PSGR Krishnammal College for Women

BACHELOR OF COMMERCE WITH E-COMMERCE

PROGRAMME CODE: EC

CHOICE BASED CREDIT SYSTEM (CBCS) &

LEARNING OUTCOMES-BASED CURRICULUM FRAMEWORK (LOCF)

SCHEME OF EXAMINATION & SYLLABUS

(w.e.f 2026 onwards)

REGULATIONS 2026

UNDERGRADUATE PROGRAMMES

(a) Qualification Descriptors

Aligned with NHEQF Level 6 (Bachelor's Degree Level).

A Bachelor's Degree signifies that a learner has completed a structured programme of study that develops disciplinary knowledge, professional competence, transferable skills and ethical values.

Graduates are expected to demonstrate:

A systematic understanding of the discipline and its linkages with related fields
Procedural and professional knowledge relevant to employment, higher education and public service
Ability to identify problems, collect and analyze data, and develop evidence-based solutions
Effective communication of academic and professional work
Capacity for self-directed learning and adaptation to new contexts
Ability to apply disciplinary knowledge and transferable skills in real-world contexts
Development of employability skills relevant to professional careers

(b) Graduate Attributes (GAs)

GA Code	Graduate Attributes
GA1	Disciplinary Knowledge
GA2	Communication Skills
GA3	Critical Thinking
GA4	Problem Solving
GA5	Analytical Reasoning
GA6	Research-related Skills
GA7	Cooperation/Teamwork
GA8	Scientific Reasoning
GA9	Reflective Thinking
GA10	Information/Digital Literacy
GA11	Self-Directed Learning
GA12	Multicultural Competence
GA13	Moral and Ethical Awareness/Reasoning
GA14	Leadership Readiness
GA15	Lifelong Learning

(c) GAs – Written Measured

These GAs are directly measurable through written examinations, assignments, or structured theory evaluation.

GA	Attribute	Measure	Assessment Method
GA1	Disciplinary Knowledge	Strongly	Theory examinations, concept-based questions, structured problem solving
GA3	Critical Thinking	Strongly	Case analysis, reasoning questions
GA4	Problem Solving	Strongly	Application-oriented problems, scenario-based questions
GA5	Analytical Reasoning	Strongly	Data interpretation, logical analysis, numerical exercises
GA6	Research-related Skills	Partially	Research oriented questions, data interpretation, literature review writing
GA8	Scientific Reasoning	Partially	Evidence-based explanations, logical justification questions
GA9	Reflective Thinking	Limited	Short reflective writing responses
GA10	Information/Digital Literacy	Limited	Application of digital tools and information ethics

(d) GAs – Performance based

These require observation of behaviour, participation, skill demonstration, or real-time engagement.

GA	Attribute	Measure	Assessment Method
GA2	Communication Skills	Strongly	Presentations, seminars, viva voce, group discussions
GA7	Cooperation/Teamwork	Strongly	Group projects, peer evaluation, collaborative assignments
GA11	Self-Directed Learning	Limited	Independent assignment / Project work / Online learning task
GA12	Multicultural Competence	Partially	Group activities with diverse teams / Fieldwork / Community engagement, Participation in cultural activities,
GA13	Moral and Ethical Awareness/Reasoning	Partially	Behavioural observation methods, Reflective reports
GA14	Leadership Readiness	Limited	Team leadership in project, Event coordination
GA15	Lifelong Learning	Limited	Participation in value added courses, certification

Vision

To create a dynamic learning environment that empowers women students with knowledge and skills in commerce and digital business, fostering innovation, entrepreneurship, and ethical values through technology-driven education, industry collaboration, and socially responsible practices.

Mission

To provide a comprehensive and industry-relevant curriculum in e-commerce, digital marketing, finance, and business analytics that integrates theoretical knowledge with practical applications.

To promote innovative teaching-learning practices using modern technologies, digital platforms, and experiential learning to prepare students for the evolving global business environment.

To encouragee research, interdisciplinary learning, and industry–institute collaboration to enhance professional competence and entrepreneurial mindset among students.

To develop entrepreneurial, managerial, and digital skills that enable students to initiate start-ups and contribute effectively to the digital economy.

To cultivatee ethical values, social responsibility, and leadership qualities to empower women to contribute meaningfully to business, society, and sustainable development.

Bachelor of Commerce with e-Commerce

Programme Objectives, Outcomes and Mapping

Programme Educational Objectives (PEOs)

(Expected career and professional achievements of graduates within three to five years of completing the programme)

PEO1: Graduates will establish successful careers or entrepreneurial ventures in e-commerce and digital business by applying commerce knowledge, digital competencies, and innovative thinking in the evolving digital economy.

PEO2: Graduates will pursue higher education, professional certifications, and lifelong learning to enhance their knowledge, research orientation, and adaptability in commerce and digital business domains.

PEO3: Graduates will demonstrate ethical responsibility, professional integrity, and leadership qualities while contributing to inclusive, equitable, and socially responsible digital business practices.

PEO4: Graduates will contribute to sustainable economic and digital development by applying analytical, managerial, and problem-solving abilities to support responsible business practices and environmentally conscious commerce operations.

PEO5: Graduates will empower themselves and others, particularly in under served communities, by promoting digital entrepreneurship, innovation, and meaningful participation in the digital marketplace with dignity and social commitment.

Programme Learning Outcomes (PLOs)

(Specific abilities, knowledge, and skills that graduates are expected to demonstrate upon Graduation)

PLO1: Apply fundamental concepts of commerce, accounting, marketing, and digital business to manage and support e-commerce operations effectively.

PLO2: Communicate business ideas, digital marketing strategies, and e-commerce solutions effectively through written reports, presentations, and professional interactions.

PLO3: Analyze business data, market trends, and online consumer behavior using appropriate analytical tools to support decision-making in digital commerce.

PLO4: Evaluate operational challenges in e-commerce systems and propose feasible solutions using logical reasoning and digital business frameworks.

PLO5: Conduct basic research on digital markets, consumer patterns, and emerging e-commerce technologies using appropriate data collection and analysis methods.

PLO6: Utilize digital platforms, e-commerce tools, and information technologies for managing online business operations, marketing, and financial transactions.

PLO7: Demonstrate ethical responsibility and professional integrity while addressing legal, social, and ethical issues in digital commerce and online business practices.

PLO8: Collaborate effectively in teams to design, plan, and execute e-commerce projects and digital business initiatives.

PLO9: Reflect on personal learning experiences and professional practices to improve decision-making and adapt to evolving digital business environments.

PLO10: Demonstrate readiness for lifelong learning by engaging in continuous skill development and adapting to emerging trends in digital commerce and technology.

