modifying, Altering and Updating Records based on conditions. - Performing TCL commands like rollback, commit, save point. - Performing Queries using ANY, ALL, IN, Exists, NOT EXISTS, UNION, INTERSECT constraints. - Creation of various Aggregation functions in SQL. - Creations of Views and Assertions. - Implementation of various control structures using PL/SQL. - Creations of Procedure and Functions. - Creation of Packages. - Creations of database trigger(creation of insert trigger, delete trigger, update trigger). - Creation of database with implicit and explicit cursor. - Real life database Application Development from the following:							

	a) Library Management. b) Student Mark Analysis. c) Web based User Identification System. d) Time Table Management System.			
Question paper Coverage - 100% Practical				
Text book	Coronel, Morris, Rob, "Database Systems, Design, Implementation and Management", Ninth Edition			
	Nilesh Shah, "Database Systems Using Oracle", 2nd edition, Pearson Education India, 2016			
Reference Book	Abraham Silberschatz, Henry F.Korth and S.Sudarshan,“Database System Concepts”, McGraw Hill International Publication ,VI Edition			
	Shio Kumar Singh , “Database Systems “,Pearson publications ,II Edition.			
E-Reference	1. http://vlabs.iitkgb.ernet.in/se/4/theory/ 2. MySQL Documentation Official documentation covering relational database design, SQL, and database management. 3. PostgreSQL Documentation Detailed guides on SQL, database development, and administration.			
Course learning outcomes	On successful completion of the course, the students will be able to:			
	COs	Course Outcomes	K Level	Learning Outcomes (LO1–LO15)
	CO1	Create, modify, and manage database schemas using DDL, DML, and TCL commands with appropriate integrity constraints such as Primary Key, Foreign Key, Unique, Check, and Not Null.	K3	LO1, LO2, LO3
	CO2	Construct and execute SQL queries using selection, projection, joins, subqueries, set operators (UNION, INTERSECT), EXISTS/NOT EXISTS, ANY, ALL, and aggregate functions for effective data retrieval and analysis.	K3	LO4, LO5, LO6
	CO3	Design and implement database objects including Views, Procedures, Functions, Packages, Triggers, and Assertions using PL/SQL programming concepts.	K4	LO7, LO8, LO9
	CO4	Develop PL/SQL programs utilizing control structures, exception handling, implicit and explicit cursors to automate database operations and improve application efficiency.	K4	LO10, LO11, LO12
	CO5	Design, develop, and demonstrate real-world database applications such as Library	K5	LO13, LO14, LO15

		Management, Student Mark Analysis, User Identification System, and Time Table Management System by integrating SQL and PL/SQL concepts.										
Mapping of Cos with Pos & PSOs	Programme Outcomes						Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PS O1	PS O2	PS O3	Mean Score	2.53
	CO1	3	2	2	2	1	2.0	3	2	1	2.0	
	CO2	3	3	2	2	2	2.4	3	2	2	2.3	
	CO3	3	3	3	3	2	2.6	3	3	2	2.7	
	CO4	2	3	3	3	3	2.6	2	3	3	2.7	
	CO5	3	3	3	3	3	3.0	3	3	3	3.0	
	Avg	2.8	2.8	2.6	2.2	2.2	2.52	2.8	2.6	2.2	2.54	
	Overall score for PO						2.52	Overall score for PSO		2.54		
	Strongly Correlating (S)						-		3 Marks			
Moderately Correlating (M)						-		2 Marks				
Weakly Correlating (W)						-		1 Mark				
No Correlation (N)						-		0 Mark				
Teaching–Learning & Assessment Framework												
Teaching Methodology						Assessment Types						
• Blended Learning, Participative Learning						• Practical Mode – Lab Work						

[illegible]

E-Reference	1. NPTEL Operations Research Course 2. MIT OpenCourseWare – Operations Research 3. GeeksforGeeks – Operations Research Tutorials												
Course learning outcomes	On successful completion of the course, the students will be able to												
	COs	Course Outcomes							K Level		Learning Outcomes (LO1–LO15)		
	CO1	Explain the fundamentals, scope, characteristics, tools, techniques, and applications of Operations Research in decision making.							K2 (Understand)		LO1, LO2, LO3		
	CO2	Formulate Linear Programming Problems (LPP) and solve those using graphical methods.							K3 (Apply)		LO4, LO5, LO6		
	CO3	Apply the Simplex Method, Artificial Variable Technique, and Two-Phase Method to solve optimization problems.							K3 (Apply)		LO7, LO8, LO9		
	CO4	Analyze transportation problems and obtain optimal solutions using appropriate methods.							K4 (Analyze)		LO10, LO11, LO12		
	CO5	Evaluate and solve assignment problems, including balanced and unbalanced cases, for effective resource allocation.							K5 (Evaluate)		LO13, LO14, LO15		
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.45	
	CO1	3	3	2	1	1	2.00	2	1	1	1.33		
	CO2	3	3	3	2	1	2.40	3	2	1	2.00		
	CO3	3	3	3	2	2	2.60	3	3	2	2.67		
	CO4	3	3	3	3	2	2.80	3	3	2	2.67		
	CO5	3	3	3	3	3	3.00	3	3	3	3.00		
	Avg	3.00	3	2.80	2.2	1.8	2.56	2.80	2.4	1.8	2.33		

			.		0	0			0	0		
				0								
				0								
				0								
				0								
	Overall score for PO					2.56	Overall score for PSO			2.33		
	Strongly Correlating (S)					-	3 Marks					
	Moderately Correlating (M)					-	2 Marks					
	Weakly Correlating (W)					-	1 Mark					
	No Correlation (N)					-	0 Mark					
Teaching–Learning & Assessment Framework												
Teaching Methodology Blended Learning, Participative Learning						Assessment Types Written Mode – Class Test, Home Assignment, Exam Integrated Mode - seminars						

[illegible]

Book	S.S.Sastry, “Introductory Methods of Numerical Analysis” PHI,1995.											
E-Reference	1. NPTEL Digital Circuits Course 2. NPTEL Computer Organization and Architecture											
Course learning outcomes	On successful completion of the course, the students will be able to:											
	COs	Course Outcomes						K Level		Learning Outcomes (LO1–LO15)		
	CO1	Explain number systems, binary arithmetic, coding schemes, and data representation techniques used in digital systems.						K2 (Understand)		LO1, LO2, LO3		
	CO2	Apply Boolean algebra, logic gates, Karnaugh maps, and simplification techniques for digital circuit design.						K3 (Apply)		LO4, LO5, LO6		
	CO3	Design and analyze combinational circuits such as adders, multiplexers, demultiplexers, encoders, and decoders.						K4 (Analyze)		LO7, LO8, LO9		
	CO4	Analyze sequential circuits, flip-flops, register organization, instruction formats, and addressing modes.						K4 (Analyze)		LO10, LO11, LO12		
	CO5	Evaluate memory organization and storage devices including RAM, ROM, cache memory, and secondary storage systems.						K5 (Evaluate)		LO13, LO14, LO15		
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.25
	CO1	3	2	1	1	1	1.60	2	1	1	1.00	
	CO2	3	3	2	1	1	2.00	3	2	1	2.00	
	CO3	3	3	3	2	1	2.40	3	3	2	2.67	
	CO4	3	3	3	2	1	2.40	3	3	2	2.67	
	CO5	3	3	3	3	2	2.40	3	3	3	3.00	
	Avg	3.00	2.80	2.40	1.80	1.2	2.24	2.80	2.40	1.80	2.33	

						0						
	Overall score for PO						2.16	Overall score for PSO			2.33	
	Strongly Correlating (S)						-	3 Marks				
	Moderately Correlating (M)						-	2 Marks				
	Weakly Correlating (W)						-	1 Mark				
	No Correlation (N)						-	0 Mark				
Teaching–Learning & Assessment Framework												
Teaching Methodology							Assessment Types					
• Problem-Based Learning • Lab Simulation Tools							Written Mode – Class Test, Home Assignment, Exam					
							Integrated Mode - Seminars					

[illegible]

	Compiling Regular Expressions.												
Question paper Coverage - 100% theory													
Text book	Mark Summerfield. —Programming in Python 3: A Complete introduction to the Python Language, Addison-Wesley Professional, 2009.												
Reference Book	Allen B. Downey, ``Think Python: How to Think Like a Computer Scientist___, 2nd edition, Updated for Python 3, Shroff/O_Reilly Publishers, 2016 Guido van Rossum and Fred L. Drake Jr, —An Introduction to Python – Revised and updated for Python 3.2, Network Theory Ltd., 2011. Kenneth A. Lambert(2012), Fundamentals of Python: First Programs, C engage Learning												
E-Reference	1. https://www.guru99.com/python-tutorials.html 2. https://www.w3schools.com/python/python_intro.asp 3. https://www.geeksforgeeks.org/python-programming-language/												
Course learning outcomes	On successful completion of the course, the students will be able to:												
	COs	Course Outcomes							K Level			Learning Outcomes (LO1– LO15)	
	CO1	Explain Python fundamentals, data types, operators, variables, and input/output operations.							K2 (Understand)			LO1, LO2, LO3	
	CO2	Apply control structures, lists, tuples, sets, and dictionaries to solve computational problems.							K3 (Apply)			LO4, LO5, LO6	
	CO3	Develop modular programs using functions, modules, lambda expressions, and built-in Python libraries.							K3 (Apply)			LO7, LO8, LO9	
	CO4	Analyze exception handling mechanisms, file operations, and directory management in Python applications.							K4 (Analyze)			LO10, LO11, LO12	
	CO5	Design object-oriented Python applications using classes, inheritance, polymorphism, and regular expressions.							K5 (Evaluate)			LO13, LO14, LO15	
Mapping of Cos with Pos	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.52	

& PSOs	CO1	3	2	1	1	2	1.80	3	2	1	2.00	
	CO2	3	3	2	2	2	2.40	3	3	2	2.67	
	CO3	3	3	3	2	2	2.60	3	3	3	3.00	
	CO4	2	3	3	3	2	2.60	2	3	3	2.67	
	CO5	2	3	3	3	3	2.80	2	3	3	2.67	
	Avg	2.60	2.80	2.40	2.20	2.20	2.44	2.60	2.80	2.40	2.60	
	Overall score for PO						2.44	Overall score for PSO		2.60		
	Strongly Correlating (S)						-	3 Marks				
	Moderately Correlating (M)						-	2 Marks				
Weakly Correlating (W)						-	1 Mark					
No Correlation (N)						-	0 Mark					
Teaching–Learning & Assessment Framework												
Teaching Methodology Blended Learning, Participative Learning							Assessment Types Written Mode – Class Test, Home Assignment, Exam Integrated Mode - seminars					

	4. Write a Python script that prints prime numbers less than 20. 5. Program to find factorial of the given number using recursive function. 6. Write a Python program to count the number of even and odd numbers from array of N numbers. 7. Write a Python class to reverse a string word by word. 8. Given a tuple and a list as input, write a program to count the occurrences of all items of the list in the tuple. 9. Create a Savings Account class that behaves just like a BankAccount, but also has an interest rate and a method that increases the balance by the appropriate amount of interest 10. Read a file content and copy only the contents at odd lines into a new file. 11. Create a Turtle graphics window with specific size. 12. Write a Python program for Towers of Hanoi using recursion 13. Create a menu driven Python program with a dictionary for words and their meanings. 14. Devise a Python program to implement the Hangman Game.
Question paper Coverage - 100% Practical	
Text book	Mark Summerfield. —Programming in Python 3: A Complete introduction to the Python Language, Addison-Wesley Professional, 2009.
Reference Book	Allen B. Downey, ``Think Python: How to Think Like a Computer Scientist__, 2nd edition, Updated for Python 3, Shroff/O_Reilly Publishers, 2016
	Guido van Rossum and Fred L. Drake Jr, —An Introduction to Python – Revised and updated for Python 3.2, Network Theory Ltd., 2011.
E-Reference	1. https://www.guru99.com/python-tutorials.html 2. https://www.w3schools.com/python/python_intro.asp 3. https://www.geeksforgeeks.org/python-programming-language/
Course	On successful completion of the course, the students will be able to:

learning outcomes	COs	Course Outcomes	K Level	Learning Outcomes (LO1–LO15)
	CO1	Develop Python programs using variables, operators, expressions, decision-making, and looping constructs to solve basic computational problems.	K3 (Apply)	LO1, LO2, LO3
	CO2	Implement functions, recursion, lists, tuples, dictionaries, and other built-in data structures for problem-solving.	K3 (Apply)	LO4, LO5, LO6
	CO3	Design object-oriented applications using classes, objects, and user-defined methods.	K4 (Analyze)	LO7, LO8, LO9
	CO4	Apply file handling techniques and graphics libraries to develop practical Python applications.	K4 (Analyze)	LO10, LO11, LO12
	CO5	Design and develop real-world applications such as games and problem-solving systems using advanced Python programming concepts.	K6 (Create)	LO13, LO14, LO15

Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.38
	CO1	3	2	1	1	1	1.60	2	1	1	1.33	
	CO2	3	3	2	2	1	2.20	3	2	1	2.00	
	CO3	3	3	3	2	1	2.40	3	3	2	2.67	
	CO4	3	3	3	3	2	2.80	3	3	3	3.00	
	CO5	3	3	3	3	2	2.80	3	3	3	3.00	
	Avg	3.00	2.80	2.40	2.20	1.40	2.36	2.80	2.40	2.00	2.40	

	Overall score for PO	2.36	Overall score for PSO	2.40	
	Strongly Correlating (S)	-	3 Marks		
	Moderately Correlating (M)	-	2 Marks		
	Weakly Correlating (W)	-	1 Mark		
	No Correlation (N)	-	0 Mark		
Teaching–Learning & Assessment Framework					
Teaching Methodology Blended Learning, Participative Learning		Assessment Types Practical Mode – Lab Work			

[illegible]

Text book	- Elementary Mathematical Statistics Madras by Kapoor V.K. Gupta S.C. (Author) - Dr.S.P.Gupta-StatisticalMethods-SultanChand&Sons,2012. - S.C.Gupta,V.K.Kapoor – Element of Mathematical Statistics – Sultan Chand & Sons,2014			
Reference Book	- S.ArumugamIssac- Statistics-NewGammaPublishingHouse,Palayamkottai,2014. - M.Haj Meeral - Statistical Methods and their Applications I – Laxmi Publications. - Larry.J.Stephens-Beginningstatistics-Schaum’sOutlineSeries,McGraw HillEducation;2nd edition, January2006			
E-Reference	https://www.studocu.com/en-us/document/oklahoma-state-university/mathematical-functions-and-their-uses/syllabus-xsaxas/67569489 https://www.scribd.com/document/670454299/Statistics-II-Syllabus			
Course learning outcomes	On successful completion of the course, the students will be able to:			
	COs	Course Outcomes	K Level	Learning Outcomes (LO1–LO15)
	CO1	Explain sampling distributions, Central Limit Theorem, and standard statistical distributions such as t, chi-square, and F distributions.	K2	LO1, LO2, LO3
	CO2	Apply regression analysis techniques to study relationships between variables and estimate regression equations.	K3	LO4, LO5, LO6
	CO3	Analyze probability distributions, random variables, mathematical expectation, and variance.	K4	LO7, LO8, LO9
	CO4	Evaluate sampling methods, sampling distributions, and sources of sampling and non-sampling errors.	K5	LO10, LO11, LO12
	CO5	Apply hypothesis testing and ANOVA techniques for statistical inference and decision making.	K5	LO13, LO14, LO15
	Programme Outcomes	Programme Specific Outcomes	Mapping Score of Cos with POs & PSOs	

Mapping of Cos with Pos & PSOs	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.43
	CO1	3	3	2	1	1	2.00	2	1	1	1.33	
	CO2	3	3	3	2	1	2.40	3	2	1	2.00	
	CO3	3	3	3	2	1	2.40	3	3	2	2.67	
	CO4	3	3	3	3	2	2.80	3	3	2	2.67	
	CO5	3	3	3	3	3	3.00	3	3	3	3.00	
	Avg	3.00	3.00	2.80	2.20	1.60	2.52	2.80	2.40	1.80	2.33	
	Overall score for PO						2.52	Overall score for PSO			2.33	
	Strongly Correlating (S)						-	3 Marks				
Moderately Correlating (M)						-	2 Marks					
Weakly Correlating (W)						-	1 Mark					
No Correlation (N)						-	0 Mark					
Teaching–Learning & Assessment Framework												
Teaching Methodology							Assessment Types					
Blended Learning, Participative Learning							Written Mode – Class Test, Home Assignment, Exam					
							Integrated Mode - seminars					

[illegible]

Course learning outcomes	COs	Course Outcomes						K Level		Learning Outcomes (LO1–LO15)			
	CO1	Apply row operations, Gaussian elimination, and echelon forms to solve systems of linear equations and determine consistency.						K3 (Apply)		LO1, LO2, LO3			
	CO2	Analyze matrices, determinants, inverses, rank, and nullity for solving algebraic problems.						K4 (Analyze)		LO4, LO5, LO6			
	CO3	Explain vector spaces, subspaces, basis, dimension, null space, and column space.						K4 (Analyze)		LO7, LO8, LO9			
	CO4	Apply linear transformations and matrix representations to study mappings between vector spaces.						K5 (Evaluate)		LO10, LO11, LO12			
	CO5	Evaluate eigenvalues, eigenvectors, diagonalization, and the Cayley–Hamilton theorem for mathematical and computational applications.						K5 (Evaluate)		LO13, LO14, LO15			
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	PO1	PO 2	PO 3	PO 4	PO 5	Mean Score	PSO 1	PSO2	PSO 3	Mean Score	2.35	
	CO1	3	2	1	1	1	1.60	3	2	1	2.00		
	CO2	3	3	2	1	1	2.00	3	3	2	2.67		
	CO3	3	3	2	2	1	2.20	3	2	2	2.33		
	CO4	3	3	3	2	1	2.40	3	3	2	2.67		
	CO5	3	2	3	3	2	2.60	3	3	3	3.00		
	Avg	3.00	2.60	2.20	1.80	1.20	2.16	3.00	2.60	2.00	2.53		
	Overall score for PO						2.16	Overall score for PSO		2.53			