PLOs with Bloom's Levels, Assessment Methods, and Graduate Attribute Mapping

PLO No	Programme Learning Outcome	Bloom's Level	Assessment Methods	Mapped GAs
PLO1	Apply fundamental concepts of commerce, accounting, marketing, and digital business to manage and support e-commerce operations effectively.	K3	CIA, ESE, Practical	GA1, GA10
PLO2	Communicate business ideas, digital marketing strategies, and e-commerce solutions effectively through written reports, presentations, and professional interactions.	K3	Seminar, Viva, Project	GA2, GA7
PLO3	Analyze business data, market trends, and online consumer behavior using appropriate analytical tools to support decision-making in digital commerce.	K4	CIA, Case Study, Practical	GA3, GA5
PLO4	Evaluate operational challenges in e-commerce systems and propose feasible solutions using logical reasoning and digital business frameworks.	K5	Case Study, Project, Viva	GA4, GA8
PLO5	Conduct basic research on digital markets, consumer patterns, and emerging e-commerce technologies using appropriate data collection and analysis methods.	K4	Project, Field Work, Viva	GA6, GA5
PLO6	Utilize digital platforms, e-commerce tools, and information technologies for managing online business operations, marketing, and financial transactions.	K3	Practical, Internship, CIA	GA10, GA1
PLO7	Demonstrate ethical responsibility and professional integrity while addressing legal, social, and ethical issues in digital commerce and online business practices.	K3	Case Study, Seminar, Viva	GA13, GA12
PLO8	Collaborate effectively in teams to design, plan, and execute e-commerce projects and digital business initiatives.	K3	Project, Seminar, Internship	GA7, GA14
PLO9	Reflect on personal learning experiences and professional practices to improve decision-making and adapt to evolving digital business environments.	K5	Internship, Viva, Reflective Report	GA9, GA11
PLO10	Demonstrate readiness for lifelong learning by engaging in continuous skill development and adapting to emerging trends in digital commerce and technology.	K4	Project, Seminar, Internship	GA15, GA11

Programme Specific Outcomes (PSOs)

(Expected knowledge, skills, and competencies that graduates will acquire by the end of the programme)

PSO1: Perform e-commerce business operations by integrating accounting, finance, and digital commerce concepts for managing online transactions and financial records.

PSO2: Design and manage functional e-commerce websites and digital platforms using web technologies, programming, and database management systems.

PSO3: Analyze business and consumer data using statistical and spreadsheet tools to support decision-making in digital commerce environments.

PSO4: Develop and implement digital business applications using programming languages and software development frameworks.

PSO5: Apply marketing, retail, logistics, and customer relationship management strategies to manage digital marketplaces and enhance online customer engagement.

PSO6: Apply legal, ethical, and regulatory frameworks governing commerce and digital business operations to ensure responsible and compliant business practices.

PSO Alignment with Core Courses and Skill Competencies

PSO No	Programme Specific Outcome	Supporting Core Courses	Skill Competency
PSO1	Perform e-commerce business operations by integrating accounting, finance, and digital commerce concepts for managing online transactions and financial records.	Principles of Accounting, Financial Accounting, Business Finance, Management Accounting	Financial analysis, transaction processing, digital accounting practices
PSO2	Design and manage functional e-commerce websites and digital platforms using web technologies, programming, and database management systems.	Web Page Designing, Relational Database Management System, Programming Applications in E-Commerce, Web Designing Practical	Website development, database management, programming, system integration
PSO3	Analyze business and consumer data using statistical and spreadsheet tools to support decision-making in digital commerce environments.	Statistics for Commerce, Mathematics for Commerce, Advanced Data Analysis Techniques in Excel Practical, Cost Accounting	Data analysis, quantitative reasoning, spreadsheet analytics
PSO4	Develop and implement digital business applications using programming languages and software development frameworks.	Programming Fundamentals for E-Commerce, Java Programming, Software Development using Java Programming, Programming with Python Practical	Software development, coding, application development
PSO5	Apply marketing, retail, logistics, and customer relationship management strategies to manage digital marketplaces and enhance online customer engagement.	Principles of Marketing, Retail Management, Logistic and Supply Chain Management, Customer Relationship Management	Digital marketing strategy, supply chain coordination, customer analytics
PSO6	Apply legal, ethical, and regulatory frameworks governing commerce and digital business operations to ensure responsible and compliant business practices.	Company Law, Business Law, Banking Law and Practice, Business Management and Ethics	Legal compliance, ethical decision-making, regulatory awareness

SCHEME OF EXAMINATION – B. Com with (e-Commerce)

Sem	Part	Course Code	Course Title	Course Type	Hours / Week	Credits	Examination			
							Duration in Hours	Maximum Marks		
								CA	ESE	TOTAL
I	I	TAM2601A	Tamil Paper I	AEC	4	3	3	25	75	100
		HIN2601A	Hindi Paper I							
		FRE2601A	French Paper I							
	II	ENG2601A	English Paper I	AEC	4	3	3	25	75	100
	III	BP26C01/ CM26C01	Core I : Principles of Accounting	DSC	5	3	3	25	75	100
		EC26C02	Core II –Fundamentals of e-Commerce	DSC	6	4	3	25	75	100
		EC26CP1	Core Practical I – Advanced Data Analysis Techniques in Excel Practical	DSC	4	2	3	15[$$]	35[$$]	50
		TH26A07	Generic Elective I: Mathematics for Commerce	MDC	5	4	3	25	75	100
	IV	NME26B1	Basic Tamil II	AEC	2	2	-	100*	-	100
		NME26A1	Advanced Tamil II							
		NME26ES	Introduction to Entrepreneurship	VAC						
I - II	VI	NM26GAW	General Awareness	VAC	SS	-	-	-	-	-
I - II		COM26SER	Community Services 30 Hours		-	-	-	-	-	-
I - V		26BONL1 26BONL2 26BONL3	Online Course I Online Course II Online Course III	ACC	-	-	-	-	-	-
Semester I Total					**30**	**21**				**650**
II	I	TAM2602A	Tamil Paper II	AEC	4	3	3	25	75	100
		HIN2602A	Hindi Paper II							
		FRE2602A	French Paper II							
	II	ENG2602A	English Paper II	AEC	4	3	3	25	75	100
	III	EC26C03	Core III : Webpage Designing	DSC	6	4	3	25	75	100
		BP26C04/ CM26C04	Core IV : Financial Accounting	DSC	5	3	3	25	75	100
		EC26CP2	Core Practical II : Web Designing Practical	DSC	4	2	3	15[$$]	35[$$]	50
		TH26A16	Generic Elective II : Statistics for Commerce	MDC	5	4	3	25	75	100
	IV	NME26B2	Basic Tamil II	AEC	2[€]	Gr.		100*	-	100 [£]

		NME26A2	Advanced Tamil II							
		NM26UHR	Universal Human Values and Human Rights	**VAC**	2	2	-	100*	-	100
I - II	VI	NM26GAW	General Awareness	**VAC**	SS	Gr.	-	100*		100 £
I - II		COM26SER	Community Services 30 Hours	**VAC**	-	St.	-	-	-	-
I - V		26BONL1 26BONL2 26BONL3	Online Course I Online Course II Online Course III	**ACC**	-	-	-	-	-	-
Semester II Total					**30**	**21**				**650**
III	I	TAM2603A	Tamil Paper III	**AEC**	4	3	3	25	75	100
		HIN2603A	Hindi Paper III							
		FRE2603A	French Paper III							
	II	ENG2603A	English Paper III	**AEC**	4	3	3	25	75	100
	III	BP26C05	Core V – Fundamentals Corporate Accounting	**DSC**	5	4	3	25	75	100
		EC26C06	Core VI– Relational Database Management System	**DSC**	5	4	3	25	75	100
		EC26CP3	Core Practical III : Database Programming Practical	**DSC**	4	2	3	15$^{\$\$}$	35$^{\$\$}$	50
		EC26A01	Generic Elective III : Company Law (OR)	**MDC**	5	4	3	25	75	100
		EC26A02	Generic Elective III : Banking Theory Law and Practice (OR)							
		BP26A01	Generic Elective III : Business Management and Ethics							
	IV	NM26DRM	Disaster Risk Reduction and Management	SEC	3	3	**-**	**100***	**-**	**100**
		NM26HAW	Health and Wellness$^{€}$	VAC		1	-	**100***	-	**100**
I - V	VI	26BONL1 26BONL2 26BONL3	Online Course I Online Course II Online Course III	**ACC**	-	-	-	-	-	-
Semester III Total					**30**	**24**				**750**
IV	I	TAM2604A	Tamil Paper IV	**AEC**	4	3	3	25	75	100
		HIN2604A	Hindi Paper IV							
		FRE2604A	French Paper IV							
	II	ENG2604A	English Paper IV	**AEC**	4	3	3	25	75	100
	III	EC26C07	Core VII –Programming Fundamentals for e-Commerce	**DSC**	4	3	3	25	75	100
		BP26C08/ CM26C10	Core VIII – Business Finance	**DSC**	5	4	3	25	75	100
		EC26CP4	Core Practical IV: Programming	**DSC**	3	2	3	15$^{\$\$}$	35$^{\$\$}$	50

			Applications in e-Commerce							
		BP26A03	Generic Elective IV : Business Law (OR)	**MDC**	5	4	3	25	75	100
		EC26A03	Generic Elective IV : Business Economics (OR)							
		EC26A04	Generic Elective IV : Auditing							
	IV	EC26SECE	e-Commerce Essentials	**SEC**	3	3	-	100*	-	100
		NM26EII	Entrepreneurship and Innovation (IgniteX)	**VAC**	2	2	-	100*	-	100
		NM26EVS	Environmental Studies		SS	Gr.	-	100*	-	100 £
	V	26COACT	Co-Curricular Activities		-	1	-	100*	-	100
I - V	VI	26BONL1 26BONL2 26BONL3	Online Course I Online Course II Online Course III	**ACC**	-	-	-	-	-	-
Semester IV Total					**30**	**25**				**850**
V	III	EC26C09	Core IX - Java Programming	**DSC**	5	5	3	25	75	100
		BP26C10/ CM26C11	Core X-Management Accounting	**DSC**	5	4	3	25	75	100
		BP26C11/ CM26C12	Core XI-Direct Taxation	**DSC**	6	4	3	25	75	100
		EC26CP5	Core Practical V-Programming with Java Practical	**DSC**	4	2	3	15$^{\$\$}$	35$^{\$\$}$	50
		EC26E01	Elective I: E-Commerce Technology (OR)	**DSE**	5	5	3	25	75	100
		EC26E02	Elective I: International Trade (OR)							
		CM26E03	Elective I: Performance Management							
		EC26AC1	Advance Learner Course I: Retail Management (OR)	**ACC**	SS	5^	3	25	75	100^
		BP26AC1	Advance Learner Course I: Business Communication (OR)							
		EC26AC2	Advance Learner Course I: Brand Management							
	IV	EC26SEP1	e-Commerce Data Analytics and Visualization Practical	**SEC**	3	3	-	100*	-	100
		NM26CS1	Cyber Security I	**VAC**	2	Gr.	-	100*	-	100 £
		EC26INST	Field work/ Institutional Training (21 Days)		-	2	-	100*	-	100
	VI	EC26COM	Comprehensive Examination	**DSC**	-	Gr.	-	100*	-	100 £
I - V	VI	26BONL1 26BONL2 26BONL3	Online Course I Online Course II Online Course III	**ACC**	-	Cr. ^ /St.	-	-	-	-
Semester V Total					**30**	**25**				**650**

VI	III	EC26C12	Core XII - Python Programming	**DSC**	6	5	3	25	75	100
		BP26C13/ CM26C14	Core XIII – Cost Accounting	**DSC**	6	4	3	25	75	100
		EC26CP6	Core Practical VI- Python Programming Practical	**DSC**	4	2	3	15[$$]	35[$$]	50
		EC26PROJ	Project and Viva- voce	**DSE**	6	5	-	25	75	100
		EC26E03	Elective II Essentials of digital Finance (OR)	**DSE**	5	5	3	25	75	100
		EC26E04	Elective II: Logistics and Supply Chain Management (OR**)**							
		BP26E04	Elective II: Indirect Taxation							
	IV	EC26SEP2	Software Development using Visual Basic	**SEC**	3	3	-	100*	-	100
	III	EC26AC3	Advance Learner Course II: Digital Insurance Practices **(OR)**	**ACC**	SS	5^	3	25	75	100^
		EC26AC4	Advance Learner Course II: Digital Marketing **(OR)**							
		EC26AC5	Advance Learner Course II: Financial Markets							
Semester VI Total					**30**	**24**				**550**
I - VI	**Total**					**140 + Additional Credits**				**4100 + Marks for Additional Credit Courses**

Hours of Instructions is inclusive of lectures, seminars, presentations, case-studies, etc

Symbols and Notations

Symbols	Notations
*	Course assessed through Internal Assessment (CIA) only
Gr.	Grade awarded based on CBCS grading system
St.	Course Status (Completed/Not Completed)
^	Advanced Learner Course, Online Courses – Additional Credit Courses
@	Course assessed through End Semester Examination (ESE) only
#	Open Book Examination
$	Evaluation Pattern converted from 25:75:100 to 20:55:75 (CIA:ESE:Total) structure
$$	Evaluation Pattern converted from 25:75:100 to 15:35:50 (CIA:ESE:Total) structure
€	Hours per Week Outside Class Hours

Abbreviation	Course Type
DSC	Discipline Specific Core Courses
DSE	Discipline Specific Elective Courses
MDC	Multidisciplinary Courses
AEC	Ability Enhancement Course
SEC	Skill Enhancement Course
VAC	Value Added Courses
ACC	Additional Credits Courses

Assessment and Evaluation Framework

Continuous Internal Assessment (CIA) – 25%

Component	Activities Included
Internal Tests	Periodic written tests
Assignments / Case Studies	Written assignments Case analysis reports Article reviews Literature review tasks Data interpretation exercises Policy analysis (Arts & Humanities) Business case studies (Commerce & Management) Lab-based analytical reports (Science)
Seminars / Presentations	PowerPoint presentations Poster presentations Panel discussions Group seminars Viva voce Digital presentations using multimedia tools Peer evaluation rubrics
ICT-based Tasks	Spreadsheet analysis Accounting software / statistical software Online quizzes Simulation tools E-content creation Coding platforms (for relevant disciplines)
Projects / Field Reports	Field surveys Industry visits Internship reports Mini-projects Laboratory experiments Community-based research Data collection & statistical analysis Reflective journals

End Semester Examination (ESE) – 75%

Component	Description
Written Examination	3-hour written examination covering all CLOs
Cognitive Levels	Questions aligned with multiple Bloom's Taxonomy (K-levels)
Professional Conduct	Ethical and professional conduct during examination
Academic Compliance	Timely submission and participation as per regulations

Assessment Components Aligned with Blooms Levels

EXAMINATION SYSTEM

Semester system will be followed. A semester consists of a minimum of 90 working days excluding the days of conduct of ESE. There will be Continuous Internal Assessment (CA) to evaluate the performance of students in each course and the End Semester Examination will be held at the end of every semester. Marks for ESE and CA with reference to the maximum marks for the courses will be as follows:

Max. Marks	CA	ESE
100	25	75
75	20	55
50	15	35

Bloom's levels are followed in question papers and aligned with CLOs and CA components.