	Strongly Correlating (S)	-	3 Marks
	Moderately Correlating (M)	-	2 Marks
	Weakly Correlating (W)	-	1 Mark
	No Correlation (N)	-	0 Mark
Teaching–Learning & Assessment Framework			
Teaching Methodology		Assessment Types	
Blended Learning, Participative Learning		Written Mode – Class Test, Home Assignment, Exam Integrated Mode - seminars	

[illegible]

Book													
	Manlyn Greenstein and Miklos, “Electronic Commerce”, TMH.												
E-Reference	https://www.the-reference.com/en/expertise/creation-and.../e-commerce												
	https://en.wikipedia.org/wiki/E-commerce												
	https://www.tutorialspoint.com/e_commerce/index.htm												
Course learning outcomes	On successful completion of the course, the students will be able to:												
	COs	Course Outcomes							K Level		Learning Outcomes (LO1–LO15)		
	CO1	Explain the fundamentals of E-Commerce, media convergence, and various consumer and organizational applications of E-Commerce.							K2 (Understand)		LO1, LO2, LO3		
	CO2	Describe Internet architecture, terminology, governance, and the role of various Internet Service Providers in Internet commercialization.							K2 (Understand)		LO4, LO5, LO6		
	CO3	Analyze the architectural framework of E-Commerce, World Wide Web technologies, and web security mechanisms.							K4 (Analyze)		LO7, LO8, LO9		
	CO4	Examine different electronic payment systems, digital payment technologies, EDI, and associated legal, privacy, and security issues.							K4 (Analyze)		LO10, LO11, LO12		
	CO5	Evaluate Internet-based advertising, marketing strategies, information filtering techniques, and software agent technologies in E-Commerce environments.							K5 (Evaluate)		LO13, LO14, LO15		
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.50	
	CO1	3	2	1	1	2	1.80	3	2	1	2.00		

	CO2	3	3	2	1	2	2.20	3	3	2	2.67	
	CO3	3	3	3	2	2	2.60	3	3	3	3.00	
	CO4	3	2	3	3	2	2.60	3	2	2	2.33	
	CO5	3	3	3	3	2	2.80	3	3	3	3.00	
	Avg	3.00	2.60	2.40	2.00	2.00	2.40	3.00	2.60	2.20	2.60	
	Overall score for PO						2.40	Overall score for PSO		2.60		
	Strongly Correlating (S)						-	3 Marks				
Moderately Correlating (M)						-	2 Marks					
Weakly Correlating (W)						-	1 Mark					
No Correlation (N)						-	0 Mark					
Teaching–Learning & Assessment Framework												
Teaching Methodology							Assessment Types					
Interactive Learning, Project-Based Learning, Industry Exposure							Written Mode – Class Test, Home Assignment, Exam					
							Integrated Mode - seminars					

Course Code	U26AIV301	Semester III	Year II	credits	L	T	P	H r s
Core/ Elective	WEB DESIGNINGLAB (Value Added Course)			1*	-	-	-	-
Nature of the Course	Employability / Skill Enhancement /Entrepreneurship							
Learning objectives	• Understand the fundamentals of HTML and the structure of a web page using head, title, body, and heading tags. • Apply HTML formatting and styling elements to create visually appealing and well-organized web pages. • Design web pages using lists, images, marquees, and hyperlinks to present and navigate information effectively. • Construct tables, frames, and forms to organize content and facilitate user interaction. • Develop complete and functional web pages by integrating various HTML elements and adhering to basic web design principles.							
	List of Exercises							
	1. Webpagecreationusinghead,title, body,h1–h6. 2. Webpagecreationusingformattingtags(bold,italic, underlineetc.,) 3. Orderedlist 4. Unorderedlist 5. Definitionlist 6. Marqueecreation 7. Webpagewith images 8. Webpagecreationwith variousfontstylesand bodycolors. 9. Hyper link 10. Tables 11. Frames 12. Forms							
Question paper Coverage - 100% Practical								
Text book	1.DOYLE .M Beginning PHP 5.3 Ist edition –Wiley Publications ltd., 2010.							
Reference Book	.Bayross.I. S.Shah – PHP 5.1 for Beginners 10 th Reprint ,SHROFF							

	Publishers and Distributors 2011													
E-Reference	https://php.com/ https://www.w3schools.com/													
Course learning outcomes	On successful completion of the course, the students will be able to:													
	COs	Course Outcomes						K Level		Learning Outcomes (LO1–LO12)				
	CO1	Create basic web pages using HTML structure elements, headings, formatting tags, and font styles.						K3 (Apply)		LO1, LO2, LO3				
	CO2	Design web pages using lists, marquees, images, hyperlinks, and visual formatting features.						K3 (Apply)		LO4, LO5, LO6				
	CO3	Develop web pages incorporating tables and frames for organizing and presenting information.						K3 (Apply)		LO7, LO8				
	CO4	Construct interactive web pages using HTML forms for data collection and user interaction.						K3 (Apply)		LO9, LO10				
	CO5	Design complete and user-friendly web pages by integrating various HTML elements and webpage components.						K4 (Analyze)		LO11, LO12				
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs		
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO 1	PSO 2	PSO 3	Mean Score	2.56		
	CO1	3	3	2	1	2	2.4	3	2	1	2.0			
	CO2	3	3	3	2	2	2.6	3	3	2	2.3			
	CO3	3	2	3	1	2	2.2	3	3	2	2.3			
	CO4	3	3	3	3	2	2.8	3	3	3	3.0			
	CO5	3	3	3	3	3	3.0	3	3	3	3.0			
	Overall score for PO						2.60	Overall score for PSO		2.52				
Strongly Correlating (S)												-	3 Marks	

	Moderately Correlating (M)	-	2 Marks
	Weakly Correlating (W)	-	1 Mark
	No Correlation (N)	-	0 Mark
Teaching–Learning & Assessment Framework			
Teaching Methodology		Assessment Types	
Lab-based learning, Task-oriented exercises, Mini project developmen		Record Submission, Mini Assignments, Mini Project	

[illegible]

	- Syntactic Analysis, Semantic Analysis, Discusses and Pragmatic Processing – Statistical Natural Language processing			
Unit V	Learning & Advanced Topics in AI What is learning? – Rote learning – Learning by taking advice – Learning in problem solving – Learning from examples: Induction – Explanation based learning – Discovery – Analogy – Formal learning theory - Neural Net learning and Genetic learning - Expert System: Representation-Expert System shells-Knowledge Acquisition. Fuzzy logic system – Crisp sets – Fuzzy sets – Fuzzy terminology – Fuzzy logic control – Sugeno style of Fuzzy inference processing – Fuzzy Hedges – Neuro Fuzzy systems.			
Question paper Coverage - 100% theory				
Text book	1. Elaine Rich, Kevin Knight (2008), Shivsankar B Nair, Artificial Intelligence, Third Edition, Tata McGraw Hill Publication			
Reference Book	1. Russel S, Norvig P (2010), Artificial Intelligence : A Modern approach,Third Edition, Pearson Education 2. Dan W Patterson (2007), Introduction to Artificial Intelligence and Expert System, Second Edition, Pearson Education Inc. 3. Jones M (2006), Artificial Intelligence application Programming, Second Edition, Dreamtech Press 4. Nilsson (2000), Artificial Intelligence : A new synthesis, Nils J Harcourt Asia PTE Ltd.			
E-Reference	1. https://aima.cs.berkeley.edu/?utm_source=chatgpt.com 2. https://ocw.mit.edu?utm_source=chatgpt.com 3. https://www.ibm.com/artificial-intelligence?utm_source=chatgpt.com			
Course learning outcomes	On successful completion of the course, the students will be able to			
	COs	Course Outcomes	K Level	Learning Outcomes (LO1-LO15)
	CO1	Recall the fundamental concepts, terminology, types, and applications of Artificial Intelligence and intelligent agents.	K1 & K2	LO1, LO2
	CO2	Apply search strategies, problem-solving techniques, and knowledge representation methods to solve AI problems.	K3	LO3, LO4
	CO3	Analyze different AI algorithms such as search methods, reasoning techniques, and learning approaches for problem solving.	K4	LO5, LO6

	CO4	Evaluate and compare various AI techniques including machine learning, heuristic search, and reasoning methods for different applications.						K5		LO7, LO8		
	CO5	Design and develop AI-based solutions for real-world						K5 & K6		LO9, LO10, LO11, LO12, LO13,		
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO 1	PSO 2	PSO 3	Mean Score	2.45
	CO1	3	2	1	1	2	1.80	3	2	1	2.00	
	CO2	2	3	3	2	3	2.60	3	3	2	2.67	
	CO3	2	3	2	3	2	2.40	2	3	2	2.33	
	CO4	2	3	2	3	2	2.40	2	3	3	2.67	
	CO5	3	2	3	2	3	2.60	3	3	3	3.00	
	Avg	2.40	2.60	2.20	2.20	2.40	2.36	2.60	2.80	2.20	2.53	
	Overall score for PO						2.36	Overall score for PSO			2.53	
	Strongly Correlating (S)							-	3 Marks			
	Moderately Correlating (M)							-	2 Marks			
Weakly Correlating (W)							-	1 Mark				
No Correlation (N)							-	0 Mark				
Teaching–Learning & Assessment Framework												

Teaching Methodology Lecture, Hands-on Training, Experiential learning, Flipped Learning, Blended Learning, Participative Learning	Assessment Types Written Mode - detailed research based reports Integrated Mode - seminars/ poster presentations / SWOC analysis
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[illegible]

Text book	1. Roger D. Peng, " R Programming for Data Science ", 2012. 2. Norman Matloff,"The Art of R Programming- A Tour of Statistical Software Design", 2011												
Reference Book	Mark Gardner, —Beginning R – The Statistical Programming Language, Wiley, 2013. 2												
	1. Robert Knell, —Introductory R: A Beginner's Guide to Data Visualisation, Statistical Analysis and programming in R, Amazon Digital South Asia Services Inc, 2013.												
	2. Garrett Grolemond, Hadley Wickham,"Hands-On Programming with R: Write Your Own Functions and Simulations" , 1st Edition, 2014.												
E-Reference	3. Venables ,W.N.,andRipley,"S programming", Springer, 2000.												
	https://www.w3schools.com/r/												
Course learning outcomes	https://www.simplilearn.com												
	On successful completion of the course, the students will be able to:												
	COs	Course Outcomes								K Level		Learning Outcomes (LO1–LO8)	
	CO1	Demonstrate the use of R expressions and fundamental data structures including vectors and matrices.								K3 (Apply)		LO1, LO2	
	CO2	Apply operations on vectors, matrices, factors, and lists for data manipulation tasks.								K3 (Apply)		LO3, LO4	
	CO3	Construct and manipulate data frames and implement looping statements in R programs.								K3 (Apply)		LO5, LO6	
	CO4	Create and customize graphical representations of data using R visualization tools.								K4 (Analyze)		LO7	
CO5	Develop advanced visualizations including three-dimensional plots for data analysis and presentation.								K4 (Analyze)		LO8		
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	P O1	PO 2	PO3	P O 4	PO 5	Mean Score	PS O1	PSO 2	PSO 3	Mean Score		

	CO1	3	2	1	1	2	1.80	3	2	1	2.00	2.25	
	CO2	3	3	2	1	2	2.20	3	3	2	2.67		
	CO3	3	3	3	2	2	2.60	3	3	2	2.67		
	CO4	2	3	3	3	2	2.60	3	2	3	2.67		
	CO5	3	2	3	3	3	2.80	3	3	3	3.00		
	Avg	2.80	2.60	2.40	2.00	2.20	2.40	3.00	2.60	2.20	2.60		
	Overall score for PO						2.40	Overall score for PSO			2.60		
	Strongly Correlating (S)						-	3 Marks					
	Moderately Correlating (M)						-	2 Marks					
Weakly Correlating (W)						-	1 Mark						
No Correlation (N)						-	0 Mark						
Teaching–Learning & Assessment Framework													
Teaching Methodology							Assessment Types						
Blended Learning, Participative Learning							Practical Mode – Lab Work						

Course Code	U26AIA44	Semester IV	Year II	credits	L	T	P	Hrs
Allied	CLOUD COMPUTING			3		4		4
Nature of the Course	Employability / Skill Enhancement /Entrepreneurship							
Learning objectives	• Learning fundamental concepts and Technologies of Cloud Computing. • Learning various cloud service types and their uses and pitfalls. • To learn about Cloud Architecture and Application design. • To know the various aspects of application design, benchmarking and security on the Cloud. • To learn the various Case Studies in Cloud Computing.							
Units	Course Contents							
Unit I	Introduction to Cloud Computing: Definition of Cloud Computing – Characteristics of Cloud Computing – Cloud Models – Cloud Service Examples – Cloud-based Services and Applications. Cloud Concepts and Technologies: Virtualization – Load balancing – Scalability and Elasticity – Deployment – Replication – Monitoring – Software Defined Networking – Network Function Virtualization – MapReduce – Identity and Access Management – Service Level Agreements – Billing.							
Unit II	Cloud Services - Compute Services: Amazon Elastic Computer Cloud - Google Compute Engine - Windows Azure Virtual Machines. Storage Services: Amazon Simple Storage Service - Google Cloud Storage - Windows Azure Storage. Database Services: Amazon Relational Data Store - Amazon Dynamo DB - Google Cloud SQL - Google Cloud Data Store - Windows Azure SQL Database - Windows Azure Table Service Application Services: Application Runtimes and Frameworks - Queuing Services - Email Services - Notification Services - Media Services Content Delivery Services: Amazon CloudFront - Windows Azure Content Delivery Network. Analytics Services: Amazon Elastic MapReduce - Google MapReduce Service - Google BigQuery - Windows Azure HDInsight. Deployment and Management Services: Amazon Elastic Beanstalk - Amazon CloudFormation. Identity and Access Management Services: Amazon Identity and Access Management - Windows Azure Active Directory Open Source Private Cloud Software: CloudStack – Eucalyptus - OpenStack.							
Unit III	Cloud Application Design: Introduction – Design Consideration for Cloud Applications –							

	Scalability – Reliability and Availability – Security – Maintenance and Upgradation – Performance – Reference Architectures for Cloud Applications – Cloud Application Design Methodologies: Service Oriented Architecture (SOA), Cloud Component Model, IaaS, PaaS and SaaS Services for Cloud Applications, Model View Controller (MVC), RESTful Web Services – Data Storage Approaches: Relational Approach (SQL), Non-Relational Approach (NoSQL).			
Unit IV	Cloud Application Benchmarking and Tuning: Introduction to Benchmarking – Steps in Benchmarking – Workload Characteristics – Application Performance Metrics – Design Consideration for Benchmarking Methodology – Benchmarking Tools and Types of Tests – Deployment Prototyping. Cloud Security: Introduction – CSA Cloud Security Architecture – Authentication (SSO) – Authorization – Identity and Access Management – Data Security : Securing data atrest, securing data in motion – Key Management – Auditing.			
Unit V	Case Studies: Cloud Computing for Healthcare – Cloud Computing for EnergySystems - Cloud Computing for Transportation Systems - Cloud Computing for ManufacturingIndustry - Cloud Computing for Education.			
Question paper Coverage - 100% theory				
Text book	ArshdeepBahga, Vijay Madisetti, <i>Cloud Computing – A Hands On Approach</i> , Universities Press (India) Pvt. Ltd., 2018			
Reference Book	Anthony T Velte, Toby J Velte, Robert Elsenpeter, <i>Cloud Computing: A Practical Approach</i> , Tata McGraw-Hill, 2013.			
	Barrie Sosinsky, <i>Cloud Computing Bible</i> , Wiley India Pvt. Ltd., 2013.			
	Dr. Kumar Saurabh, <i>Cloud Computing</i> , Wiley India, Second Edition 2012.			
	David Crookes, <i>Cloud Computing in Easy Steps</i> , Tata McGraw Hill, 2015.			
E-Reference	https://en.wikipedia.org/wiki/Cloud_computing			
	https://link.springer.com/chapter/10.1007/978-3-030-34957-8_7			
	https://webobjects.cdw.com/webobjects/media/pdf/solutions/cloud-computing/121838-CDW-Cloud-Computing-Reference-Guide.pdf			
Course learning outcomes	On successful completion of the course, the students will be able to:			
	COs	Course Outcomes	K Level	Learning Outcomes (LO1– LO12)
	CO1	Explain the fundamentals of cloud computing, including cloud characteristics, service models, deployment models, virtualization, scalability, elasticity, and cloud-enabling technologies.	K2	LO1, LO2
	CO2	Analyze and compare cloud services for computing, storage,	K3	LO3, LO4

		databases, analytics, deployment, identity management, and open-source cloud platforms to select appropriate cloud solutions.										
	CO3	Design cloud-based applications using cloud architecture principles, SOA, MVC, RESTful Web Services, and suitable SQL/NoSQL data storage approaches.						K4	LO5, LO6			
	CO4	Evaluate cloud application performance through benchmarking, deployment strategies, tuning techniques, and implement cloud security mechanisms including authentication, authorization, IAM, data protection, and auditing.						K4	LO7, LO8			
	CO5	Assess the application of cloud computing technologies in real-world domains such as healthcare, energy, transportation, manufacturing, and education, and recommend suitable cloud-based solutions.						K5	LO9, LO10, LO11, LO12			
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs
	COs	PO1	PO 2	PO 3	PO4	PO5	Mean Score	PS O1	PSO 2	PS O3	Mean Score	2.59
	CO1	3	2	2	1	2	2.00	3	2	2		
	CO2	3	3	2	2	2	2.40	3	3	2		
	CO3	3	3	3	2	2	2.60	3	3	2	2.67	
	CO4	3	3	3	2	2	2.60	3	3	2	2.67	
	CO5	3	3	3	3	3	3.00	3	3	3	3.00	
	Avg	3.00	2.80	2.60	2.00	2.20	2.52	3.00	2.80	2.20	2.60	
	Overall score for PO						2.52	Overall score for PSO		2.67		
	Strongly Correlating (S)							-	3 Marks			
Moderately Correlating (M)							-	2 Marks				
Weakly Correlating (W)							-	1 Mark				
No Correlation (N)							-	0 Mark				
Teaching–Learning & Assessment Framework												
Teaching Methodology							Assessment Types					