Remember - K1

Understand - K2

Apply - K3

Analyze - K4

Evaluate - K5

Create - K6

B. Continuous Internal Assessment CA

The weightage assigned to various components of the CA is as follows

Undergraduate Programmes

Theory

AEC (Language, English), DSC (Core, Elective) & MDC (GE-Allied)

CA Components	Marks	K level
CIA Test	5 Marks (Conducted for 45 marks after 50 days – 3 units)	K1 to K6 as per QP Pattern
Model Exam	7 Marks (Conducted for 75 marks after 85 days - Each Unit 15 Marks)	
Seminar	4 Marks	K6
Assignment	4 Marks	K5
ICT (Quiz)	2 Marks	K2
Attendance	3 Marks (Attendance 75% - 80% - 1 Mark, 81% - 90% - 2 Marks, 91% - 100% - 3 Marks)	
Total	**25 Marks**	

For Science allied courses with theory as 75 marks, the split-up is 20 marks as internal and 55 as external. Internal conducted for 25 and converted to 20 marks and external conducted for 75 and converted to 55 marks.

Practical

CA Components	Marks	K level
Lab Performance	7 Marks	K4
Internal Viva Voce	5 Marks	K4
Model Exam	10 Marks	K5
Attendance	3 Marks	
Total	**25 Marks**	

For practical courses with 50 marks as ESE, the split-up is 15 marks as internal and 35 as external. Internal conducted for 25 and converted to 15 marks and external conducted for 75 and converted to 35 marks.

Skill Enhancement Courses

Theory courses

CA Components	Marks	K level
Test I	30 Marks (Conducted for 45 marks and converted to 30 Marks – 3 Units)	K2 to K6 as per QP Pattern
Test II	50 Marks (Conducted for 75 marks after 85 days - Each Unit 15 Marks)	
Assignment	10 Marks	K5
Seminar	10 Marks	K6
Total	**100 Marks**	

Practical Courses

CA Components	Marks	K level
Practical exam	80 Marks (Practical Execution: 65 Marks, Record : 15 Marks)	K5
Lab Performance	10 Marks	K4
Internal Viva Voce	10 Marks	K4
Total	**100 Marks**	

Theory and Practical

CA Components	Marks	K level
Test I (Theory)	30 Marks (Conducted for 45 Marks and converted to 30 Marks)	K2 – K6
Test II (Practical)	50 Marks (Practical Execution: 40 Marks, Record : 10 Marks)	K5
Lab Performance	10 Marks	K4
Internal Viva Voce	10 Marks	K4
Total	**100 Marks**	

Theory and Project

CA Components	Marks	K level
Test I (Theory)	30 Marks (Conducted for 45 Marks and converted to 30 Marks)	K2 – K6
Project Examination	30 Marks	K5
Internal Viva Voce	40 Marks	K4
Total	**100 Marks**	

Project: Individual / Group Project

Components	Marks	K level
Continuous Internal Assessment (CA**)**	25 Marks	K3, K4, K6
End Semester Examination	75 Marks	K5, K6
Total	**100 Marks**	

Continuous Internal Assessment (CA)

CA Components	Marks	K level
I Review - Project Proposal Presentation	5 Marks	K3
II Review - Periodic Review-Progress Evaluation	10 Marks	K4
III Review - Project Report Draft Submission	10 Marks	K6
Total	**25 Marks**	

End semester examination

Components	Marks	K level
Evaluation of the Project Report	25 Marks	K6
Viva Voce	50 Marks	K5
Total	**75 Marks**	

Introduction to Entrepreneurship / Women Studies / Universal Human Values and Human Rights / Environmental Studies / Cyber Security I

CA Components	Marks	K level
ICT (Quiz)	50 Marks	K2
Assignment	25 Marks	K5
Project / Case study / Poster	25 Marks	K6
Total	**100 Marks**	

Entrepreneurship and Innovation (IgniteX)

CA Components	Marks	K level
ICT (Quiz)	50 Marks (3 Quizzes each quiz 25 marks, 75 marks converted to 50 marks)	K2
ICT (Pitch Deck Presentation)	20Marks	K6
Assignment	30 marks (30 Venture Activities)	K5
Total	**100 Marks**	

Advanced Tamil & Basic Tamil

Components	Marks	K level
CIA	25 Marks (conducted for 45 marks after 50 days)	K1 to K6 as per QP Pattern
Model	50 marks (conducted for 75 marks after 85 days)	
ICT (Quiz)	15Marks	K2
Assignment	10 Marks	K5
Total	**100 Marks**	

General Awareness / Comprehensive Examination / Co-Curricular Activities / Community Services

Course Title	Marks	K level
General Awareness	100	K3
Comprehensive Examination	100	K3
Co-Curricular Activities	100	K6
Community Services	*St.*	K6

***Field Work / Institutional Training*:**

CA Components	Marks	K level
Work diary	15 Marks	K3
Report	50 Marks	K6
Viva Voce	25 Marks	K5
Attendance	10 Marks	
Total	**100 Marks**	

Advance learner Course:

CA Components	Marks	K level
Test 1	10 Marks (conducted for 45 marks after 50 days – 3 units)	K1 to K6 as per QP Pattern
Model Exam	15 Marks (Conducted for 75 marks after 85 days (Each Unit 15 Marks)	
Total	**25 Marks**	

Postgraduate Programme

Core and Elective (Including Course with Open Book Examination)

CA Components	Marks	K Level
CIA Test	5 Marks (conducted for 45 marks after 50 days – 3 units)	K2 to K6 as per QP Pattern
Model Exam	7 Marks (Conducted for 75 marks after 85 days) (Each Unit 15 Marks)	
Seminar	4 Marks	K6
Assignment	4 Marks	K5
ICT (Quiz)	2 Marks	K2
Attendance	3 Marks (Attendance 75% - 80% - 1 Mark, 81% - 90 % - 2 Marks, 91% - 100% - 3 Marks)	
Total	**25 Marks**	

Coursera in combination with Core Course:

CA Components	Marks	K Level
Coursera	25 Marks (100 marks from Coursera converted to 25 marks)	K4
CIA Test	25 Marks (conducted for 45 marks from Coursera converted to 25 marks)	K2 to K6 as per QP Pattern
Model Exam	30 Marks (conducted for 75 marks from Coursera converted to 30 marks)	
Assignment	10 Marks	K5
Seminar	10 Marks	K6
Total	**100 Marks**	

Practical

CA Components	Marks	K Level
Lab Performance	7 Marks	K4
Internal Viva-Voce	5 Marks	K4
Model Exam	10 Marks	K5
Attendance	3 Marks	
Total	**25 Marks**	

For practical courses with 50 marks as ESE, the split-up is 15 marks as internal and 35 as external. Internal conducted for 25 and converted to 15 marks and external conducted for 75 and converted to 35 marks.