UNIT I	Ethical AI and Emerging Trends: Responsible AI Practices - AI Bias and Fairness - Privacy and Data Security - Intellectual Property and Copyright Issues - AI Governance and Regulations - Future Trends in AI Tools and Applications			
Question paper Coverage - 40% Theory & 60% Practical				
Text book	Krishna Kumar Mohbey, <i>Artificial Intelligence Tools and Applications</i> , BPB Publications, Latest Edition.			
Reference Book	2. Bernard Marr, <i>Generative AI in Practice</i> , Wiley Publications. 3. Tom Taulli, <i>Artificial Intelligence Basics</i> , Apress. 4. Stuart Russell and Peter Norvig, <i>Artificial Intelligence: A Modern Approach</i> , Pearson. 5. Andrew Ng, <i>Machine Learning Yearning</i> , DeepLearning.AI.			
E-Reference	1. OpenAI Platform Documentation 2. Google AI Resources 3. Microsoft AI Learning Hub 4. Hugging Face Learning Resources 5. Kaggle Learn AI Courses			
Course learning outcomes	On successful completion of the course, the students will be able to:			
	COs	Course Outcomes	K Level	Learning Outcomes (LO1–LO12)
	CO1	Explain the concepts, applications, and functionalities of modern AI tools used across various domains.	K2 (Understand)	LO1, LO2, LO11
	CO2	Apply AI-powered tools for content generation, productivity enhancement, coding, and data analytics tasks.	K3 (Apply)	LO3, LO6, LO7
	CO3	Analyze AI-generated outputs and evaluate the effectiveness, limitations, and suitability of AI tools for different applications.	K4 (Analyze)	LO5, LO8, LO14
	CO4	Evaluate ethical, legal, privacy, and security considerations associated with the use of AI technologies.	K5 (Evaluate)	LO11, LO12, LO13
	CO5	Design innovative AI-assisted solutions and workflows for real-world problems using appropriate AI tools and technologies.	K6 (Create)	LO4, LO9, LO10, LO15

Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs
	COs	PO1	PO 2	PO 3	PO4	PO5	Mean Score	PSO 1	PSO 2	PSO 3	Mean Score	2.30
	CO1	2	2	2	1	2	1.80	2	2	1	1.67	
	CO2	2	3	3	1	2	2.20	2	3	2	2.33	
	CO3	2	3	3	2	2	2.40	2	3	3	2.67	
	CO4	2	2	2	3	3	2.40	1	2	3	2.00	
	CO5	3	3	3	2	3	2.80	2	3	3	2.67	
	Avg	2.20	2.60	2.60	1.80	2.40	2.32	1.80	2.60	2.40	2.27	
	Overall score for PO							2.32	Overall score for PSO			2.27
	Strongly Correlating (S)							-				
Moderately Correlating (M)							-					2 Marks
Weakly Correlating (W)							-					1 Mark
No Correlation (N)							-					0 Mark
Teaching–Learning & Assessment Framework												
Teaching Methodology							Assessment Types					
Blended Learning, Participative Learning							• Assignments • AI Tool Demonstration					

[illegible]

Course learning outcomes	On successful completion of the course, the students will be able to:												
	COs	Course Outcomes								K Level	Learning Outcomes (LO1–LO12)		
	CO1	Demonstrate proficiency in using Photoshop tools, layers, and editing features for digital image creation and manipulation.								K3 (Apply)	LO1, LO2		
	CO2	Create graphic designs such as albums, wallpapers, visiting cards, and invitation cards using Photoshop.								K3 (Apply)	LO3, LO4, LO5		
	CO3	Apply image enhancement techniques including background modification, cloning, and photo retouching.								K3 (Apply)	LO6, LO7, LO8		
	CO4	Design professional promotional and publishing materials such as flex banners and book covers.								K4 (Analyze)	LO9, LO10		
	CO5	Evaluate and produce creative digital artworks by integrating design principles, typography, and visual effects.								K5 (Evaluate)	LO11, LO12		
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.52	
	CO1	3	2	1	1	1	1.60	3	2	1	2.00		
	CO2	3	2	3	1	2	2.20	3	2	3	2.67		
	CO3	3	3	3	2	2	2.60	3	3	2	2.67		
	CO4	2	3	3	3	2	2.60	3	3	3	3.00		
	CO5	3	2	3	3	3	2.80	3	3	3	3.00		
	Avg	2.80	2.40	2.60	2.00	2.00	2.36	3.00	2.60	2.40	2.67		

	Overall score for PO	2.36	Overall score for PSO	2.67	
	Strongly Correlating (S)	-	3 Marks		
	Moderately Correlating (M)	-	2 Marks		
	Weakly Correlating (W)	-	1 Mark		
	No Correlation (N)	-	0 Mark		
Teaching–Learning & Assessment Framework					
Teaching Methodology		Assessment Types			
Blended Learning, Participative Learning		Practical Mode – Lab Work			

[illegible]

Text book	1.Tom M. Mitchell, —Machine Learning, McGraw-Hill Education (India) Private Limited, 2013. 2. Bengio, Yoshua, Ian J. Goodfellow, and Aaron Courville. "Deep learning" 2015, MIT Press												
Reference Book	1. EthemAlpaydin, —Introduction to Machine Learning (Adaptive Computation and Machine Learning), The MIT Press 2004. 2. Stephen Marsland, —Machine Learning: An Algorithmic Perspective, CRC Press, 2009.												
E-Reference	1. Machine Learning by Zhi-Hua Zhou. Springer, 2021. Comprehensive coverage of machine learning fundamentals, decision trees, neural networks, support vector machines, clustering, and reinforcement learning. 2. Machine Learning Methods by Hang Li. Springer, 2024. Covers supervised and unsupervised learning techniques including logistic regression, SVMs, decision trees, PCA, and clustering.												
Course learning outcomes	On successful completion of the course, the students will be able to												
	COs	Course Outcomes						K Level		Learning Outcomes (LO1–LO15)			
	CO1	Recall the fundamental concepts, terminology, types, and applications of machine learning and data preprocessing techniques.						K1 & K2		LO1			
	CO2	Apply data preprocessing, feature selection, and supervised learning algorithms to solve classification and regression problems.						K3		LO4			
	CO3	Analyze the performance of machine learning models using appropriate evaluation metrics and validation techniques.						K4		LO5			
	CO4	Evaluate and compare various machine learning techniques, including supervised, unsupervised, and ensemble methods, for different applications.						K5		LO11			
	CO5	Design and develop machine learning solutions for real-world problems using suitable algorithms, tools, and frameworks.						K5 & K6		LO2, LO15			
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PS O1	PS O2	PS O3	Mean Score		

	CO1	3	2	1	1	2	1.80	3	2	1	2.00	2.45
	CO2	2	3	3	2	3	2.60	3	3	2	2.67	
	CO3	2	3	2	3	2	2.40	2	3	2	2.33	
	CO4	2	3	2	3	2	2.40	2	3	3	2.67	
	CO5	3	2	3	2	3	2.60	3	3	3	3.00	
	Avg	2.40	2.60	2.20	2.20	2.40	2.36	2.60	2.80	2.20	2.53	
	Overall score for PO						2.36	Overall score for PSO		2.53		
	Strongly Correlating (S)						-	3 Marks				
Moderately Correlating (M)						-	2 Marks					
Weakly Correlating (W)						-	1 Mark					
No Correlation (N)						-	0 Mark					
Teaching–Learning & Assessment Framework												
Teaching Methodology Lecture, Hands-on Training, Experiential learning, Flipped Learning, Blended Learning, Participative Learning							Assessment Types - Written Mode - detailed research based reports - Integrated Mode - seminars/ poster presentations / SWOC analysis					

[illegible]

	Hill, 2010												
Reference Book	Rajib Mall, “Fundamental of Software Engineering “, 3rd edition, PHI, 2009.												
	Naseeb Singh Gill, “Software Engineering: Software reliability, testing and quality, Khanna Book Publishing, 2011.												
E-Reference	https://en.wikipedia.org/wiki/Software_engineering												
	https://www.geeksforgeeks.org/software-engineering/software-engineering/												
	https://www.tutorialspoint.com/software_engineering/index.htm												
Course learning outcomes	On successful completion of the course, the students will be able to												
	COs	Course Outcomes						K Level			Learning Outcomes (LO1– LO15)		
	CO1	Explain the fundamentals of software engineering, software process models, software evolution, process frameworks, and software quality standards including CMMI.						K2			LO1, LO2, LO3		
	CO2	Analyze and compare various software development life cycle (SDLC) models such as Waterfall, Incremental, RAD, Prototyping, Spiral, and Concurrent models to select suitable approaches for software projects.						K4			LO4, LO5, LO6		
	CO3	Apply software requirement analysis and analysis modeling techniques to develop data models, data flow diagrams, and data dictionaries for software systems.						K3			LO7, LO8, LO9		
	CO4	Design software systems using modular design principles, architectural design, data design, and software design heuristics to develop maintainable and efficient software solutions.						K4			LO10, LO11, LO12		
	CO5	Evaluate software quality by applying appropriate software testing techniques including white-box testing, black-box testing, unit testing, integration testing, validation testing, and system testing.						K5			LO13, LO14, LO15		
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	PO1	PO 2	PO 3	PO4	PO5	Mea n Scor e	PS O1	PS O2	PS O 3	Mea n Scor e	2.67	
	CO1	3	2	2	1	2	2.40	3	2	2	2.33		
	CO2	3	3	2	2	2	2.40	3	3	2	2.67		

	CO3	3	3	3	2	2	2.60	3	3	2	2.67	
	CO4	3	3	3	2	2	2.60	3	3	3	3.00	
	CO5	3	3	3	3	3	3.00	3	3	3	3.00	
	Avg	3.00	2.80	2.60	2.00	2.20	2.52	3.00	2.80	2.40	2.73	
	Overall score for PO						2.6	Overall score for PSO	2.73			
	Strongly Correlating (S)						-	3 Marks				
	Moderately Correlating (M)						-	2 Marks				
	Weakly Correlating (W)						-	1 Mark				
No Correlation (N)						-	0 Mark					
Teaching–Learning & Assessment Framework												
Teaching Methodology Lecture, Hands-on Training, Experiential learning, Flipped Learning, Blended Learning, Participative Learning						Assessment Types - Written Mode - detailed research based reports - Integrated Mode - seminars/ poster presentations / SWOC analysis						

[illegible]

	10. Data & Text Clustering using Gaussian Mixture Models											
Question paper Coverage - 100% Practical												
Text book	1.Tom M. Mitchell, —Machine Learning, McGraw-Hill Education (India) Private Limited, 2013. 2. Bengio, Yoshua, Ian J. Goodfellow, and Aaron Courville. "Deep learning" 2015, MIT Press											
Reference Book	1.EthemAlpaydin, —Introduction to Machine Learning (Adaptive Computation and Machine Learning), The MIT Press 2004. 2.Stephen Marsland, —Machine Learning: An Algorithmic Perspective, CRC Press, 2009.											
E-Reference	1. https://www.ibm.com/artificial-intelligence?utm_source=chatgpt.com 2. https://www.microsoft.com/ai?utm_source=chatgpt.com 3. https://openai.com?utm_source=chatgpt.com											
Course learning outcomes	On successful completion of the course, the students will be able to											
	Cos	Course Outcomes						K Level			Learning Outcomes (LO1–LO15)	
	CO1	Recall and demonstrate fundamental concepts of machine learning, Python programming basics, and data preprocessing techniques.						K1 & K2			LO1, LO2	
	CO2	Apply data preprocessing methods and implement supervised learning algorithms for classification and regression problems using Python libraries.						K3			LO3, LO4	
	CO3	Analyze and interpret machine learning model performance using evaluation metrics such as accuracy, precision, recall, and F1-score.						K4			LO5, LO6	
	CO4	Evaluate and compare different machine learning models including supervised, unsupervised, and ensemble techniques for suitable applications.						K5			LO7, LO8	
	CO5	Design and develop end-to-end machine learning solutions for real-world datasets using appropriate tools, algorithms, and frameworks.						K5 & K6			LO9, LO10, LO11, LO12, LO13, LO14, LO15	
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs
	Cos	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	

							e					2.51
CO1	3	2	2	1	2	2.00	3	2	1	2.00		
CO2	2	3	3	2	3	2.60	3	3	2	2.67		
CO3	2	3	2	3	2	2.40	2	3	2	2.33		
CO4	2	3	2	3	2	2.40	2	3	3	2.67		
CO5	3	3	3	3	3	3.00	3	3	3	3.00		
Avg	2.40	2.80	2.40	2.40	2.40	2.48	2.60	2.80	2.20	2.53		
Overall score for PO						2.48	Overall score for PSO		2.53			
Strongly Correlating (S)						-	3 Marks					
Moderately Correlating (M)						-	2 Marks					
Weakly Correlating (W)						-	1 Mark					
No Correlation (N)						-	0 Mark					
Teaching–Learning & Assessment Framework												
Teaching Methodology Lecture, Demonstration, Hands-on Training, Experiential Learning, Flipped Learning, Blended Learning, Problem-Based Learning						Assessment Types - Laboratory record submissions - Mini project documentation - Case study / dataset analysis reports Integrated Mode – - Viva-voce examinations - SWOC (Strengths, Weaknesses, Opportunities, Challenges) analysis of ML models - Mini-project presentations using real-world datasets						

[illegible]

E-Reference	1. Arduino Documentation 2. Arduino Project Hub 3. ESP8266 Documentation												
Course learning outcomes	On successful completion of the course, the students will be able to												
	Cos	Course Outcomes						K Level		Learning Outcomes (LO1–LO15)			
	CO1	Explain the fundamentals of IoT devices, sensors, actuators, and embedded systems used in IoT applications.						K2 (Understand)		LO1, LO2, LO3			
	CO2	Interface sensors and actuators with microcontrollers and implement basic IoT applications for data acquisition and control.						K3 (Apply)		LO4, LO5, LO6			
	CO3	Develop IoT-based monitoring systems using environmental, distance, gas, fire, and health-related sensors.						K3 (Apply)		LO7, LO8, LO9			
	CO4	Analyze and evaluate IoT solutions for smart home automation, security, and smart city applications.						K4 (Analyze)		LO10, LO11, LO12			
	CO5	Design and implement real-time IoT applications integrating sensing, communication, and automation technologies.						K6 (Create)		LO13, LO14, LO15			
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	Cos	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.41	
	CO1	3	2	1	1	2	1.80	2	2	1	1.67		
	CO2	3	3	2	2	3	2.60	3	2	2	2.33		
	CO3	2	3	3	2	3	2.60	2	3	2	2.33		
	CO4	2	3	3	3	3	2.80	2	3	3	2.67		
	CO5	2	2	3	3	3	2.60	2	3	3	2.67		
	Avg	2.40	2.6	2.40	2.20	2.80	2.48	2.2	2.6	2.2	2.33		

			0					0	0	0		
	Overall score for PO						2.48	Overall score for PSO		2.33		
	Strongly Correlating (S)						-	3 Marks				
	Moderately Correlating (M)						-	2 Marks				
	Weakly Correlating (W)						-	1 Mark				
No Correlation (N)						-	0 Mark					
Teaching–Learning & Assessment Framework												
Teaching Methodology • Demonstration-Based Learning • Hands-on Laboratory Practice • Problem-Based Learning							Assessment Types • Observation during Lab Sessions • Experiment Execution • Record / Lab Notebook					

[illegible]

	Scorecards – Six sigma as a performance measurement system.			
Unit V	Visualizations: Using Tableau to Summarize Data, Slicing and Dicing Financial Data, Charts to Summarize Marketing Data. Functions to Summarize Data, Pricing Analytics, Risk based pricing, Fraud Detection and Prediction, Recovery Management, Loss Risk Forecasting, Risk Profiling, Portfolio Stress Testing.			
Question paper Coverage - 100% theory				
Text book	Analysis of Economic Data, Gary Koop, (4th Edition), Wiley.			
	Statistics and Data Analysis for Financial Engineering: with R examples; David Ruppert, David S. Matteson, Springer			
Reference Book	Analyzing Financial Data and Implementing Financial Models Using „R“, Ang Clifford, Springer.			
	Microsoft Excel 2013: Data Analysis and Business Modeling, Wayne L. Winston, Microsoft Publishing			
E-Reference	https://www.techtarget.com/searcherp/definition/financial-analytics			
	https://www.teradata.com/Glossary/What-is-Finance-Analytics			
Course learning outcomes	On successful completion of the course, the students will be able to:			
	COs	Course Outcomes	K Level	Learning Outcomes (LO1-LO15)
	CO1	Explain the fundamentals of financial analytics, financial data, and business intelligence concepts.	K2	LO1, LO2
	CO2	Apply statistical and analytical techniques to analyze financial data and generate meaningful insights.	K3	LO3, LO4, LO5
	CO3	Analyze financial statements, investment data, and market trends using analytical tools and techniques.	K4	LO6, LO7, LO8
	CO4	Evaluate financial performance and risk using predictive and descriptive analytics models.	K5	LO9, LO10, LO11
	CO5	Develop data-driven financial solutions and dashboards for decision-making using analytics software.	K6	LO12, LO13, LO14, LO15
Mapping of Cos with Pos & PSOs	Programme Outcomes	Programme Specific Outcomes	Mapping Score of Cos with POs & PSOs	

	COs	PO1	PO 2	PO 3	PO4	PO5	Mea n Scor e	PSO 1	PSO 2	PSO 3	Mean Score	2.33	
	CO1	3	2	1	1	2	1.80	3	1	1	1.67		
	CO2	2	3	2	2	3	2.40	2	3	2	2.33		
	CO3	2	3	3	2	2	2.40	3	2	2	2.33		
	CO4	2	3	2	3	2	2.40	2	3	3	2.67		
	CO5	2	2	3	3	3	2.60	2	3	3	2.67		
	Avg	2.20	2.60	2.20	2.20	2.40	2.32	2.40	2.40	2.20	2.33		
	Overall score for PO						2.32	Overall score for PSO			2.33		
	Strongly Correlating (S) - 3 Marks												
	Moderately Correlating (M) - 2 Marks												
	Weakly Correlating (W) - 1 Mark												
	No Correlation (N) - 0 Mark												
Teaching–Learning & Assessment Framework													
Teaching Methodology							Assessment Types						
• Blended Learning, Case-Based Teaching, Group Discussions & Seminars							• Written examinations, Case study analysis reports, Quiz (online/offline)						