Cyber Security II

CA Components	Marks	K Level
ICT (Quiz)	50 Marks	K2
Assignment	25 Marks	K5
Project / Case Study / Poster	25 Marks	K6
Total	**100 Marks**	

Advance Learner Course

CA Components	Marks	K Level
Test 1	10 Marks (conducted for 45 marks after 50 days – 3 units)	K2 to K6 as per QP Pattern
Model Exam	15 Marks (Conducted for 75 marks after 85 days (Each Unit 15 Marks)	
Total	**25 Marks**	

f. Comprehensive Examination

Course Title	Marks	K level
Comprehensive Examination	100	K3

Project and Viva voce

Components	Marks	K level
Continuous Internal Assessment (CA**)**	25 Marks	K3, K4, K6
End Semester Examination	75 Marks	K5, K6
Total	**100 Marks**	

Continuous Internal Assessment (CA)

CA Components	Marks	K Level
I Review - Project Proposal Presentation	5 Marks	K3
II Review - Periodic Review-Progress Evaluation	10 Marks	K4
III Review - Project Report Draft Submission	10 Marks	K6
Total	**25 Marks**	

End Semester Examination

Components	Marks	K level
Evaluation of the Project Report	25 Marks	K6
Viva Voce	50 Marks	K5
Total	**75 Marks**	

h. *Summer Internship* / Field Work / Institutional Training

CA Components	Marks	K Level
Work diary	15 Marks	K3
Report	50 Marks	K6
Viva Voce	25 Marks	K5
Attendance	10 Marks	
Total	**100 Marks**	

C. Schedule for CA Tests

One test for Continuous Assessment (3 Units) will be conducted on pre-determined date i.e., commencing on the 50th day from the date of reopening. The model exam (5 units) will be conducted after completing 85th working day.

D. Question Paper Pattern and Distribution of Marks for CA – UG

UG: Language, English, Core, Elective, Allied, ALC, Basic Tamil and Advanced Tamil - (First 3 Units)

Description	Marks	Number of questions in K level					
Questions from each unit comprising of		**K1**	**K2**	**K3**	**K4**	**K5**	**K6**
One question with a weightage of 2 Marks	3 X 2 = 6	**1**	**2**				
One question with a weightage of 5 Marks (Internal Choice at the same CLO level)	3 X 5 = 15			1	1	1	
One question with a weightage of 8 Marks (Internal Choice at the same CLO level)	3 X 8 = 24			1	1		1
Total	**45 Marks**						

Skill Enhancement Courses - UG

Description	Marks	Number of questions in K level					
Questions from each unit comprising of		**K1**	**K2**	**K3**	**K4**	**K5**	**K6**
One question with a weightage of 5 Marks (Internal Choice at the same CLO level)	3 x 5 =15		1	1	1	1	1
One question with a weightage of 10 Marks (Internal Choice at the same CLO level)	3 x 10 = 30			2	1	1	1
Total	**45 Marks**						

E. Model /End Semester Examination – Question Paper Pattern and Distribution of Marks

UG: Language, English, Core, Elective, Allied, ALC, Basic Tamil & Advanced Tamil

Description	Marks	Number of questions in K level					
Questions from each unit comprising of		**K1**	**K2**	**K3**	**K4**	**K5**	**K6**
One question with a weightage of 2 Marks	5 x 2 = 10	2	3				
One question with a weightage of 5 Marks (Internal Choice at the same CLO level)	5 x 5 =25			2	2	1	
One question with a weightage of 8 Marks (Internal Choice at the same CLO level)	5 x 8 =40			2	1	1	1
Total	**75 Marks**						

ESE Practical Pattern (UG)

The End Semester Examination will be conducted for a maximum of 75 marks with a maximum 15 marks for the record and other submissions if any.

Practical Components	Marks	K level
Practical Execution	60 Marks	K5
Record	15 Marks	K2
Total	**75 Marks**	

Submission of Record note books for Practical Examinations

Submission of bonafide record note books is mandatory to appear for the practical examination. If a candidate is unable to submit the record note book on valid grounds, she may be permitted to appear for the practical examinations, provided the head of the department certifies that the candidate has performed the experiments prescribed for the course and she will be awarded zero (0) marks for record note book.

Rubrics for Assessments

Rubrics for Assessment

Standard 4-Level Performance Scale

Level	Descriptor	Score Range (Illustrative)
Level 4	Excellent	80–100% of component marks
Level 3	Good	60–79%
Level 2	Satisfactory	40–59%
Level 1	Needs Improvement	Below 40%

1. Theory

End Semester Examination (ESE)

Section	K-Level	Criteria	Level 4 (Excellent)	Level 3 (Good)	Level 2 (Satisfactory)	Level 1 (Needs Improvement)
SEC A (Theory / Knowledge)	K1–K2	Knowledge recall & understanding	Thorough understanding across all required cognitive levels	Good understanding, minor gaps	Basic understanding, limited depth	Inadequate or incorrect understanding
SEC B (Application & Analysis)	K3–K5	Problem-solving, application of concepts, analytical reasoning	Accurately applies concepts, strong logical reasoning, handles problems independently	Mostly correct application, minor errors, reasonable reasoning	Partial application, procedural errors, limited reasoning	Unable to apply concepts, incorrect, poor reasoning
SEC C (Comprehensive / Higher-Order Tasks)	K3–K6	Analytical reasoning, creation, problem-solving, innovation	Clear logical reasoning, structured solutions, innovative or optimized solutions	Reasonable logic with minor gaps, mostly correct solutions	Limited reasoning, basic attempt at solution	Poor or no reasoning, incorrect or missing solutions

Continuous Internal Assessment (CIA)

Section	K-Level	Criteria	Level 4 (Excellent)	Level 3 (Good)	Level 2 (Satisfactory)	Level 1 (Needs Improvement)
SEC A (Theory / Knowledge)	K1–K2	Knowledge recall & understanding	Thorough understanding across all required cognitive levels	Good understanding, minor gaps	Basic understanding, limited depth	Inadequate or incorrect understanding
SEC B (Application & Analysis)	K3–K5	Problem-solving, application of concepts, analytical reasoning	Accurately applies concepts, strong logical reasoning, handles problems independently	Mostly correct application, minor errors, reasonable reasoning	Partial application, procedural errors, limited reasoning	Unable to apply concepts, incorrect, poor reasoning
SEC C (Comprehensive / Higher-Order Tasks)	K3, K4, K6	Analytical reasoning, creation, problem-solving, innovation	Clear logical reasoning, structured solutions, innovative or optimized solutions	Reasonable logic with minor gaps, mostly correct solutions	Limited reasoning, basic attempt at solution	Poor or no reasoning, incorrect or missing solutions