	Reach and Engagement analysis. Post- performance on FB. Social campaigns. Measuring and Analyzing social campaigns, defining goals and evaluating outcomes, Network Analysis. 9 (LinkedIn, Instagram, YouTube Twitter etc. Google analytics. Introduction. (Websites)			
Unit V	Web Analytics and making connections: Link analysis. Random graphs and network evolution. Social contexts: Affiliation and identity. Web analytics tools: Clickstream analysis, A/B testing, online surveys, Web crawling and Indexing.			
Question paper Coverage - 100% theory				
Text book	Digital Marketing Analytics: Making Sense of Consumer Data in a Digital World, ChuckHemann& Ken Burbary, Pearson, ISBN 9780789750303			
	Predictive Analytics: The Power to Predict Who Will Click, Buy, Lie, or Die, Eric Siegel, Pearson.			
	Marketing Analytics: Optimize Your Business with Data Science in R, Python, and SQL, Dave Jacobs.			
	Matthew Ganis, AvinashKohirkar. Social Media Analytics: Techniques and Insights for Extracting Business Value Out of Social Media. Pearson 2016.			
	Jim Sterne. Social Media Metrics: How to Measure and Optimize Your Marketing Investment. Wiley, 2020.			
	Marshall Sponder. Social Media Analytics. McGraw Hill Latest edition.			
Reference Book	Marketing Analytics: A practical guide to real marketing science, Mike Grigsby, Kogen Page, ISBN 9780749474171			
	Cutting Edge Marketing Analytics: Real World Cases and Data Sets for Hands on Learning, Raj Kumar Venkatesan, Paul Farris, Ronald T. Wilcox.			
E-Reference	https://www.coursera.org/learn/uva-darden-market-analytics			
	https://www.wrike.com/marketing-guide/marketing-analytics/			
Course learning outcomes	On successful completion of the course, the students will be able to:			
	COs	Course Outcome	K Level	Learning Outcomes (LO1- LO15)
	CO1	Understand the fundamental concepts of marketing analytic, consumer behavior, and marketing data sources.	K1 & K2	LO1, LO2
	CO2	Apply statistical and analytical tools to analyze marketing data and interpret customer insights.	K3	LO2, LO3, LO4
	CO3	Evaluate customer segmentation, targeting, and positioning strategies using data-driven approaches.	K4	LO5, LO6, LO10

	CO4	Develop predictive models and marketing dashboards for campaign effectiveness and performance measurement.							K5		LO7, LO8, LO9, LO12		
	CO5	Utilize digital marketing analytics tools to support strategic marketing decision-making.							K3 & K5		LO8, LO11, LO14, LO15		
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	PO1	PO 2	PO 3	PO4	PO5	Mean Score	PSO 1	PSO 2	PSO 3	Mean Score	2.38	
	CO1	3	2	1	1	2	1.80	2	1	1	1.33		
	CO2	2	3	2	2	2	2.20	3	2	2	2.33		
	CO3	2	2	3	2	2	2.20	3	3	2	2.67		
	CO4	2	3	3	3	3	2.80	3	3	3	3.00		
	CO5	1	3	2	3	3	2.40	3	3	3	3.00		
	Avg	2.00	2.60	2.20	2.20	2.40	2.28	2.80	2.40	2.20	2.47		
	Overall score for PO						2.28	Overall score for PSO			2.47		
	Strongly Correlating (S) - 3 Marks												
	Moderately Correlating (M) - 2 Marks												
Weakly Correlating (W) - 1 Mark													
No Correlation (N) - 0 Mark													
Teaching–Learning & Assessment Framework													
Teaching Methodology							Assessment Types						
• ICT-Enabled Teaching, Case Study Method, Blended Learning							• Written examinations, Case study analysis reports, Quiz (online/offline), Practical lab evaluation						

[illegible]

Reference Book	Fred Halsall(1996), Data Communications Computer Networks and Open Systems, Fourth Edition, Addison Wesley.											
E-Reference	https://www.tutorialspoint.com/data_communication_computer_network/index.htm											
	https://www.geeksforgeeks.org/data-communication-definition-components-types-channels/											
Course learning outcomes	On successful completion of the course, the students will be able to:											
	COs	Course Outcomes							K Level		Learning Outcomes (LO1–LO12)	
	CO1	Explain the fundamental concepts of data communication, networking, protocols, standards, and network models.							K2 (Understand)		LO1, LO2	
	CO2	Analyze transmission media, error detection and correction techniques, framing, and flow control mechanisms in data communication networks.							K4 (Analyze)		LO3, LO4, LO5	
	CO3	Examine medium access control methods, logical addressing schemes, and transport layer protocols for efficient network communication.							K4 (Analyze)		LO6, LO7, LO8	
	CO4	Apply application layer services including DNS, E-mail, FTP, and remote login in Internet-based communication systems.							K3 (Apply)		LO9, LO10	
	CO5	Evaluate wireless communication technologies and modern network architectures for diverse networking environments.							K5 (Evaluate)		LO11, LO12	
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs
	COs	PO1	PO 2	PO 3	PO4	PO5	Mean Score	PS O1	PSO 2	PS O3	Mean Score	2.52
	CO1	3	2	1	1	2	1.80	3	2	1	2.00	
	CO2	3	3	2	1	2	2.20	3	3	2	2.67	
	CO3	3	3	3	2	2	2.60	3	3	2	2.67	
	CO4	3	2	3	3	2	2.60	3	2	3	2.67	
	CO5	3	3	3	3	3	3.00	3	3	3	3.00	

	Avg	3.00	2.60	2.40	2.00	2.20	2.44	3.00	2.60	2.20	2.60	
	Overall score for PO						2.44	Overall score for PSO		2.60		
	Strongly Correlating (S)						-	3 Marks				
	Moderately Correlating (M)						-	2 Marks				
	Weakly Correlating (W)						-	1 Mark				
	No Correlation (N)						-	0 Mark				
Teaching–Learning & Assessment Framework												
Teaching Methodology							Assessment Types					
Blended Learning, Participative Learning							Written Mode – Class Test, Home Assignment, Exam					
							Integrated Mode - seminars					

[illegible]

Unit IV	Semantic Level: logical forms - ambiguity resolution - semantic network and parsers-procedural semantics - montague semantics- vector space approaches - distributional semantics-lexical semantics and word sense disambiguation-compositional semantics semantic role labeling and sematic parsing			
Unit V	Pragmatic Level: knowledge representation- reasoning- plan/goal recognition –speech acts/intentions – belief models- discourse- reference. Natural language generation: content determination – sentence planning- surface realization, subjectivity and sentiment analysis: information extraction – automatic summarization- information retrieval and question answering– named entity recognition and relation extraction.			
Question paper Coverage - 100% theory				
Text book	Danie IJ and JamesH. Martin, An Introduction to natural language processing, computation a linguistics and speech recognition prenticehall,2009.			
Reference Book	LanH Written and Elbef, Mark A. Hall, datamining: practical machine learning tools and techiniques, Morgan Kaufmann, 2013. Mohamed ZakariaKurdi, Natural Language Processing and Computational Linguistics 1, speech, Morphology, and syntax, wiley, ISTE Ltd, 2016.			
E-Reference	• Natural Language Processing with Python (NLTK Book) NLTK Book – Natural Language Processing with Python • Stanford Natural Language Processing Group Stanford NLP Resources • Speech and Language Processing (Daniel Jurafsky & James H. Martin) Speech and Language Processing eBook • Natural Language Processing Specialization Resources Coursera NLP Learning Resources			
Course learning outcomes	On successful completion of the course, the students will be able to			
	COs	Course Outcomes	K Lev el	Learning Outcomes (LO1– LO15)
	CO1	Explain the fundamental concepts, architecture, and applications of Natural Language Processing and understand the stages involved in processing natural language data.	K2 – Und ersta nd	LO1, LO3
	CO2	Apply text preprocessing techniques such as tokenization, stemming, lemmatization, stop-word removal, and feature extraction for language data analysis.	K3 – Appl y	LO1, LO4, LO9
	CO3	Analyze linguistic structures and implement NLP methods for syntactic, semantic, and sentiment analysis	K4 – Anal	LO4, LO5, LO8, LO9

		using appropriate tools and techniques.						alyze				
	CO4	Develop and evaluate machine learning and deep learning models for NLP tasks such as text classification, information retrieval, and language modeling.						K5 – Evaluate		LO5, LO6, LO9, LO11		
	CO5	Design intelligent NLP applications such as chatbots, machine translation systems, and text summarization tools while considering ethical and societal implications.						K6 – Create		LO7, LO9, LO10, LO12		
Mapping of Cos with Pos & PSOs	Programme Outcomes						Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.41
	CO1	3	2	1	2	1	1.80	2	2	1	1.67	
	CO2	3	3	2	3	2	2.60	3	2	2	2.33	
	CO3	2	3	3	3	2	2.60	2	3	2	2.33	
	CO4	2	3	3	3	3	2.80	2	3	3	2.67	
	CO5	2	2	3	3	3	2.60	2	3	3	2.67	
	Avg	2.40	2.60	2.40	2.80	2.20	2.48	2.20	2.60	2.20	2.33	
	Overall score for PO						2.48	Overall score for PSO		2.33		
	Strongly Correlating (S) - 3 Marks											
	Moderately Correlating (M) - 2 Marks											
	Weakly Correlating (W) - 1 Mark											
No Correlation (N) - 0 Mark												
Teaching–Learning & Assessment Framework												
Teaching Methodology							Assessment Types					
Lectures and Interactive Sessions							Written Mode - Seminar / Presentation					
Problem-Solving and Case Studies							• Student presentations on emerging NLP technologies, research papers, or application domains.					
Collaborative Learning												

	• Class Tests / Internal Examinations
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[illegible]

Reference	Deep Learning Book (Free Online) PyTorch Tutorials and Learning Resources PyTorch Tutorials DeepLearning.AI Learning Resources DeepLearning.AI MIT Introduction to Deep Learning MIT Introduction to Deep Learning Course Google Machine Learning Crash Course Google Machine Learning Crash Course OpenCV Deep Learning Tutorials OpenCV Deep Learning Tutorials			
Course learning outcomes	On successful completion of the course, the students will be able to			
	COs	Course Outcomes	K Level	Learning Outcomes (LO1–LO12)
	CO1	Explain the fundamental concepts of deep learning, neural networks, activation functions, learning algorithms, and their applications in intelligent systems.	K2 – Understand	LO1, LO3
	CO2	Apply data preprocessing techniques and implement feedforward neural networks using deep learning frameworks for solving computational problems.	K3 – Apply	LO1, LO4, LO9
	CO3	Analyze and evaluate the performance of deep learning models using optimization methods, loss functions, hyperparameter tuning, and performance metrics.	K4 – Analyze	LO4, LO5, LO6, LO9
	CO4	Develop advanced deep learning architectures such as Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), and Transformer models for real-world applications.	K5 – Evaluate	LO5, LO6, LO9, LO11
	CO5	Design and deploy deep learning solutions for applications in computer vision, natural language processing, speech recognition, and predictive analytics while adhering to ethical practices.	K6 – Create	LO7, LO9, LO10, LO12
Mapping of Cos with Pos	Programme Outcomes		Programme Specific Outcomes	Mapping Score of Cos with POs &

& PSOs												PSOs
	COs	PO1	PO 2	PO 3	PO4	PO5	Mea n Scor e	PSO 1	PSO 2	PSO 3	Mea n Scor e	2.54
	CO1	3	2	1	2	1	1.80	2	2	1	1.67	
	CO2	3	3	2	3	2	2.60	3	3	2	2.67	
	CO3	3	3	3	2	3	2.80	2	3	3	2.67	
	CO4	3	3	3	3	3	3.00	2	3	3	2.67	
	CO5	2	3	3	3	3	2.80	2	3	3	2.67	
	Avg	2.80	2.80	2.40	2.60	2.40	2.60	2.20	2.80	2.40	2.47	
	Overall score for PO						2.60	Overall score for PSO			2.47	
	Strongly Correlating (S) - 3 Marks											
	Moderately Correlating (M) - 2 Marks											
	Weakly Correlating (W) - 1 Mark											
No Correlation (N) - 0 Mark												

Teaching–Learning & Assessment Framework	
Teaching Methodology - Lectures and Interactive Sessions - Problem-Solving and Case Studies - Collaborative Learning	Assessment Types Written Mode - Seminar / Presentation - Student presentations on emerging NLP technologies, research papers, or application domains. - Class Tests / Internal Examinations - Periodic written tests to evaluate conceptual understanding and problem-solving skills. Integrated Mode - Portfolios, seminars/ poster presentations / SWOC analysis

[illegible]

E-Reference	1. Natural Language Processing with Python (NLTK Book) NLTK Book – Natural Language Processing with Python 2. Stanford Natural Language Processing Group Stanford NLP Resources 3. Speech and Language Processing (Daniel Jurafsky & James H. Martin) Speech and Language Processing eBook 4. Natural Language Processing Specialization Resources Coursera NLP Learning Resources												
Course learning outcomes	On successful completion of the course, the students will be able to												
	COs	Course Outcomes							K Level	Learning Outcomes (LO1–LO15)			
	CO1	Explain the fundamental concepts, architecture, and applications of Natural Language Processing and understand the stages involved in processing natural language data.							K2 – Underst and	LO1, LO3			
	CO2	Apply text preprocessing techniques such as tokenization, stemming, lemmatization, stop-word removal, and feature extraction for language data analysis.							K3 – Apply	LO1, LO4, LO9			
	CO3	Analyze linguistic structures and implement NLP methods for syntactic, semantic, and sentiment analysis using appropriate tools and techniques.							K4 – Analyz e	LO4, LO5, LO8, LO9			
	CO4	Develop and evaluate machine learning and deep learning models for NLP tasks such as text classification, information retrieval, and language modeling.							K5 – Evaluat e	LO5, LO6, LO9, LO11			
	CO5	Design intelligent NLP applications such as chatbots, machine translation systems, and text summarization tools while considering ethical and societal implications.							K6 – Create	LO7, LO9, LO10, LO12			
Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs	
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.41	
	CO1	3	2	1	2	1	1.80	2	2	1	1.67		
	CO2	3	3	2	3	2	2.60	3	2	2	2.33		

	CO3	2	3	3	3	2	2.60	2	3	2	2.33		
	CO4	2	3	3	3	3	2.80	2	3	3	2.67		
	CO5	2	2	3	3	3	2.60	2	3	3	2.67		
	Avg	2.40	2.60	2.40	2.80	2.20	2.48	2.20	2.60	2.20	2.33		
	Overall score for PO						2.48	Overall score for PSO			2.33		
	Strongly Correlating (S) - 3 Marks												
	Moderately Correlating (M) - 2 Marks												
	Weakly Correlating (W) - 1 Mark												
	No Correlation (N) - 0 Mark												
Teaching–Learning & Assessment Framework													
Teaching Methodology - Lectures and Interactive Sessions - Problem-Solving and Case Studies - Collaborative Learning							Assessment Types						
							Written Mode - Seminar / Presentation - Student presentations on emerging NLP technologies, research papers, or application domains. - Class Tests / Internal Examinations - Periodic written tests to evaluate conceptual understanding and problem-solving skills. Integrated Mode - Portfolios, seminars/ poster presentations / SWOC analysis						

SYLLABUS FOR COMMON COURSES

Semester-1

Part – 1 Tamil



MOTHER TERESA WOMEN'S UNIVERSITY
KODAIKANAL – 624101



**DEPARTMENT OF -TAMIL STUDIES
PART – I TAMIL
(All UG Courses and Integrated Courses)**

Curriculum Framework, Syllabus, and Regulations

(Syllabus under Choice Based Credit System –CBCS)



**(For the candidates to be admitted from the Academic Year 2026-2027
onwards)**

பொதுத்தமிழ் -1

இக்கால இலக்கியம்

[illegible]

Unit - I	மரபுக்கவிதையும் புதுக்கவிதையும்
	மரபுக்கவிதை, புதுக்கவிதையின் தோற்றமும் வளர்ச்சியும் கற்பிக்கப்பட வேண்டும். மரபுக்கவிதை பாரதியார் கவிதைகள் ஞானப் பாடல்கள் (1-25) முழுவதும். பாரதிதாசன் கவிதைகள்- தமிழ் (1-10) பாடல்கள். புதுக்கவிதை வைரமுத்து கவிதை இந்தப் பூக்கள் விற்பனைக்கு அல்ல - ஐந்துபெரிது ஆறுசிறிது. மு.மேத்தா தேசப்பிதாவுக்கு ஒரு தெருப் பாடகனின் அஞ்சலி. சிற்பி பாலசுப்ரமணியம் ஒரு கிராமத்து நதி-ஓடுஓடு சங்கிலி. இரா. மீனாட்சி உதய நகரிலிருந்து - மழையும் நானும். சல்மா - நினைவுத்துயர். அப்துல்ரகுமான் ஹைக்கூ - கண்ணாடி, நிழல், ஊசி. கண்ணாடி 1. உடைந்த பிறகுதான் பல முகம் காட்டுகிறது... கண்ணாடி! 2. என்னை அப்படியே ஏற்றுக்கொள்கிறது... என் கண்ணாடி! 3. பொய்யே சொல்வதில்லை... ஆனால், வலது கைக்கு இடது கை காட்டுகிறது! 4. இருட்டில் முகமிழந்து போகிறது... கண்ணாடி!

	நிழல் 1. வெளிச்சத்தில் என்னைத் தொடர்கிறது... இருட்டில் என்னைக் கைவிடுகிறது! 2. எத்தனை முயன்றும் மிதிக்க முடிவதில்லை... என் நிழலை! 3. சுவரில் படர்கிறது... ஆனால் சுவரை மறைப்பதில்லை! 4. நண்பனைப் போல கூடி வருகிறது... இரவு வந்ததும் ஒளிகிறது! ஊசி 1. காயங்களைச் தைத்து ஆற்றுகிறது... ஆனால் தன் தலையில் ஒரு துளையோடு! 2. துணியை ஊடுருவிச் செல்கிறது... தையலாகிப் பின் தங்குகிறது நூல் மட்டுமே! 3. கிழியக் கிழியத் தைக்கிறது... தியாகத்தின் கூர்மையான அடையாளம்.
Unit - II	சிறுகதை சிறுகதையின் தோற்றமும் வளர்ச்சியும் கற்பிக்கப்பட வேண்டும். புதுமைப்பித்தன்- சாப விமோசனம். ஜெயகாந்தன் - ஒரு பிடி சோறு. இளசை சுந்தரம் - சாதகப் பறவைகள். சூர்ய காந்தன் -வேட்கை. இராஜம் கிருஷ்ணன் - தனிமை. ஆர்.சுடாமணி - அந்நியர்கள். ஆண்டாள் பிரியதர்ஷினி - மாத்திரை.