2. Internal Components – Other Activities

Component	K-Level	Criteria	Level 4	Level 3	Level 2	Level 1
Assignment	K5	Application & Problem Solving	Strong solutions, accurate	Mostly correct	Partial	Incorrect / missing
Seminar / Presentation	K6	Creation, Communication & Analysis	Insightful, professional, confident	Good, minor gaps	Basic	Poor / incomplete
ICT Quiz	K2	Knowledge & Application	Accurate & confident	Mostly correct	Basic	Incorrect
Attendance	—	Participation & Punctuality	Full attendance, punctual	Mostly present	Occasional	Poor / frequently absent

3. Practical

Continuous Internal Assessment (CIA)

Component	Bloom's Level	Level 4 (Excellent)	Level 3 (Good)	Level 2 (Satisfactory)	Level 1 (Needs Improvement)
Model Practical (Converted to 10)	K5	Independent execution, accurate results, strong analysis, handles unexpected issues confidently	Minor errors, mostly accurate, guided problem-solving	Performs with guidance, partial understanding, limited analysis	Unable to perform, inaccurate results, no reasoning
Internal Viva	K4	Strong conceptual knowledge, clear reasoning, confident troubleshooting	Good understanding, minor gaps, can handle problems with guidance	Basic understanding, limited problem-solving	Weak knowledge, unable to respond or reason
Lab Performance	K4	Active participation, consistent improvement, skillfully applies concepts	Mostly regular participation, moderate improvement	Irregular, minimal improvement	Rarely participates, no skill growth
Attendance	—	Full attendance, punctual	Mostly present	Occasionally absent	Frequently absent

End Semester Practical Examination (ESE)

Component	Bloom's Level	Level 4 (Excellent)	Level 3 (Good)	Level 2 (Satisfactory)	Level 1 (Needs Improvement)
Practical Execution	K5	Accurate execution, proper procedure, precise results, handles unexpected issues confidently	Minor errors, mostly correct, can handle problems with help	Multiple errors, partial results, limited troubleshooting	Incorrect procedure, unable to execute, fails completely
Record Verification	K2	Complete experiments, accurate results, correct interpretation, neat & structured	Minor omissions, minor errors, mostly clear	Incomplete, errors present, basic clarity	Very incomplete, incorrect, untidy
External Viva	K4	Strong theoretical knowledge, clear understanding & application, confident reasoning	Good understanding, minor gaps, partial application	Basic knowledge, limited linkage to experiment	Weak knowledge, unable to explain or apply concepts

4. Projects

Continuous Internal Assessment (CIA)

Component	Bloom's Level	Level 4 (Excellent)	Level 3 (Good)	Level 2 (Satisfactory)	Level 1 (Needs Improvement)
Project Proposal Presentation	K3	Clear, focused problem definition; well-defined objectives; feasible plan; confident presentation	Minor gaps in clarity or planning; mostly clear	Broad or partially defined problem; basic objectives; basic presentation	Vague/unclear problem; objectives missing; poor presentation
Periodic Review / Progress Evaluation	K4	Consistent, timely progress; correct application; identifies & resolves issues independently; systematic documentation; proactive	Minor delays, minor guidance needed, mostly updated documentation; moderately proactive	Irregular progress, partial application, needs support, basic documentation	Very limited progress, incorrect application, passive, poor documentation
Project Report Draft Submission	K6	Well-structured report; accurate understanding; adequate data; logical analysis; proper referencing & presentation	Minor structural or conceptual gaps; minor data issues; reasonable analysis; minor formatting issues	Basic structure; partial understanding; limited data; basic analysis; basic formatting	Poorly organized; incorrect understanding; insufficient data; no analysis; poor presentation

End Semester Examination (ESE)

Component	Bloom's Level	Level 4 (Excellent)	Level 3 (Good)	Level 2 (Satisfactory)	Level 1 (Needs Improvement)
Final Project Report Evaluation (External)	K6	Topic relevant & meaningful; accurate application of concepts; adequate & relevant data; logical analysis; effective problem-solving; professional formatting	Mostly relevant; minor conceptual errors; minor gaps in data; mostly logical; reasonable solutions; minor formatting issues	Moderately relevant; basic application; limited data; basic analysis; basic problem-solving; basic formatting	Poor relevance; incorrect application; insufficient data; weak analysis; no solution; poor formatting
External Viva Voce	K5	Thorough understanding; strong linkage to project; logical reasoning; confident & accurate responses; professional communication	Minor gaps in understanding or reasoning; mostly correct answers; acceptable communication	Basic understanding; limited linkage; basic reasoning; limited answers; basic communication	Weak understanding; no linkage; no reasoning; unable to respond; poor communication

SYLLABUS
FIRST SEMESTER

Course Code	Course Title	Hours			Credits
		Total	Lecture	Examination	
BP26C01/ CM26C01	**Core I: Principles of Accounting**	**75**	**70**	**5**	**3**

Preamble

Introduces a strong foundation in accounting by covering principles, preparation of accounts, and application of accounting standards in various business situations.

Prerequisite

Basic knowledge of business transactions and arithmetic is essential.

Course Learning Outcomes (CLOs)

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

CLO No	Course Learning Outcome	Bloom's Level
CLO1	Define fundamental accounting concepts, conventions, and basic terminology used in financial accounting.	K1
CLO2	Explain the accounting cycle, accounting standards, and the preparation of basic financial statements.	K2
CLO3	Apply accounting procedures to record transactions, prepare journals, ledgers, trial balance, bank reconciliation statements, and depreciation calculations.	K3
CLO4	Analyze accounting records to identify and rectify errors, interpret incomplete records, and examine financial information.	K4
CLO5	Evaluate accounting treatments related to royalties, insurance claims, provisions, and contingent liabilities using appropriate accounting principles and standards.	K5
CLO6	Prepare complete financial statements and related accounting reports from different accounting situations using appropriate accounting methods.	K6
K1 - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create		

Unit-wise CLO Mapping

Unit	Coverage	Mapped CLOs
Unit I	Basic Accounting Concepts, Journal, Ledger, Trial Balance, Accounting Standards, Final Accounts	CLO1, CLO2, CLO3, CLO4,CLO5,CLO6
Unit II	Errors, Rectification, Suspense Account, Bank Reconciliation, Bills of Exchange	CLO1, CLO2, CLO3, CLO4,CLO5,CLO6

Unit III	Incomplete Records, Statement of Affairs, Conversion Method, Joint Venture	CLO1, CLO2, CLO3, CLO4,CLO5,CLO6
Unit IV	Royalty Accounts, Insurance Claims, Provisions and Contingencies	CLO1, CLO2, CLO3, CLO4,CLO5,CLO6
Unit V	Depreciation Methods and Accounting Treatment	CLO1, CLO2, CLO3, CLO4,CLO5,CLO6

Alignment of CLO with PLO

CLO \ PLO	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CLO1	3	1	1	1	1	1	1	1	1	1
CLO2	3	2	1	1	1	1	1	1	1	1
CLO3	3	1	2	1	1	2	1	1	1	1
CLO4	1	1	3	2	1	1	1	1	1	1
CLO5	1	1	1	3	1	1	2	1	1	1
CLO6	3	2	2	1	1	2	1	1	1	1

3 = High, 2 = Medium, 1 = Low, – = Not Applicable

Core I - PRINCIPLES OF ACCOUNTING (BP26C01/ CM26C01) (70 Hrs)

Unit I (14 Hrs)

Basic Accounting: Concepts and Conventions -Journal, Ledger Accounts– Subsidiary Books — Trial Balance – Disclosure of Company Accounting Policies (AS 1) - Revenue Recognition (AS 9)– Final Accounts of Sole Trading Concern- Capital and Revenue Expenditure and Receipts – Preparation of Trading, Profit and Loss Account and Balance Sheet with Adjustments.