	உமா மகேஷ்வரி – அரளிவனம்
Unit - III	உரைநடை,நாடக இலக்கியம் உரைநடை, நாடக இலக்கியத்தின் தோற்றமும் வளர்ச்சியும் கற்பிக்கப்பட வேண்டும். ஏ.கே.செட்டியார்– குடகு. அறிஞர் அண்ணா - நீதி தேவன் மயக்கம். பண்டிதமணி மு.கதிரேசன் செட்டியார்– மண்ணியல் சிறுதேர். ஜெயந்தி நாகராஜன்– புராண நாடகங்கள்.
Unit - IV	புதின இலக்கியம் புதின இலக்கியத்தின் தோற்றமும் வளர்ச்சியும் கற்பிக்கப்பட வேண்டும். ஆண்டாள் பிரியதர்ஷினி - தகனம். சு.சமுத்திரம்-வேரில் பழுத்த பலா.
Unit - V	இலக்கணம் மொழி முதல் எழுத்துக்கள் , மொழி இறுதி எழுத்துக்கள் ,வல்லெழுத்து மிகும், மிகாஇடங்கள், உடம்படுமெய்,ஈரொற்று வரும் இடங்கள், ஒரு,ஓர் வரும் இடங்கள், தான்,தாம் வரும் இடங்கள்.
Question paper Coverage - 100% theory	
Text book	- பாரதியார் கவிதைகள்,பூம்புகார் பதிப்பகம் ,சென்னை,2015. - பாரதிதாசன் கவிதைகள், மணிவாசகர் பதிப்பகம், சென்னை,1998. - இந்தப் பூக்கள் விற்பனைக்கு அல்ல ,வைரமுத்து, திருமகள் பதிப்பகம், சென்னை,2009. - மு.மேத்தா கவிதைகள்,திருமகள் நிலையம், சென்னை, 1974. - ஒரு கிராமத்து நதி ,சிற்பி பாலசுப்ரமணியம்,கோலம் வெளியீடு, பொள்ளாச்சி, 1998. - உதய நகரிலிருந்து, இரா.மீனாட்சி,கபிலன் பதிப்பகம், புதுச்சேரி ,2006. - ஒரு மாலையும் இன்னொரு மாலையும் , சல்மா, காலச்சுவடு பதிப்பகம், நாகர்கோவில், 2000. - அப்துல் ரகுமான் கவிதைகள் தொகுப்பு,அப்துல் ரகுமான்,நேஷனல் பப்ளிஷர்ஸ் , சென்னை,1974. - புதுமைப்பித்தன் சிறுகதைகள், காலச்சுவடு பதிப்பகம், நாகர்கோவில்

	2000. • ஒரு பிடி சோறு, ஜெயகாந்தன், தமிழ்ப்பண்ணை பதிப்பகம், சென்னை,1958. • சாதகப் பறவைகள் , இளசை சுந்தரம், நியூ செஞ்சுரி புக் ஹவுஸ், சென்னை,2008. • ராஜம் கிருஷ்ணனின் சிறுகதைகள், இராஜம் கிருஷ்ணன், கௌரா பதிப்பகம் சாரதா பதிப்பகம் /, சென்னை, 2016. • வேட்கை, சூர்யகாந்தன் , நியூ செஞ்சுரி புக் ஹவுஸ், சென்னை, 2012. • அந்நியர்கள், ஆர். குடாமணி, காலச்சுவடு பதிப்பகம், சென்னை ,1980. • மாத்திரை, ஆண்டாள் பிரியதர்ஷினி,உயிர்மை பதிப்பகம், சென்னை 2007. • அரளிவனம், உமா மகேஸ்வரி, காலச்சுவடு பதிப்பகம்,நாகர்கோவில்,2008. • குடகு, ஏ.கே.செட்டியார், நியூ செஞ்சுரி புக் ஹவுஸ்,சென்னை, 2014. • நீதி தேவன் மயக்கம் ,அறிஞர் அண்ணா, பூம்புகார் பதிப்பகம், சென்னை,1947. • மண்ணியல் சிறுதேர், பண்டிதமணி மு. கதிரேசன் செட்டியார், சைவ சித்தாந்த நூற்பதிப்புக் கழகம், சென்னை ,1957. • புராண நாடகங்கள் , ஜெயந்தி நாகராஜன், நியூ செஞ்சுரி புக் ஹவுஸ், சென்னை ,2012. • தகனம் , ஆண்டாள் பிரியதர்ஷினி , நியூ செஞ்சுரி புக் ஹவுஸ், சென்னை, 2022. • வேரில் பழுத்த பலா, சு.சமுத்திரம், அறிவுப் பதிப்பகம், சென்னை, 2022. • தொல்காப்பியம்.ச.வே.சுப்பிரமணியம்,மணிவாசகர்பதிப்பகம், சென்னை,2008.
Reference Book	• புதுக்கவிதையின் தோற்றமும் வளர்ச்சியும், வல்லிக்கண்ணன்,பாவை பப்ளிகேஷன்ஸ், சென்னை, இரண்டாம் பதிப்பு, 2020. • புதுக்கவிதை ஒரு புதுப்பார்வை, பாலா, அகரம் பதிப்பகம்,ஐந்தாம் பதிப்பு,தஞ்சாவூர்,2011. • தமிழ்ச் சிறுகதை வரலாறு, சி.சு.செல்லப்பா, காலச்சுவடு பதிப்பகம், சென்னை,1980. • தமிழ்ச் சிறுகதை – நேற்றும் இன்றும்,ம.திருமலை,(தொகுப்பாசிரியர்), ஐந்திணைப் பதிப்பகம்,சென்னை, 1990.

	• தமிழில் சிறுகதையின் தோற்றமும் வளர்ச்சியும், க.சிவதம்பி,தமிழ்ப் புத்தகாலயம் ,சென்னை1980. • தமிழ்ச் சிறுகதை வரலாறு,எம்.வேதசகாயகுமார்,சித்திரிகா பதிப்பகம், திருவனந்தபுரம் ,1979. • புதிய உரைநடை ,மா.இராமலிங்கம்,தமிழ்ப் புத்தகாலயம்,சென்னை,1980. • நாடகக் கலை, அவ்வை டி.கே.சண்முகம், அவ்வை பதிப்பகம், சென்னை,1972. • புதிய நோக்கில் தமிழ் நாடக வரலாறு, முனைவர் கோ.கருணாகரன், நியூ செஞ்சுரி புக் ஹவுஸ், சென்னை,1988. • மேலை நோக்கில் தமிழ்க் கவிதை,ப.மருதநாயகம்,உலகத்தமிழாராய்ச்சி நிறுவனம், தரமணிவெளியீடு, சென்னை,மறுப்பதிப்பு,2001. • நாவல் கலையியல், இராபாலசுப்பிரமணியன்.,உலகத் தமிழாராய்ச்சி நிறுவனம், தரமணிவெளியீடு, சென்னை, மறுப்பதிப்பு,2004. • நாவலும் வாசிப்பும் ஒரு வரலாற்றுப் பார்வை, இரா.ஆவேங்கடாசலபதி , காலச்சுவடு பதிப்பகம், நாகர்கோவில், மறு பதிப்பு,2012. • தமிழ் நாவல்கள் ஒரு மதிப்பீடு,ந.வானமாமலை, நியூ செஞ்சுரி புக் ஹவுஸ், சென்னை,மறுபதிப்பு, 1970. • தமிழ் நாவல் அடிப்படைகள்,எஸ்.தோத்தாத்ரி, சிவகங்கை அகரம் பதிப்பகம், 1980. • நாடக மேடை நினைவுகள், பம்மல் சம்பந்த முதலியார்,உலகத் தமிழாராய்ச்சி நிறுவனம்,தரமணி வெளியீடு,சென்னை,1988.
E-Reference	• Tamil Heritage Foundation- www.tamilheritage.orghttp://www.tamilheritage.org • Tamil virtual University Library- www.tamilvu.org/ library http://www.virtualvu.org/library • Project Madurai - www.projectmadurai.org. • Chennai Library- www.chennailibrary.com . • Tamil Universal Digital Library- www.ulib.prg . • Tamil E-Books Downloads- tamale books downloads. blogspot.com • Tamil Books on line- books.tamil cube.com • Catalogue of the Tamil books in the Library of British Congress archive.org • Tamil novels on line - books.tamilcube.com

Course learning outcomes	On successful completion of the course, the students will be able to			
	COs	Course Outcomes	K Level	Learning Outcomes (LO1-LO15)
	CO1	இக்கால இலக்கியங்களை அறிதல்.	K1 & K2	LO1
	CO2	இக்கால இலக்கியங்களைப் பயின்று பகுத்து வகை தொகை செய்தல்.	K3	LO4
	CO3	இக்கால இலக்கியங்களில் சிறந்த படைப்புகளைத் திறனாய்தல்	K4	LO5
	CO4	இக்கால இலக்கியங்களைப் பகுத்தாய்ந்து மதிப்பிடல்.	K5	LO11
	CO5	இலக்கிய ஆக்கங்களை ஆய்வு செய்து, தானே புது கவிதை,நாவல்,சிறுகதை,நாடகம் எழுதப் பயிற்சி பெற்றுதல்.	K5 & K6	LO2 LO15 LO3 LO8 LO9

Mapping of Cos with Pos & PSOs	Programme Outcomes						Programme Specific Outcomes			Mapping Score of Cos with POs & PSOs		
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.6
	CO1	3	2	2	2	2	2.2	2	2	2	2	
	CO2	3	3	2	2	2	2.4	2	2	2	2	
	CO3	3	3	2	3	3	2.8	3	3	3	3	

	CO4	3	3	2	3	3	2.8	3	3	3	3	
	CO5	3	3	3	3	3	3	3	3	3	3	
	Overall score for PO				2.6	Overall score for PSO		2.6				
	Strongly Correlating (S)						-	3 Marks				
	Moderately Correlating (M)						-	2 Marks				
	Weakly Correlating (W)						-	1 Mark				
	No Correlation (N)						-	0 Mark				
Teaching–Learning & Assessment Framework												
Teaching Methodology Experiential learning, Flipped Learning, Blended Learning, Participative Learning					Assessment Types Written mode – exam, class test, assignment Integrated mode – paper presentation / seminar							

Assignment Topics

1. சமகால இலக்கியத்தில் சமூகமாற்றங்களின் பிரதிபலிப்பு.
2. தமிழ் நவீன கவிதைகளில் பெண்களின் குரல் மற்றும் சுயஅடையாளம் .
3. சமகால சிறுகதைகளில் நகர வாழ்க்கையின் தாக்கம்.
4. மின்னணு காலத்தில் தமிழ் இலக்கியத்தில் மாற்றங்கள்.
5. சமகால இலக்கியத்தில் சுற்றுச்சூழல் விழிப்புணர்வு.

Seminar Topics

1. சமகால தமிழ் நாவல்களில் மனிதஉறவுகள் மற்றும் மதிப்புகள்.

2. சமூக ஊடகங்கள் மற்றும் இக்கால இலக்கிய வளர்ச்சி.
3. சமகால இலக்கியத்தில் இளைஞர்களின் சிந்தனை மற்றும் எதிர்காலம்.
4. சமகால இலக்கியம் மற்றும் பன்முக கலாச்சாரம்.
5. இலக்கியம் மூலம் சமூகவிழிப்புணர்வு உருவாக்கம்.

SEMESTER- II

பொதுத்தமிழ் -2

இடைக்கால இலக்கியம் - முதலாமாண்டு (இரண்டாம் பருவம்-தாள் 2)

[illegible]

Units	Course Contents
Unit - I	மூவர் தேவாரம் பக்தி இலக்கியத்தின் தோற்றமும் வளர்ச்சியும் கற்பிக்கப்பட வேண்டும். 1.கோளறுபதிகம்(1-11 பாடல்கள்)- இரண்டாம் திருமுறை- திருஞானசம்பந்தர். 2.மாசில்வீணையும்(1-10)- ஐந்தாம்திருமுறை- திருநாவுக்கரசர். 3.திருவெண்ணைநல்லூர் பதிகம்-1-10 பாடல்கள்-ஏழாம்திருமுறை - சுந்தரர்.
Unit - II	பக்தி இலக்கியம் 1. சிவபுராணம் முழுவதும் – மாணிக்கவாசகர். 2. பெரியாழ்வார் திருமொழி – திருப்பல்லாண்டு (1 – 12 பாசுரங்கள்) – பெரியாழ்வார். 3. திருப்பாவை முழுவதும் - ஆண்டாள்.
Unit - III	தனிப்பாடல்கள் 1. காளமேகப் புலவரின் தனிப்பாடல்கள் – கடவுள் வாழ்த்து மட்டும். 2. தாயுமானவர் தனிப்பாடல்கள் – பராபரக்கண்ணி. 3. காசிப் புலவர் தனிப்பாடல்கள் – திருப்புகழ் (இசுலாமிய பக்திப் பாடல்கள்). 4. இரட்சணிய மனோகரம் – முதல் 10 பாடல்கள் - எச்.ஏ.கிருஷ்ணபிள்ளை.
Unit - IV	சிறுநிலக்கியம் திருக்கயிலாய ஞான உலா(1-50) கண்ணிகள் கலிங்கத்துப்பரணி –களம் பாடியது. குறவஞ்சி – திருக்குற்றாலக் குறவஞ்சி – வசந்தவல்லியின் காதல் பள்ளு – ஞானப்பள்ளு இலக்கியம் முழுவதும். தூது – நெஞ்சுவிடு தூது முழுவதும்.
Unit - V	சித்தர் இலக்கியம் 5.1 வள்ளலார் பாடல்கள் 1."வாடிய பயிரைக் கண்ட போதெல்லாம் வாடினேன் " 2. "எத்தனையோ பேதமுறாத்தொரு உயிரும் 5.2 திருமூலரின் திருமந்திரம் யாக்கை நிலையாமை - முதல் தந்திரம் (143-167) 25 பாடல்கள்.

Question paper Coverage - 100% theory

Text book	• தேவாரம் (திருமுறை 1-7),சைவ சித்தாந்த நூற்பதிப்புக் கழகம்,சென்னை,1957. • திருவாசகம் (சிவபுராணம் உட்பட)- மாணிக்கவாசகர், சைவ சித்தாந்த நூற்பதிப்புக் கழகம், சென்னை, 1980. • நாலாயிர திவ்ய பிரபந்தம் , ஆழ்வார்கள் (compiled by நாதமுனிகள்), சைவ சித்தாந்த நூற்பதிப்புக் கழகம், சென்னை, 1980. • காளமேகப் புலவர், தனிப்பாடல்கள், புலியூர்க் கேசிகன், மங்கை வெளியீடு, சென்னை,2014. • தாயுமானவர், தனிப்பாடல்கள் திரட்டு,கலைஞன் பதிப்பகம்,சென்னை,2001. • காசிம் புலவர் திருப்புகழ்- தனிப்பாடல்கள் , காசிம் புலவர், ஷாஹீல் ஹமீதியா அச்சயாந்திர சாலைசென்னை, 1953. • இரட்சணிய மனோகரம், எச்.ஏ. கிருஷ்ணபிள்ளை, நாசரேத் பதிப்பகம், நாகர்கோவில், 1890. • திருக்கயிலாய ஞான உலா, சேரமான் பெருமாள் நாயனார்,கௌரா பதிப்பகம், சென்னை,2021. • கலிங்கத்துப்பரணி,புலியூர்க்கேசிகன்,உரை,பாவைபதிப்பகம்,சென்னை,2014. • திருக்குற்றாலக் குறவஞ்சி , திரிகூடராசப்பக் கவிராயர் , சைவ சித்தாந்த நூற்பதிப்புக் கழகம், சென்னை,2000. • ஞானப்பள்ளி, பதிப்பாசிரியர்-பேராசிரியர்.ஆ.சதாசிவம், இலங்கை,1968. • நெஞ்சுவிடு தூது , உமாபதி சிவாசாரியார், சைவ சித்தாந்த நூற்பதிப்புக் கழகம், சென்னை,2000. • திருவருட்பா ,இராமலிங்க அடிகள் (வள்ளலார்), சமரச சுத்த சன்மார்க்க சங்கம், வடலூர்/சென்னை,1999. • திருமந்திரம் , திருமூலர், சைவ சித்தாந்த நூற்பதிப்புக் கழகம், சென்னை, 1999.
Reference Book	• தமிழ்ச் சிற்றிலக்கியங்கள், இரா.சந்திரசேகர்,நாம் தமிழர் பதிப்பகம்,சென்னை, 2012 . • ந.வீ.செயராமன் சிற்றிலக்கியச் செல்வம், மணிவாசகம் பதிப்பகம்,சிதம்பரம். 2010. • மூவர் தேவாரம் சொல்லரசு புலவர்,வீ.சிவஞானம்,விஜயாபதிப்பகம், கோவை,2012. • சிற்றிலக்கியங்களின் தோற்றமும் வளர்ச்சியும்,முத்துச்சண்முகன் மற்றும் நிர்மலா மோகன்,முத்துப் பதிப்பகம்,மதுரை1979. • பக்தி இலக்கிய வரலாறு - முனைவர் த.மேகநாதன் ,காவ்யா பதிப்பகம்,

	சென்னை. 2017. • சித்தர் இலக்கியம்- அண்ணாமலைப் பல்கலைக்கழகப் பதிப்பகம், 1988.			
E-Reference	• Tamil Heritage Foundation- www.tamilheritage.org • Tamil virtual University Library- www.tamilvu.org/ library • Project Madurai - www.projectmadurai.org. • Chennai Library- www.chennailibrary.com . • Tamil Universal Digital Library- www.ulib.prg . • Tamil E-Books Downloads- tamale books downloads. blogspot.com • Tamil Books on line- books.tamil cube.com • Catalogue of the Tamil books in the Library of British Congress archive.org • Tamil novels on line - books.tamilcube.com			
Course learning outcomes	On successful completion of the course, the students will be able to			
	COs	Course Outcomes	K Level	Learning Outcomes (LO1- LO15)
	CO1	இடைக்கால இலக்கியங்களை அறிதல்.	K1 & K2	LO1
	CO2	மூவர்தேவாரத்தின் படைப்புகளைத் திறனாய்தல்.	K3	LO4
	CO3	இடைக்கால இலக்கியங்களை பயின்று பகுத்து வகை தொகை செய்தல்.	K4	LO5
	CO4	பக்தி இலக்கிய வளர்ச்சியினைப் பகுத்தாய்தல்.	K5	LO11
	CO5	பிற சமய இலக்கியங்களை மதிப்பீடு செய்தல்.	K5 & K6	LO2 LO15 LO3 LO8 LO9

Mapping of Cos with Pos & PSOs	Programme Outcomes					Programme Specific Outcomes						Mapping Score of Cos with POs & PSOs
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.6
	CO1	3	2	2	2	2	2.2	2	2	2	2	
	CO2	3	3	2	2	2	2.4	2	2	2	2	
	CO3	3	3	2	3	3	2.8	3	3	3	3	
	CO4	3	3	2	3	3	2.8	3	3	3	3	
	CO5	3	3	3	3	3	3	3	3	3	3	
	Overall score for PO						2.6	Overall score for PSO			2.6	
	Strongly Correlating (S)						-	3 Marks				
	Moderately Correlating (M)						-	2 Marks				
	Weakly Correlating (W)						-	1 Mark				
	No Correlation (N)						-	0 Mark				
Teaching–Learning & Assessment Framework												
Teaching Methodology Experiential learning, Flipped Learning, Blended Learning, Participative Learning						Assessment Types Written mode – exam, class test, assignment Integrated mode – paper presentation / seminar						

Assignment Topics

1. இடைக்கால இலக்கியத்தில் சமூகப் பதிவுகள்.
2. இடைக்கால இலக்கியங்களில் பக்தி உணர்வு.
3. சிற்றிலக்கியங்களின் தோற்றமும் வளர்ச்சியும் .