Unit II (14 Hrs)

Rectification of Errors: Classification of Errors - Rectification of Errors – Preparation of Suspense Account. Bank Reconciliation Statement - Need and Preparation. **Average Due Date:** Meaning – Determination of due Date-Basis for Calculation of Interest- Interest on Drawings of partners.

Bills of Exchange: Definition – Specimens – Discounting of Bills – Endorsement of Bill – Collection – Noting – Renewal – Retirement of Bill under rebate (trade bills only).

Unit III **(14 Hrs)**

Single Entry System and Double Entry System: Meaning and Features - Limitations - Difference between Single Entry System and Double Entry System - Methods of Calculation of Profit - Statement of Affairs Method – Preparation of final statements by Conversion method. **Joint Venture:** Meaning - Features – Accounting for Joint Venture (AS-27).

Unit IV **(14 Hrs)**

Royalty: Meaning – Minimum Rent – Short Working – Recoupment of Short Working – Lessor and Lessee – Sublease – Accounting Treatment.Provisions - Contingent Liabilities, and Contingent Assets (AS 29). **Insurance Claims**: Calculation of Claim Amount-Average clause (Loss of Stock only).

Unit V **(14 Hrs)**

Depreciation: Meaning – Objectives – Accounting Treatments - Types - Straight Line Method – Diminishing Balance method – Conversion method – Annuity Method – Revaluation Method (AS 6).

*** Course Alignment with SDGs: 16**

*** 80 % Problems 20 % Theory**

Text Books

S. No	Authors	Title	Publishers	Year and Edition
1.	Jain S.P & Narang K.L	Principles of Accountancy	Kalyani Publishers	2024, 23rd Edn.
2.	Reddy TS & A Murthy	Financial Accounting	Margham Publications	Reprint 2021, 7th Edn.

Reference Books

S. No	Authors	Title	Publishers	Year and Edition
1.	R L Gupta & Radhasamy	Advanced Accountancy (Vol I)	Sultan Chand& Sons.	2021, 15th Edn.
2.	M C Shukla, T.S. Grewal & S.C. Gupta	Advanced Accountancy	S.Chand & sons	2021, 19th Edn.

Related Online References

https://www.coursera.org/learn/wharton-accounting

https://web.ung.edu/media/university-press/Principles-of-Financial-Accounting.pdf?t=1542408454385

Skill Components

Review and assess a company's accounting policies and identify compliance with AS 1 (Disclosure of Accounting Policies) and AS 9 (Revenue Recognition).

Identify and classify accounting errors and implement appropriate methods for their rectification.

Apply the Single-Entry System to business situations and evaluate the limitations of incomplete records.

Analyze insurance claims with special emphasis on calculating the claim amount under the average clause, and apply it to loss of stock situations.

Apply various methods of depreciation to different business scenarios and understand the financial impact of each method

Pedagogy

The course will be delivered using a combination of traditional and learner-centered teaching methods, including:

Lecture - Chalk and Talk

PowerPoint presentations

E-content and digital learning resources

Numerical problem-solving exercises

Group discussions

Assignments

Quizzes

Peer learning activities

Student seminars

Course Designers & Teaching–Learning Strategies

Course Code & Title	**CM26C01, Core I: Principles of Accounting**
Course Designers	Dr. L.Nithya, Dr.T.Ambika
Teaching–Learning Strategies	Participatory Learning : 25 %
	Experiential Learning : 16 %
	Problem-based Learning : 59 %

Course Content and Lecture Schedule

Module No	Topics	CLO Level	K Level	No. of Hours	Content Delivery Method	Learning Methods
Unit I						**14 Hrs**
1	Basic Accounting Concepts and Conventions: Meaning, Objectives, and Terminology	CLO1 CLO2 CLO3	K1 K2 K3	1	Lecture - Chalk and Talk, PowerPoint presentations	Participatory Learning
2	Accounting Conventions and Principles with Practical Illustrations	CLO3 CLO4 CLO5	K3 K4 K5	1	Lecture - Chalk and Talk, PowerPoint presentations	Participatory Learning
3	Journal: Meaning, Format, Recording of Business Transactions	CLO2 CLO3 CLO4	K2 K3 K4	1	Demonstration & Numerical problem-solving exercises	Problem Based Learning
4	Ledger Posting and Preparation of Ledger Accounts	CLO1 CLO2 CLO6	K1 K2 K6	1	Demonstration Numerical problem-solving exercises	Problem Based Learning
5	Subsidiary Books: Types, Purpose, and Preparation	CLO2 CLO5 CLO6	K2 K5 K6	2	Lecture - Chalk and Talk, PowerPoint presentations	Participatory Learning
6	Trial Balance: Objectives, Preparation, and Error Identification	CLO1 CLO2	K1 K2	1	Numerical problem-solving exercises	Problem Based Learning
7	Accounting Standards: Disclosure of Accounting Policies (AS1) and Revenue Recognition (AS9)	CLO1 CLO3 CLO4	K1 K3 K4	1	Case Discussion, Peer learning activities	Experiential Learning
8	Capital and Revenue Expenditure and Receipts with Examples	CLO1, CLO2 CLO6	K1 K2 K6	1	Lecture - Chalk and Talk, PowerPoint presentations	Participatory Learning
9	Final Accounts of Sole Trading Concern – Trading Account Preparation	CLO4 CLO5 CLO6	K4 K5 K6	2	Numerical problem-solving exercises	Problem Based Learning
10	Profit and Loss Account and Balance Sheet with Adjustments	CLO1, CLO2 CLO4	K1 K2 K4,	2	Numerical problem-solving exercises	Problem Based Learning