4. இடைக்கால இலக்கியங்களில் அறக்கருத்துகள்.
5. குறவஞ்சி இலக்கியத்தின் தோற்றமும் வளர்ச்சியும்.
6. உலா இலக்கியத்தின் தோற்றமும் வளர்ச்சியும்.
7. பரணி இலக்கியத்தின் தோற்றமும் வளர்ச்சியும்.
8. பள்ளு இலக்கியத்தின் தோற்றமும் வளர்ச்சியும்.
9. தனிப்பாடல்களில் இறைச் செய்திகள்.
10. பக்தி இலக்கியத்தின் தோற்றமும் வளர்ச்சியும்.
11. பக்தி இலக்கியத்தின் இறை உணர்வுகள்.
12. சைவ, வைணவ பக்தி இலக்கியங்களில் ஒப்பாய்வு.
13. சிவபுராணம் கூறும் வாழ்வியல் நெறிகள்.

Seminar Topics

1. இடைக்கால இலக்கியங்களில் தமிழ் மொழி வளர்ச்சி.
2. தமிழ் இலக்கிய வரலாற்றில் சிற்றிலக்கிய வகைகளும்-சிறப்புகளும்.
3. பக்தி இயக்கமும் இடைக்காலத் தமிழ் இலக்கிய வளர்ச்சியும்.
4. மூவர் தேவாரத்தில் சமயச் சிந்தனைகள்.
5. மூவர் தேவாரத்தில் பக்தி.
6. திருப்பாவையில் காணப்படும் பக்தி நெறிகள்.
7. சிவபுராணம் காட்டும் சைவத் தத்துவங்கள் .
8. சித்தர் இலக்கியங்களில் சமூகச் சீர்திருத்தக் கருத்துகள்.
9. வள்ளலார் பாடல் செய்திகள்.
10. திருமூலரின் யாக்கை நிலையாமை கருத்துக்கள்.

பொதுத்தமிழ் -3

Course Code	U26TAL30 3	Semester III	Year II	credits	L	T	P	Hrs
Part-1 Tamil	காப்பிய இலக்கியம்			3	y		-	6
Nature of the Course	Employability / Skill enhancement							
Learning objectives	• காப்பிய இலக்கிய உருவாக்கம்,அதன் வரையறை,வகைகள் ஆகியவற்றை அறிந்து கொள்ளுதல். சிலப்பதிகாரம் பெருங்காப்பிய மரபிற்குள் வருவதை அடையாளம் காண்பதோடு அதனை விளக்கும் திறனைப் பெறுதல். • தமிழ்ப் புராண இலக்கியத்தின் சிறப்பினை உணர்தல்,சைவ சமயக் கருத்துகளை அறியும் திறனைப் பெற்று காப்பிய அறநெறிகளைப் புரிந்துகொள்ளுதல் • மரபான காப்பிய இலக்கியங்களை உள்வாங்கி,பின்னாளில் எழுந்த கிறித்தவ,இசுலாமியக் காப்பியங்களையும் ஒப்பிட்டு அதன் வளர்நிலைகளைப் புரிந்து கொள்ளுதல். புராண,இதிகாச மரபுகளிலிருந்து,புதிய காப்பிய இலக்கிய விதிகளை அறிந்து கொள்ளுதல்.							

Units	Course Contents
Unit - I	இரட்டைக் காப்பியங்கள்
	1.1 சிலப்பதிகாரம் 1.மங்கல வாழ்த்துப் பாடல். 2.மனை அறம் படுத்த காதை. 3.அந்திமாலை சிறப்புச் செய் காதை. 4.இந்திர விழா ஊர் எடுத்த காதை. 1.2 மணிமேகலை முதல் ஐந்து காதைகள்.
Unit - II	சமண ,பௌத்த காப்பியங்கள்
	2.1.சீவகசிந்தாமணி – பூமகள் இலம்பகம், முழுவதும். 2.2 .குண்டலகேசி – யாக்கை நிலையாமை.
Unit - III	கிறித்துவ, இசுலாமிய காப்பியங்கள்
	3.1.தேம்பாவணி – முடிசூட்டுப் படலம் – சூசை பெற்ற ஏழு வரங்கள். 3.2. சீறாப்புராணம் – ஓநாய் பேசிய படலம்.
Unit - IV	கம்பராமாயணம் ,வில்லிபாரதம்
	4.1.கம்பராமாயணம் – கிட்கிந்தா காண்டம் - வாலிவதைப் படலம் (மட்டும்). 4.2. வில்லிபாரதம் – சபா பருவம் முழுவதும்.
Unit - V	புராணக் காப்பியங்கள்
	5.1.பெரியபுராணம் – கண்ணப்பநாயனார் புராணம் முழுவதும் 5.2 .இராவண காவியம் – தாய்மொழிப் படலம்(1-11)பாடல்கள் மட்டும்
Question paper Coverage - 100% theory	
Text book	- சிலப்பதிகாரம், ஞா.மாணிக்கவாசகன், உமாபதிப்பகம், சென்னை, 2000. - மணிமேகலை – ந.மு.வேங்கடசாமி நாட்டார், ராமையா பதிப்பகம், சென்னை. 2000. - சீவகசிந்தாமணி , திருத்தக்கதேவர், சைவ சித்தாந்த நூற்பதிப்புக் கழகம், சென்னை, 2000. - குண்டலகேசி, சைவ சித்தாந்த நூற்பதிப்புக் கழகம், சென்னை, 2000. - தேம்பாவணி, எம்.ஆர்.அடைக்கலசாமி, வர்த்தமானன் பதிப்பகம், சென்னை, 1992. - சீறாப்புராணம் , நாச்சிசுளத்தார் உரை , தீர் எம் பதிப்பகம், சென்னை, 1974.

	• கம்பராமாயணம் -அ.ச.ஞானசம்பந்தன்,கம்பன் டிரஸ்ட்,கோவை,2000. • வில்லிபாரதம், சைவ சித்தாந்த நூற்பதிப்புக் கழகம், சென்னை, 2000. • பெரியபுராணம், குமரகுருபரன்பிள்ளை(பதி),சிரீகாசிமடம், திருப்பானந்தாள்,1964. • இராவண காவியம் - புலவர்குழந்தை,திராவிடப்பண்ணைபதிப்பகம்,சென்னை. 2000.			
Reference Book	• தமிழில் காப்பியக் கொள்கை,து.சீனிச்சாமி,தமிழ்ப் பல்கலைக் கழகம்,தஞ்சாவூர்,1985. • காப்பியத் தோற்றமும் வளர்ச்சியும் – காசிராசன்,மதி பதிப்பகம்,மதுரை.2000. • காப்பியத் திறன்- சோம இளவரசு,மணிவாசகர் நூலகம்,சிதம்பரம்.2000. • கிறித்துவ இலக்கிய சிந்தனைகள், கு.இன்னாசி,வளநாடு வெளியீடு, சென்னை 1984. • இஸ்லாமியத் தமிழ் இலக்கிய வரலாறு(தொகுதிஒன்று) ம.முகம்மது உவைஸ்(ம)பீ.மு.அஜ்மல்கான்,மதுரை காமராசர் பல்கலைக்கழகம், மதுரை,1986. • இலக்கிய சிந்தனை, சிற்பி, கோலம் வெளியீடு.பொள்ளாச்சி.1989. • சேக்கிழார் தந்த செல்வம்,அ.ச.ஞானசம்பந்தன்,கங்கை புத்தக நிலையம், சென்னை,முதற் பதிப்பு,1997.			
E-Reference	• Tamil Heritage Foundation- www.tamilheritage.org • Tamil virtual University Library- www.tamilvu.org/library • Project Madurai - www.projectmadurai.org • Chennai Library- www.chennailibrary.com • Tamil Universal Digital Library- www.ulib.org • Tamil E-Books Downloads- tamale booksdownloads. blogspot.com • Tamil Books on line- books.tamil cube.com • Catalogue of the Tamil books in the Library of British Congress archive.org • Tamil novels on line - books.tamilcube.com			
Course learning outcomes	On successful completion of the course, the students will be able to			
	COs	Course Outcomes	K Level	Learning Outcomes (LO1-LO15)
	CO1	காப்பிய இலக்கியங்களின் தோற்றம்- வளர்ச்சி பற்றி அறிவர்.	K1 & K2	LO1

	CO2	காப்பிய இலக்கியங்களைப் பயின்று பகுத்து வகை தொகை செய்வர்.	K3	LO4
	CO3	காப்பிய இலக்கியங்களைப் பயின்று ஒப்பீடு செய்வர்.	K4	LO5
	CO4	பிற காப்பிய இலக்கியங்களைப் பகுத்தாய்ந்து மதிப்பிடுவர்.	K5	LO11
	CO5	காப்பியங்களை ஒப்பிட்டு ஆய்வு மேற்கொண்டு தானே புதிய காப்பிய இலக்கியம் உருவாக்கும் சிந்தனை பெறுவர்.	K5 & K6	LO2 LO15 LO3 LO8 LO9

Mapping of Cos with Pos & PSOs	Programme Outcomes							Programme Specific Outcomes				Mapping Score of Cos with POs & PSOs
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score	2.6
	CO 1	3	2	2	2	2	2.2	2	2	2	2	
	CO 2	3	3	2	2	2	2.4	2	2	2	2	
	CO 3	3	3	2	3	3	2.8	3	3	3	3	
	CO 4	3	3	2	3	3	2.8	3	3	3	3	
	CO 5	3	3	3	3	3	3	3	3	3	3	
	Overall score for PO						2.6	Overall score for PSO			2.6	
	Strongly Correlating (S)							-	3 Marks			
	Moderately Correlating (M)							-	2 Marks			
Weakly Correlating (W)							-	1 Mark				
No Correlation (N)							-	0 Mark				
Teaching–Learning & Assessment Framework												
Teaching Methodology Experiential learning, Flipped Learning, Blended Learning,							Assessment Types Written mode – exam, class test, assignment					

Participative Learning	Integrated mode – paper presentation / seminar
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Assignment Topics

1. தமிழ்க் காப்பியங்களின் தோற்றமும் வளர்ச்சியும்.
2. தமிழ்க் காப்பியங்களில் சமயச் சிந்தனைகள்.
3. தமிழ்க் காப்பியங்களின் இலக்கிய மரபும் தாக்கமும்.
4. சிலப்பதிகாரம்- அந்திமாலைச் சிறப்புசெய் காதைச் செய்திகள்.
5. சிலப்பதிகாரம்- இந்திர விழா ஊர் எடுத்த காதைச் செய்திகள்.
6. விழாவறை காதை காதைச் செய்திகள்.
7. ஊரலர் உரைத்த காதைச் செய்திகள்.
8. மலர்வனம் புக்க காதைச் செய்திகள்.
9. பளிக்கறைப் புக்க காதைச் செய்திகள்.
10. மணிமேகலா தெய்வம் தோன்றிய காதைச் செய்திகள்.
11. சீவகசிந்தாமணி பூமகள் இலம்பகச் செய்திகள்.
12. குண்டலகேசி யாக்கை நிலையாமை செய்திகள்.
13. கம்பராமயணம் வாலிவதைப் படலச் செய்திகள்.
14. வில்லிபாரதம் சபா பருவச் செய்திகள்.
15. கண்ணப்ப நாயனாரின் பக்தி நெறி.
16. இராவண காவியத்தில் இராவணனின் பாத்திரப் படைப்பு.
17. இராவண காவியத்தில் அறநெறிச் சிந்தனைகள்.
18. இராவண காவியத்தின் இலக்கியப் பங்களிப்பு.

Seminar Topics

1. தமிழ்க் காப்பியங்கள் காட்டும் தமிழர் பண்பாடு.
2. மணிமேகலையில் சமயச் சிந்தனைகள்.
3. காப்பியங்களில் நீதி மற்றும் அறநெறி.
4. கம்பராமயணம் வாலிவதைப் படலம் கதைச் செய்திகள்.
5. சீவகசிந்தாமணியில் இல்லறமும் துறவறமும்.
6. சீவகசிந்தாமணியின் காப்பியச் சிறப்புகள்.
7. தேம்பாவணி முடிசூட்டுப் படலத்தின் இலக்கியப் பங்களிப்பு.
8. கண்ணப்ப நாயனாரின் பக்திச் சிறப்பு.
9. இராவண காவியத்தில் வீரரும் தலைமைத்துவமும்.

பொதுத்தமிழ் -4

Course Code	U26TAL404	Semester IV	Year II	credits	L	T	P	H rs
Part-1 Tamil	பழந்தமிழ் இலக்கியம்			3	y		-	6
Nature of the Course	Employability / Skill enhancement/Entrepreneurship							
Learning objectives	• தமிழின் சங்க இலக்கிய வரலாற்றை அறிதல். சங்க இலக்கிய எட்டுத்தொகை நூல்களில் இடம்பெற்றுள்ள ஐந்திணைசார் செய்யுட்கள் பற்றி அறியும் திறனைப் பெறுதல். பத்துப்பாட்டில் முல்லைப்பாட்டின் இலக்கியப் பணிபினைக் கற்றல். • தமிழின் அற இலக்கிய வரலாற்றை அறிதல். அற இலக்கியங்கள் முன்							

	வைக்கும் அறக்கருத்துகள்,அற இலக்கியங்களின் இலக்கிய மதிப்புகள் போன்றவற்றை அறிந்துகொள்ளுதல். தமிழர்களின் பண்டைய அறவாழ்வுப் பெருமிதங்களை அறிந்து பின்பற்றும் விருப்பத்தைத் தூண்டுதல்.சமுதாய ஒற்றுமை,சமத்துவம்,மனித மாண்பு ஆகியவற்றை வலியுறுத்தல்.சிந்தனைத் திறன் வளர்ச்சி, நல்ல முடிவுகளை எடுக்க உதவும் நெறிமுறைகளை அறியச் செய்தல்.
Units	Course Contents
Unit - I	சங்க இலக்கியம் 1.1. எட்டுத்தொகை, பத்துப்பாட்டு - குறிஞ்சித் திணை - ஐங்குறுநூறு-205-கபிலர். - முல்லைத் திணை - அகநானூறு-74-மதுரைக் கவுணியன் பூதத்தனார். - மருதத் திணை - நற்றிணை-120- மாங்குடி கிழார். - நெய்தல் திணை - குறுந்தொகை-345-அண்டர் மகன் குறுவழுதி. - பாலைத் திணை - பாலைக்கலி -9-பாலை பாடிய பெருங்கடுங்கோ. 1.2. பத்துப்பாட்டு –முல்லைப்பாட்டு முழுவதும்.
Unit - II	புறப்பாடல்கள் புறநானூறு - ஒளவையார் பாடல்கள்- 91,206,235,392. - பாரி மகளிர் -112. - பேய்மகள் இளவெயினார் -11. - பூதப்பாண்டியன் தேவி பெருங்கோப்பெண்டு – 246. - காக்கை பாடினியார் – 278. - ஒக்கூர் மாசாத்தியார் – 279. - அள்ளூர் நன்முல்லையார் – 306. - காவற்பெண்டு -86.
Unit - III	திருக்குறள் - நாலடியார் – நான்மணிக்கடிகை - இன்னாநாற்பது - திருக்குறள் – அறத்துப்பால்- (அறன் வலியுறுத்தல் – செய்ந்நன்றி அறிதல், நடுவுநிலைமை, ஒழுக்கமுடைமை , அற உடைமை). - நாலடியார், – பொருட்பால் – (கல்வி – 131- 140) குஞ்சியழகும் முதல் அலகுசால் வரை. - நான்மணிக்கடிகை (11-20) கன்றாமை முதல் மனைக்குப்பாழ் வரை - இன்னா நாற்பது (21 – 30) ஈத்தவகையால் முதல் நெடுமரம். வரை

Unit - IV	இனியவை நாற்பது - திரிகடுகம் – சிறுபஞ்ச மூலம் – ஏலாதி ஆசாரக்கோவை – பழமொழி
	• இனியவை நாற்பது (11-20) அதர் சென்று முதல் சலவரைச் சாரா வரை • திரிகடுகம் (11-20) விளியாதான் முதல் ஆசை பிறன்கண் வரை • சிறுபஞ்ச மூலம் (11-20) கோறலும் நஞ்சு முதல் பூவாதுகாய்க்கும் வரை • ஏலாதி (11-20) அவாஅறுக்கல் முதல் மின் நேர் வரை • ஆசாரக்கோவை (11 – 20) உடுத்து அலால் முதல் உண்ணுங்கால் வரை • பழமொழி – (11-20) 1. விதிப்பட்ட நூலுணர்ந்து வேற்றுமை யில்லார். 2. கற்றானும் கற்றார்வாய்க் கேட்டானும் இல்லாதார். 3. கல்லாதான் கண்ட கழிநுட்பம் கற்றார்முன் . 4. கல்லாதான் கண்ட கழிநுட்பம் காட்டரிதல். 5. கல்வியா னாய கழிநுட்பம் கல்லார்முன். 6. கல்லா தவரிடைக் கட்டுரையின் மிக்கதோர். 7. கற்றாற்று வாரைக் கறுப்பித்துக் கல்லாதார் . 8. கேட்பாரை நாடிக் கிளக்கப் படும்பொருட்கண். 9. ஒருவ ருரைப்ப உரைத்தால், அதுகொண். 10. துன்னி இருவர் தொடங்கிய மாற்றத்திற்.
Unit - V	முதுமொழிக் காஞ்சி - களவழி நாற்பது
	5. 1.முதுமொழிக் காஞ்சி -(6-10) இல்லைப் பத்து முதல் தண்டாப் பத்து வரை. 5. 2. களவழி நாற்பது முழுவதும்.
Question paper Coverage - 100% theory	
Text book	• சங்க இலக்கியம் மூலமும் உரையும்- ச.வே. சுப்பிரமணியன்,மணிவாசகர் பதிப்பகம்,சென்னை,2014. • பத்துபாட்டு மூலமும் உரையும்,ச.வே. சுப்பிரமணியன்,மணிவாசகர் பதிப்பகம்,சென்னை,2014 • பதினெண்கீழ்க்கணக்கு நூல்கள், அ.மாணிக்கம், வர்த்தமானன் பதிப்பகம், சென்னை,2007.
Reference Book	• தமிழ் இலக்கிய வரலாறு, மு.வரதராசன்,சாகித்ய அகாடெமி பப்ளிகேஷன், சென்னை.1972. • தமிழ்ச் செவ்வியல் நூல்கள், ச.வே.சுப்பிரமணியன்,மணிவாசகர்

	பதிப்பகம்,சென்னை,2008.		
E-Reference	- Tamil Heritage Foundation- www.tamilheritage.org - Tamil virtual University Library- www.tamilvu.org/library - Project Madurai - www.projectmadurai.org. - Chennai Library- www.chennaiLibrary.com. - Tamil Universal Digital Library- www.ulib.prg. - Tamil E-Books Downloads- tamale booksdownloads. blogspot.com - Tamil Books on line- books.tamil cube.com - Catalogue of the Tamil books in the Library of British Congress archive.org - Tamil novels on line - books.tamilcube.com		
Course learning outcomes	On successful completion of the course, the students will be able to		
	COs	Course Outcomes	K Level Learning Outcomes (LO1-LO15)
	CO1	பழந்தமிழ் இலக்கியங்களின் தோற்றம், வளர்ச்சி மற்றும் இலக்கியப் பின்னணியை அறிதல்.	K1 & K2 LO1
	CO2	சங்க இலக்கியங்களின் அகப்பொருள்,புறப்பொருள் கோட்பாடுகளைப் புரிந்து பழந்தமிழ் இலக்கியக் கருத்துக்களை கல்வி,சமூகம் மற்றும் வாழ்வியல் சூழல்களில் பயன்படுத்தும் திறனைப் பெறுவார்.	K3 LO4
	CO3	பழந்தமிழ் இலக்கியங்களை நவீன இலக்கியங்களுடன் ஒப்பிட்டு பகுத்தறிதல்.	K4 LO5
	CO4	பழந்தமிழ் இலக்கியங்களில் காணப்படும் வாழ்வியல் நெறிகளை மதிப்பீடு செய்தல்.	K5 LO11
	CO5	பழந்தமிழ் இலக்கியம் தொடர்பான ஆய்வு,கருத்தரங்கம், ஒப்படைப்பு மற்றும் படைப்பாக்கப் பயிற்சியினைப் பெறுதல்.	K5 & K6 LO2 LO15 LO3 LO8 LO9

Mapping of Cos	Programme Outcomes	Programme Specific Outcomes	Mapping Score of Cos with POs &
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with Pos & PSOs											PSOs	
	COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO3	PSO3	Mean Score	2.6
	CO1	3	2	2	2	2	2.2	2	2	2	2	
	CO2	3	3	2	2	2	2.4	2	2	2	2	
	CO3	3	3	2	3	3	2.8	3	3	3	3	
	CO4	3	3	2	3	3	2.8	3	3	3	3	
	CO5	3	3	3	3	3	3	3	3	3	3	
	Overall score for PO						2.6	Overall score for PSO			2.6	
Strongly Correlating (S)							-	3 Marks				
Moderately Correlating (M)							-	2 Marks				
Weakly Correlating (W)							-	1 Mark				
No Correlation (N)							-	0 Mark				
Teaching–Learning & Assessment Framework												
Teaching Methodology Experiential learning, Flipped Learning, Blended Learning, Participative Learning							Assessment Types Written mode – exam, class test, assignment Integrated mode – paper presentation / seminar					

Assignment Topics

- 1.சங்க இலக்கியத்தின் தோற்றமும் வளர்ச்சியும் .
- 2.எட்டுத்தொகை நூல்களின் இலக்கியச் சிறப்பு.
- 3.பத்துப்பாட்டு நூல்களின் தோற்றமும் வளர்ச்சியும் .
- 4.முல்லைப்பாட்டில் தலைவியின் உணர்வு.
5. திருக்குறள் காட்டும் வாழ்வியல் நெறிகள்.
- 6.பதினெண் கீழ்க்கணக்கு நூல்களில் அறக்கருத்துகள்.
- 7.திரிகடுகம் காட்டும் அறச்சிந்தனைகள்.
- 8.பழமொழி நானூற்றில் மக்களின் வாழ்க்கை அனுபவங்கள்.
9. புறநானூற்றில் ஒளவையார் பாடலின் கருத்துக்களை தொகுக்க.

Seminar Topics

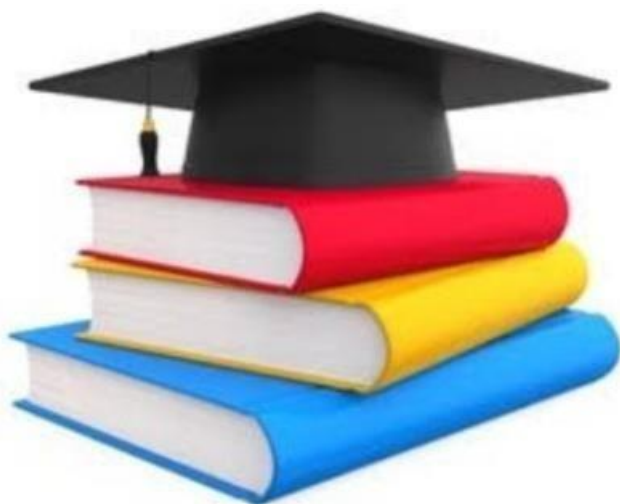
- 1.சங்க இலக்கியத்தில் திணைகளும் தமிழர் வாழ்வியலும்.
- 2.திணைக்கோட்பாடுவழி சங்ககால மக்களின் வாழ்க்கைமுறை.
- 3.முல்லைப்பாட்டில் சங்ககால சமூகப் பண்பாடுகள்.
- 4.திருக்குறளில் அறநெறிச் சிந்தனைகள்.
- 5.பழமொழி நானுற்றில் வாழ்வியல் கூறுகள்.
6. பதினெண் கீழ்க்கணக்கு நூல்களில் நீதிக் கருத்துக்கள்.
7. பதினெண் கீழ்க்கணக்கு நூல்களில் அற இலக்கிய மரபு.

Department of English and Foreign Languages Syllabus

for

Part II English

(University Department and Affiliated Colleges)



Curriculum Framework and Syllabus for 2026-2029



Department of English and Foreign Languages Minutes of the BoS meeting

Date & Time: 25.6.2026, 10.30.am

Meeting Link: meet.google.com/vsu-qqto-yka

The Department of English and Foreign Languages has convened the Board of Studies for the curriculum of UG & P.G Programme in English offered by the Affiliated Colleges, M.A. English Programme offered by the Department of English and Foreign Languages, Mother Teresa Women's University, Kodaikanal Certificate Programme in English (News Reporting and Environmental Journalism), Part II English, Part I French, and Value Based Education for both MTWU & Affiliated Colleges to be offered from the academic year 2026-2027 onwards.

It is resolved that the Board of Studies of the Department of English having reviewed in detail the syllabus placed before it, hereby, confirmed and approved the curriculum framed for the M. A. English literature (University), M. A. English literature (All Affiliated Colleges) UG B. A. English literature (All Affiliated Colleges) Programmes, Part -II English, Part -I French, Certificate Programme and Value Based Education for the Academic Year 2026-2027.

It is further resolved that the said Curriculum have been framed and revised on the basis of the recommendations of Subject experts, Faculty members, Industry representatives, Alumnae and Student feedback, all of whose suggestions have been systematically considered and incorporated, and that the syllabus duly reflect the emerging trends in English Literature and the current requirements of the Society. The syllabus of Part -II English, Part -I French, Certificate Programme and Value Based Education submitted to the board has been approved.

It is further resolved that the aforementioned syllabus stand approved with minor modifications to the curriculum of the M A. English literature (University), M. A. English literature (All Affiliated Colleges) and UG B. A. English literature (All Affiliated Colleges) programmes, by incorporating the regional needs of the area, and that theses syllabus be implemented with effect from the academic year 2026-2027 for next three years.

 25/06/26

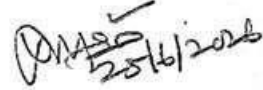
Dr. P. Jeyappriya, Professor and Head, Chair Person, BOS
Department of English and Foreign Languages
Mother Teresa Women's University, Kodaikanal



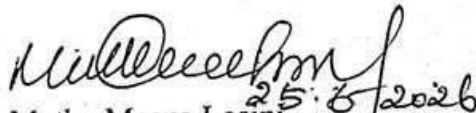
Mr. Lokesh,
Lady Hawk Language Research Foundations,
Gandhipuram,
Coimbatore.

 25/6/2026

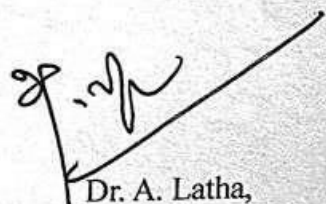
Dr. P. Nagaraj, Professor and Head,
Department of English,
Bharathiar University,
Coimbatore.

 25/6/2026

Dr. Rajaram,
Associate Professor,
Department of English,
M.V.M. Govt. Arts College for Women,
Dindigul.

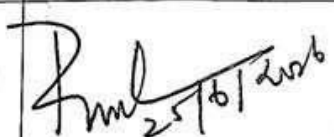
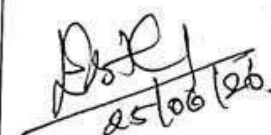
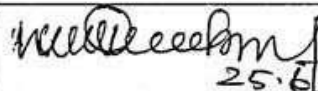
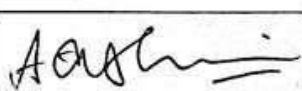
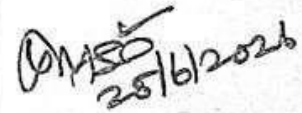
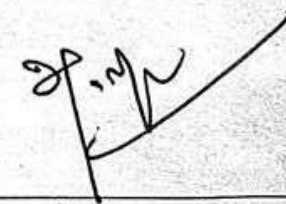
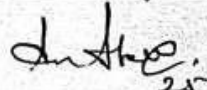
 25.6.2026

Dr. A. Muthu Meena Losini,
Department of English and Foreign Languages
Mother Teresa Women's University,
Kodaikanal



Dr. A. Latha,
Associate Professor,
Department of English
Govt. Arts college for Women,
Nilakottai

MOTHER TERESA WOMEN'S UNIVERSITY, KODAIKANAL
DEPARTMENT OF ENGLISH

S.NO.	BoS Members	Members Present	SIGNATURE
1.	Head of the Department/ CHAIRPERSON	Dr. P. Jeyappriya, Professor and Head, Department of English and Foreign Language Mother Teresa Women's University, Kodaikanal.	 25/06/2026
2.	Subject Expert from other Universities	Dr.P.Nagaraj, Professor and Head, Department of English, Bharathiar University Maruthamalai Road, Coimbatore 641 046	 25/6/2026
3.	One representative from Alumnae	S. Esther Vidhya Kumbar	 25/06/2026
4.	One representative from Industrial field	Mr. LOKESH Lady Hawk Language Research Foundation 289, SMB Toys Complex, 6th Street, Gandhipuram , Coimbatore.	
5.	Department Staff from our University	Dr.A.Muthumeena Losini, Asst.Professor	 25.6.26
6.		Dr.A.Rajalakshmi, Asst.Professor	
7.	One Co-ordinator from each affiliated College where the Respective course is offered	Dr.Rajaram, Associate Professor, Department of English, M.V.M. Government Arts College for Women, Dindigul.	 25/6/2026
8.		Dr.A.Latha, Associate Professor, Govt. Arts College for Women, Nilakottai.	
9.	One Student Representative	K. A. Ann Abano.	 25.6.26.

GENERIC ENGLISH (PART II)

SEMESTER I- IV

[illegible]

V	Writing Reading Comprehension General Essay Writing		
Course Outcomes			
Course Outcomes	On completion of this course, students will be able to		
		K Level	LO
CO1	To introduce students to foundational literary genres including poetry, prose, drama, and short fiction across varying socio-cultural periods.	K1 & K2	LO1
CO2	To cultivate critical thinking, aesthetic appreciation, and interpretive skills through textual analysis of classic and modern literature.	K3	LO4
CO3	To sensitise students to core human values, universal ethics, and ecological awareness embedded within structural texts.	K4	LO5
CO4	To strengthen baseline communicative proficiency by clarifying foundational principles of English grammar and syntax.	K5	LO11
CO5	To enhance workplace readiness and lifelong communication skills by training students to apply active/passive voice and precise tenses.	K5 & K6	LO15
Textbook (Latest Editions)			
1.	<i>Literary Gleam: An Anthology of Prose and Poetry</i> (Standard First-Year UG Foundation Textbook).		
2.	<i>An Introduction to the Study of English Literature</i> by B. Prasad.		
References Books (Latest editions, and the style as given below must be strictly adhered to)			
1.	<i>A Glossary of Literary Terms</i> by M.H. Abrams (Cengage Learning).		
2.	<i>The Pelican Guide to English Literature (Vol. 1–8)</i> , edited by Boris Ford.		
Web Resource			
1.	Poetry Foundation: For authorised, printable versions of Wordsworth, Frost, and Keats.		
2.	Cambridge Dictionary. — <i>Grammar and Language Reference</i> . Cambridge University Press, https://dictionary.cambridge.org/grammar .		
3.	The British Council. — <i>LearnEnglish</i> . British Council, https://learnenglish.britishcouncil.org .		

Mapping of Cos with Pos & PSOs

COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score
CO1	3	2	2	2	3	2.4	3	2	2	2.3
CO2	2	3	2	3	2	2.4	2	3	1	2
CO3	2	2	3	1	2	2	2	1	2	1.6
CO4	2	2	2	2	2	2	3	2	3	2.6
CO5	2	2	2	3	2	2.2	2	2	2	2
Overall score for PO						2.2	Overall score for PSO			2.1

Course Code		Semester II	Year I	Credits	L	T	P	Hrs
Core/ Elective	General English II			3				6
Nature of the Course	Employability, Skill Development, Entrepreneurship							
Learning Objectives								
LO1	To introduce students to foundational literary genres, including poetry, prose, drama, and short fiction across varying socio-cultural periods.							
LO2	To cultivate critical thinking, aesthetic appreciation, and interpretive skills through text analysis of classic and modern literature.							
LO3	To sensitise students to core human values, universal ethics, and ecological awareness embedded within structural texts.							
LO4	To strengthen foundational syntactic clarity by training students to identify and construct standard sentence patterns.							
LO5	To enhance workplace readiness and situational fluency through conversational skills, dialogue production, and reporting mechanics.							
UNIT	Course Contents							
I	Poetry Rudyard Kipling - <i>If</i> Walt Whitman – <i>O’Captain, My Captain</i> Langston Hughes – <i>Dreams</i> P.B.Shelley – <i>Ozymandias</i> William Blake – <i>Poison Tree</i>							
II	Prose Malala Yousafzai’s <i>I am Malala(Chapter 1)</i> M.K. Gandhi’s moral and personal growth in <i>The Story of My Experiments with Truth (Chapters 1- 2)</i>							
III	Short story Stephan Leacock - <i>My Financial Career</i> O’ Henry - <i>After 20 Years</i>							
IV	Grammar and Communication Skills Sentence Patterns Direct and Indirect Speech							
V	Writing Letter Writing - Formal Letters - Application for Leave - Letter to the Editor - Complaint Letter - Enquiry Letter - Informal Letters							

Course Outcomes			
Course Outcomes	On completion of this course, students will be able to		
		K Level	LO
CO1	Recall and explain structural, thematic, and stylistic traits belonging to specified literary eras and authors.	K1 & K2	LO1
CO2	Analyse and interpret underlying metaphors, socio-cultural contexts, and philosophical concepts across various genres.	K3	LO4
CO3	Critique and evaluate human actions, ethical choices, and social realities depicted across the literary texts.	K4	LO5
CO4	Apply rules of syntax and speech transformation accurately to modify sentences in spoken and written contexts.	K5	LO11
CO5	Synthesize and produce coherent dialogic exchanges, creative scenarios, and professional reports based on real-world situations.	K5 & K6	LO15
Textbook (Latest Editions)			
1.	Touchstone: An Anthology of Prose and Poetry (Orient BlackSwan).		
2.	Echoes: A Course in Literature and Language (Macmillan Education).		
References Books (Latest editions, and the style as given below must be strictly adhered to)			
1.	A Glossary of Literary Terms by M.H. Abrams and Geoffrey Galt Harpham (Cengage Learning).		
2.	A Remedial English Grammar for Foreign Students by F.T. Wood (Macmillan Publishers).		
Web Resource			
1.	Poetry Foundation: For authorized, printable versions of works by William Wordsworth, Robert Frost, and John Keats.		
2.	Oxford Reference. —English Language and Literature.∥ Oxford University Press, https://www.oxfordreference.com .		
3.	JSTOR. —Language and Literature Collection.∥ ITHAKA, https://www.jstor.org .		

Mapping of Cos with Pos & PSOs

COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score
CO1	3	2	2	2	3	2.4	3	2	2	2.3
CO2	2	3	2	3	2	2.4	2	3	1	2
CO3	2	2	3	2	2	2.2	2	2	2	2
CO4	3	3	2	2	2	2.4	3	2	3	2.6
CO5	2	3	2	1	2	2	2	2	2	2
Overall score for PO						2.28	Overall score for PSO			2.18

Course Code		Semester III	Year II	Credits	L	T	P	Hrs
Core/ Elective	General English III			3				6
Nature of the Course	Employability, Skill Development, Entrepreneurship							
Learning Objectives								
LO1	To introduce foundational literary genres including lyrical poetry, reflective prose, social drama, and gothic/realist short fiction across global contexts.							
LO2	To develop analytical skills and aesthetic evaluation by unpacking text metaphors, sensory imagery, and diverse structural narratives.							
LO3	To nurture socio-cultural empathy and moral consciousness by exploring human vulnerabilities, simple life joys, and ethical transformations.							
LO4	To rectify syntactic structural weaknesses through target training in modifiers, non-finite verbs, and common usage errors.							
LO5	To equip students with expressive, real-world communicative output including contextual descriptions, cohesive paragraphing, and personal letters.							
UNIT	Course Contents							
I	Poetry W. B. Yeats - <i>The Lake Isle of Innisfree</i> William Shakespeare – <i>All the World’s a Stage</i> Robert Herrick - <i>To Daffodils</i> Joyce Kilmer - <i>Trees</i> Robert Browning – <i>Incident of the French Camp</i>							
II	Prose Robert Louis Stevenson - <i>Walking Tours</i> Jessie Owen - <i>My Greatest Olympic Prize</i>							
III	Short Stories Isaac Asimov - <i>The Last Question</i> Guy de Maupassant - <i>The Necklace</i>							
IV	Grammar and Communication Skills Degrees of Comparison Gerunds and Infinitives Common Errors in Usage							
V	Writing Writing a Paragraph Dialogue writing Report Writing							

Course Outcomes			
Course Outcomes	On completion of this course, students will be able to		
		K Level	LO
CO1	Recall and interpret core themes, character motivations, and literary imagery used across various global eras and authors.	K1 & K2	LO1
CO2	Deconstruct and examine underlying societal critiques, cultural practices, and existential concepts embedded within texts	K3	LO4
CO3	Critique and evaluate moral actions, financial vanities, and shifting emotional states depicted in diverse literary modes.	K4	LO5
CO4	Detect structural grammar flaws and construct accurate phrases using precise degrees of comparison, gerunds, and infinitives	K5	LO11
CO5	Draft well-structured paragraphs, situational narratives, and informal messages tailored to personal and social contexts.	K5 & K6	LO15
Textbook (Latest Editions)			
1.	<i>Symphony: An Anthology of Prose and Poetry</i> (Orient BlackSwan).		
2.	<i>Fluency in English: A Coursebook for Foundation English</i> (Macmillan Education).		
References Books (Latest editions, and the style as given below must be strictly adhered to)			
1.	<i>A Glossary of Literary Terms</i> by M.H. Abrams and Geoffrey Galt Harpham (Cengage Learning).		
2.	<i>Oxford Guide to English Grammar</i> by John Eastwood (Oxford University Press - Excellent for structural breakdowns of Gerunds vs. Infinitives).		
Web Resource			
1.	Poetry Foundation: For authorized, printable versions of works by W.B. Yeats, William Wordsworth, Robert Herrick, and Langston Hughes.		
2.	Cambridge Dictionary. — <i>Grammar and Language Reference</i> . Cambridge University Press, https://dictionary.cambridge.org/grammar .		
3.	Encyclopaedia Britannica. — <i>English Literature</i> . Encyclopaedia Britannica, https://www.britannica.com/art/English-literature .		
4.	Oxford Reference. — <i>English Language and Literature</i> . Oxford University Press, https://www.oxfordreference.com .		

Mapping of Cos with Pos & PSOs

COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score
CO1	3	2	3	2	3	2.6	3	2	2	2.3
CO2	2	3	2	3	2	2.4	2	3	2	2.3
CO3	2	2	3	3	2	2.4	2	2	2	2
CO4	3	1	2	2	2	2	3	2	3	2.6
CO5	2	3	2	3	2	2.4	2	3	1	2
Overall score for PO						2.36	Overall score for PSO			2.24

Course Code		Semester IV	Year II	Credits	L	T	P	Hrs
Core/ Elective	General English IV			3				6
Nature of the Course	Employability, Skill Development, Entrepreneurship							
Learning Objectives								
LO1	To analyze advanced global literary works across poetry, prose, drama, and short fiction, focusing on complex thematic structures and historical contexts							
LO2	To cultivate psychological insight and mature critical evaluation by unpacking text ironies, social behaviors, and motivational narratives							
LO3	To foster advanced professional language mechanics through sentence restructuring, syntax transformation, and reading comprehension.							
LO4	To develop modern workplace documents including formal electronic correspondence and industry-standard resumes or curricula vitae.							
LO5	To train students in corporate verbal skills covering competitive group discussions, recruitment interviews, and public presentation platforms.							
UNIT	Course Contents							
I	Poetry Christina Rossetti - <i>A Birthday</i> Walter de la Mare - <i>Silver</i> Thomas Hardy - <i>The Darkling Thrush</i> Wifred Owen – <i>Strange Meeting</i> Nissim Ezekiel - <i>Night of the Scorpion</i>							
II	Prose Martin Luther King – <i>I Have a Dream</i> A. P. J. Abdul Kalam - <i>The Power of Determination</i>							
III	Short Stories Ruskin Bond – <i>No Room for a Leopard</i> Saki - <i>The Open Window</i>							
IV	Grammar and Communication Skills Transformation of Sentences: Simple, Compound, and Complex Sentences Reading Comprehension							
V	Writing Resume / CV Writing Writing formal Emails Precise Writing							

Course Outcomes			
Course Outcomes	On completion of this course, students will be able to		
		K Level	LO
CO1	Identify and explain stylistic nuances, dramatic techniques, and underlying ironies across global genres	K1 & K2	LO1
CO2	Deconstruct and examine complex sociocultural identities, regional superstitions, and psychological character traits.	K3	LO4
CO3	Critique and evaluate human habits, societal systems, personal resilience models, and ethical dilemmas in literature	K4	LO5
CO4	Analyze syntactic relationships and alter structural data to convert sentences into simple, compound, or complex forms.	K5	LO11
CO5	Design, draft, and perform professional corporate communication tasks including CV creation, business emails, group presentation dynamics, and structured interview strategies.	K5 & K6	LO15
Textbook (Latest Editions)			
1.	Confluence: A Course in Literature and Language (Orient BlackSwan).		
2.	Prism: An Anthology of Prose, Poetry, and Drama (Macmillan Education India).		
References Books (Latest editions, and the style as given below must be strictly adhered to)			
1.	Poetry Foundation: For authorized, printable editions of poems by Christina Rossetti, Walter de la Mare, and Thomas Hardy		
2.	Poetry Foundation: For authorized, printable editions of poems by Christina Rossetti, Walter de la Mare, and Thomas Hardy		
Web Resource			
1.	Poetry Foundation: For authorized, printable editions of poems by Christina Rossetti, Walter de la Mare, and Thomas Hardy.		
2.	Cambridge Dictionary. —Grammar and Language Reference.¶ Cambridge University Press, https://dictionary.cambridge.org/grammar .		
3	Encyclopaedia Britannica. —English Grammar.¶ Encyclopaedia Britannica, https://www.britannica.com/topic/grammar .		

Mapping of Cos with Pos & PSOs

COs	PO1	PO2	PO3	PO4	PO5	Mean Score	PSO1	PSO2	PSO3	Mean Score
CO1	3	2	2	2	2	2.2	3	2	2	2.3
CO2	2	3	2	3	3	2.6	2	3	3	2.6
CO3	2	2	3	3	2	2.4	2	2	2	2
CO4	3	2	2	2	2	2.2	3	2	3	2.6
CO5	3	3	2	2	2	2.4	2	2	2	2
Overall score for PO						2.36	Overall score for PSO			2.3

Value Based Education (for all UG courses)

[illegible]

Reference Book	1. S. Dinesh, <i>Education for Values, Environment and Human Rights</i> , Discovery Publishing House. 2. M.G. Chitkara, <i>Education and Human Values</i> , APH Publishing.			
E-Reference	1. UGC Consortium for Educational Communication (CEC): https://cec.nic.in/ 2. UNESCO Values Education Resource Portal: https://en.unesco.org/			
Course learning outcomes	On successful completion of the course, the students will be able to			
	COs	Course Outcomes	K Level	Learning Outcomes (LO1-LO15)
	CO1	Recall and explain the core foundations of truth, honesty, professional integrity, and academic authenticity.	K1,K2	LO1, LO2
	CO2	Apply empathetic listening, conflict-resolution mechanisms, and mindful self-regulation techniques in daily personal and campus interactions.	K3	LO4, LO7
	CO3	Analyze various sources of emotional triggers, ethical dilemmas, and the behavioral consequences of convenience-based choices.	K4	LO5, LO9
	CO4	Evaluate the social impact of inclusive civic citizenship, corporate/governance transparency, and ethical accountability in modern public life.	K5	LO11, LO12
	CO5	Evaluate biological roles, structural parameters, and dietary variations like Omega-3/Omega-6 fatty acids while addressing ethical concerns in modern biotechnology.	K5, K6	LO2, LO13
	CO6	Formulate and adopt a structured personal plan for lifelong ethical living, utilizing emotional journaling, mindfulness, and value-based professional goals.	K6	LO14, LO15
Teaching–Learning & Assessment Framework				
Teaching Methodology Experiential & Reflective Learning: Regular classroom breathing and pause exercises, guided emotional journaling sessions, and peer-to-peer role-plays simulating emotionally charged situations or ethical dilemmas.		Assessment Types Blended Learning: Reviewing selected case studies on corporate, health, and academic transparency via online open-source educational modules. Interactive Frameworks: Group discussions using Think-Pair-Share methodologies focused on real-world conflict resolution, empathy mapping, and establishing strong campus values.		

Semester III

U26EVS301

ENVIRONMENTAL STUDIES - **(For all UG courses)**

Course Code	U26EVS301	Semester III	Year II	Credits	L	T	P	Hrs
General Course	Environmental Studies			2	2	-	-	2
Nature of the Course	Employability							
Learning objectives	-To understand the scope and interdisciplinary nature of Environmental Studies, including ecosystem concepts, community ecology, and the relationship between humans and the environment. -To acquire knowledge of natural resources, biodiversity, environmental pollution, and their conservation and management for sustainable environmental development. -To develop an understanding of sustainable development, environmental health, pollution prevention, and the importance of environmental ethics and public awareness. -To familiarize students with national and international environmental laws, policies, and conventions that support environmental protection, biodiversity conservation, and sustainable resource							
Units	Course Contents							
Unit I	Multidisciplinary nature of environmental studies The multidisciplinary nature of environmental studies. Definition, Scope and importance. Need for public awareness. Ecosystem: What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chain, food web and ecological succession. Case studies of the following ecosystems: a) Forest ecosystem b) Grassland ecosystem c) Desert ecosystem d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)							
Unit II	Natural Resources: Renewable and Non-renewable Resources : Land Resources and land use change; Land degradation, soil erosion and desertification. Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations. Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state). Heating of earth and circulation of air; air mass formation and precipitation. Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources, growing energy needs, case studies.							
Unit III	Biodiversity and Conservation - Levels of biological diversity :genetic, species and ecosystem diversity; Biogeography zones of India; Biodiversity patterns and global biodiversity hot							

	spots. India as a mega-biodiversity nation; Endangered and endemic species of India. Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity. Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value. Environmental pollution -Environmental pollution : types, causes, effects and controls; Air, water, soil, chemical and noise pollution. Nuclear hazards and human health risks. Solid waste management: Control measures of urban and industrial waste. Pollution case studies.
Unit IV	Environmental Policies & Practices- Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture. Environment Laws : Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act; International agreements; Montreal and Kyoto protocols and conservation on Biological Diversity (CBD). The Chemical Weapons Convention (CWC). Nature reserves, tribal population and rights, and human, wildlife conflicts in Indian context
Unit V	Human Communities and the Environment - Human population and growth: Impacts on environment, human health and welfares. Carbon foot-print. Resettlement and rehabilitation of project affected persons; case studies. Disaster management: floods, earthquakes, cyclones and landslides. Environmental movements: Chipko, Silent valley, Bishnios of Rajasthan. Environmental ethics: Role of Indian and other religions and cultures in environmental conservation. Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi). Field work- Visit to a local area to document environmental assets-river / forest/ grassland/ hill / mountain
Question paper Coverage - 100% theory	
Reference Book	1.Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt. 2. Gadgil, M., & Guha, R.1993. This Fissured Land: An Ecological History of India. Univ. of California Press. 3. Gleeson,B. and Low, N. (eds.) 1999. Global Ethics and Environment, London, Routledge.

	4. Gleick, P.H. 1993. Water in Crisis. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press. 5. Groom, Martha J. Gary K. Meffe, and Carl Ronald carroll. Principles of Conservation Biology. Sunderland: Sinauer Associates, 2006. 6. Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. Science, 339: 36-37. 7. McCully, P.1996. Rivers no more: the environmental effects of dams(pp. 29-64). Zed Books. 8. McNeil, John R. 2000. Something New Under the Sun: An Environmental History of the Twentieth Century. 9. Odum, E.P., Odum, h.T. & Andrews, J.1971. Fundamentals of Ecology. Philadelphia: Saunders. 10. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. Environmental and Pollution Science. Academic Press. 11. Rao, M.N. & Datta, A.K. 1987. Waste Water Treatement. Oxford and IBH Publishing Co. Pvt. Ltd. 12. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. Environment. 8th edition. John Wiley & Sons. 13. Rosencranz, A., Divan, S., & Noble, M.L. 2001. Environmental law and policy in India. Tripathi 1992. 14. Sengupta, R. 2003. Ecology and economics: An approach to sustainable development. OUP. 15. Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi. 16. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. Conservation Biology: Voices from the Tropics. John Wiley & Sons. 17. Thapar, V. 1998. Land of the Tiger: A Natural History of the Indian Subcontinent. 18. Warren, C.E. 1971. Biology and Water Pollution Control. WB Saunders. 19. Wilson, E.O. 2006. The Creation: An appeal to save life on earth. New York: Norton. 20. World Commission on environment and Development. 1987. Our Common
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	Future. Oxford University Press.			
E-Reference				
Course learning outcomes	On successful completion of the course, the students will be able to			
	COs	Course Outcomes	K L ev el	Learning Outcomes (LO1-LO15)
	CO1	Explain the basic concepts of environmental studies, ecosystems, natural resources, biodiversity, and environmental pollution.	K1 & K2	LO1
	CO2	Analyze environmental issues and the impact of human activities on natural resources and ecosystems.	K4	LO3
	CO3	Evaluate environmental conservation methods, pollution control measures, and environmental laws for sustainable development.	K5	LO5
	CO4	Apply environmental knowledge to identify environmental problems and suggest suitable solutions through field studies and community participation.	K3	LO5
	CO5	Demonstrate environmental awareness, ethical responsibility, and sustainable practices for environmental protection.	K3	LO13,LO14
	CO6	Develop environmental responsibility and participate in environmental conservation and sustainable development activities.	K6	LO14,LO15
Teaching–Learning & Assessment Framework				
Teaching Methodology Experiential learning, Blended Learning, Participative Learning		Assessment Types Written Mode - Exam, Class test, Assignment Integrated Mode - Paper presentation/ Seminar,		

Semester V

[illegible]

	2. Singh, R. B. , <i>Disaster Management, Global Challenges and Local Solutions</i> , Rawat Publications.			
Reference Book	1. Coppola, D. P. , <i>Introduction to International Disaster Management</i> , Butterworth-Heinemann. 2. Government of India , <i>National Policy on Disaster Management</i> , NDMA, New Delhi.			
E-Reference	1. NDMA India Portal : https://ndma.gov.in 2. UNDRR Prevention Web : https://www.preventionweb.net			
Course learning outcomes	On successful completion of the course, the students will be able to			
	COs	Course Outcomes	K L ev el	Learning Outcomes (LO1-LO15)
	CO1	Recall and describe basic hazards, classification paradigms, institutional frameworks, and disaster governance roadmaps.	K 1, K 2	LO1
	CO2	Apply geo-technical parameters, first-aid emergency procedures, and CBDRR strategies to mitigate field-level disaster risks.	K 3	LO4
	CO3	Analyze regional vulnerability patterns, geo-climatic data profiles, and the balance between structural and non-structural mitigation measures.	K 4	LO5
	CO4	Evaluate the efficacy of economic instruments, psychosocial support interventions, and the administrative performance of regional civil societies.	K 5	LO11
	CO5	Evaluate environmental and socio-economic vulnerabilities within vulnerable coastal and fragile highland geomorphologies.	K 5, K 6	LO2, LO13
	CO6	Design inclusive community-led response plans and structural framework models for localized disaster risk reductions.	K 6	LO3, LO6
Teaching–Learning & Assessment Framework				

Teaching Methodology Experiential Learning: Hands-on emergency simulations (triage modeling and mock drills) and participatory mapping of community-based vulnerability paths. Blended Learning: Real-time analysis of GIS/Geo-Tech tracking tools and exploring spatial vulnerability databases from global DRR portals during dedicated tech laboratory hours. Interactive Modules: Strategic problem-solving sessions focusing on policy implementation challenges and public administration parameters aligned with civil service competitive standards.	Assessment Types Written Mode: Multi-hazard spatial mapping assignments, detailed case study evaluations focusing on recent extreme weather anomalies in Tamil Nadu, and structured periodic class examinations. Oral Mode: Think-pair-share simulations focusing on immediate triage response coordination and panel presentations evaluating the socio-economic impacts of post-disaster recovery efforts. Integrated Mode: Field-oriented poster presentations on community risk mitigation designs and a comprehensive SWOC analysis reviewing the structural vs non-structural resilience profiles of vulnerable regional coastal boundaries.
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