11	Comprehensive Problem on Final Accounts Preparation	CLO1, CLO2 CLO3 CLO6	K1 K2 K3 K6	1	Numerical problem-solving exercises	Problem Based Learning
Unit II						**14 Hrs**
12	Classification of Errors and Identification of Accounting Errors	CLO1, CLO2 CLO3	K1, K2, K3,	1	Lecture - Chalk and Talk, PowerPoint presentations	Participatory Learning
13	Rectification of Errors and Preparation of Suspense Account	CLO2 CLO3 CLO4	K2 K3 K4	2	Numerical problem-solving exercises	Problem Based Learning
14	Practical Problems on Rectification of Errors and Suspense Account	CLO3 CLO4 CLO5	K3 K4 K5	2	Numerical problem-solving exercises	Problem Based Learning
15	Bank Reconciliation Statement – Need and Preparation	CLO1, CLO2 CLO6	K1 K2 K6	1	Numerical problem-solving exercises	Problem Based Learning
16	Practical Problems on Bank Reconciliation Statement	CLO1 CLO2 CLO5 CLO6	K1 K2 K5 K6	2	Numerical problem-solving exercises	Problem Based Learning
17	Average Due Date – Determination of due date-Basis for Calculation of Interest and drawings of partners	CLO1, CLO2 CLO4	K1 K2 K4	1	Numerical problem-solving exercises	Problem Based Learning
18	Bills of Exchange – Meaning, Parties, Specimen and Accounting Entries	CLO1 CLO4 CLO5	K1 K4 K5	1	Lecture - Chalk and Talk, PowerPoint presentations	Participatory Learning
19	Bills of Exchange Transactions – Discounting, Endorsement, Collection, Noting	CLO1 CLO2 CLO6	K1 K2 K6	2	Numerical problem-solving exercises	Problem Based Learning
20	Renewal and Retirement of Bills under Rebate (Trade Bills)	CLO3 CLO4 CLO5	K3 K4 K5	1	Numerical problem-solving exercises	Problem Based Learning
21	Case-based Analysis of Bills of Exchange Transactions	CLO1 CLO6	K1 K6	1	Case Discussion	Experiential Learning
Unit III						**14 Hrs**

22	Accounting for Incomplete Records- Single Entry system – Meaning, Features, and Limitations	CLO1 CLO2 CLO3	K1 K2 K3	1	Lecture - Chalk and Talk, PowerPoint presentations	Participatory Learning
23	Difference between Incomplete records and Double Entry System	CLO2 CLO4	K2 K4	1	Lecture - Chalk and Talk, PowerPoint presentations	Participatory Learning
24	Methods of Calculation of Profit under Single Entry System	CLO3 CLO5	K3, K5,	2	Numerical problem-solving exercises	Problem Based Learning
25	Statement of Affairs Method – Preparation and Interpretation	CLO1 CLO2 CLO6	K1 K2 K6	2	Numerical problem-solving exercises	Problem Based Learning
26	Conversion Method – Preparation of Final Accounts from Conversion Method	CLO2 CLO4 CLO6	K2 K4 K6	2	Numerical problem-solving exercises	Problem Based Learning
27	Practical Problems on Conversion Method	CLO4 CLO5 CLO6	K4 K5 K6	2	Numerical problem-solving exercises	Problem Based Learning
28	Joint Venture – Meaning, Features, and Accounting Treatment (AS 27)	CLO1, CLO2 CLO4	K1 K2 K4	1	Lecture - Chalk and Talk, PowerPoint presentations	Participatory Learning
29	Joint Venture Accounting Problems and Analysis	CLO2 CLO4 CLO6	K2 K4 K6	2	Numerical problem-solving exercises	Problem Based Learning
30	Case-based Application of Joint Venture Accounting	CLO1 CLO2 CLO3	K1 K2 K3	1	Case Discussion Peer learning activities	Experiential Learning
Unit IV						**14 Hrs**
31	Royalty – Meaning, Minimum Rent, Short Working and Recoupment	CLO1 CLO2 CLO3	K1 K2 K3	2	Lecture - Chalk and Talk, PowerPoint presentations	Participatory Learning
32	Royalty Accounting – Lessor and Lessee Accounts	CLO1, CLO2 CLO3 CLO6	K1 K2 K3 K6	2	Numerical problem-solving exercises	Problem Based Learning

33	Sublease Accounting and Problem Solving	CLO2 CLO5	K2 K5	2	Numerical problem-solving exercises	Problem Based Learning
34	Provisions, Contingent Liabilities, and Contingent Assets (AS 29)	CLO1 CLO2 CLO6	K1 K2 K6	2	Case Discussion, Peer learning activities	Experiential Learning
35	Insurance Claims – Meaning and Calculation of Claim Amount	CLO1 CLO4 CLO5	K1 K4 K5	2	Numerical problem-solving exercises	Problem Based Learning
36	Insurance Claims – Loss of Stock and Average Clause Problems	CLO1 CLO3 CLO4	K1 K3 K4	2	Numerical problem-solving exercises	Problem Based Learning
37	Case Analysis on Insurance Claims and Accounting Treatment	CLO1 CLO2 CLO3	K1 K2 K3	2	Case Discussion Peer learning activities	Experiential Learning
Unit V						**14 Hrs**
38	Depreciation – Meaning, Objectives, and Accounting Standards (AS 6)	CLO1 CLO2 CLO4	K1 K2 K4	2	Lecture - Chalk and Talk, PowerPoint presentations	Participatory Learning
39	Straight Line Method – Concept and Practical Problems	CLO3 CLO4 CLO6	K3 K4 K6	2	Numerical problem-solving exercises	Problem Based Learning
40	Diminishing Balance Method – Calculation and Accounting Entries	CLO2 CLO3 CLO5	K2 K3 K5	2	Numerical problem-solving exercises	Problem Based Learning
41	Conversion Method and Annuity Method of Depreciation	CLO3 CLO4 CLO5	K3 K4 K5	2	Numerical problem-solving exercises	Problem Based Learning
42	Revaluation Method – Accounting Treatment and Analysis	CLO3 CLO4 CLO5	K3 K4 K5	2	Numerical problem-solving exercises	Problem Based Learning
43	Comparative Analysis of Depreciation Methods	CLO1 CLO4	K1 K4	2	Case Discussion Peer learning activities	Experiential Learning
44	Comprehensive Depreciation Problems and Preparation of Depreciation Accounts	CLO2 CLO3 CLO4 CLO5	K2 K3 K4 K5	2	Numerical problem-solving exercises	Problem Based Learning

Course Code	Course Title	Hours			Credits
		Total	Lecture	Examination	
EC26C02	**Core II: Fundamentals of e-Commerce**	**90**	**85**	**5**	**4**

Preamble

The course explains the basics and growth of e-commerce in the digital world. It teaches e-business models, online services, digital payments, and data management. It also covers legal, security, ethical issues, and new technologies like AI, IoT, and Industry 4.0.

Prerequisite

Higher Secondary level knowledge of basic commerce and computer fundamentals, including understanding of business activities, internet usage, and basic digital technologies.

Course Learning Outcomes (CLOs)

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

CLO No	Course Learning Outcome	Bloom's Level
CLO1	Recall the basic concepts, evolution, categories, and key components of e-commerce and e-business.	K1
CLO2	Explain e-commerce business models, e-services, and the technological framework supporting electronic commerce.	K2
CLO3	Apply electronic payment systems and digital document concepts in typical e-commerce transaction environments.	K3
CLO4	Analyze e-commerce infrastructure, network security issues, and legal frameworks influencing digital business operations.	K4
CLO5	Evaluate emerging trends, ethical issues, and regulatory challenges in the electronic commerce ecosystem.	K5
CLO6	Design basic conceptual solutions or applications integrating Industry 4.0 technologies such as AI and IoT in e-commerce contexts.	K6
K1 - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create		

Unit-wise CLO Mapping

Unit	Coverage	Mapped CLOs
Unit I	Introduction to e-Commerce – perspectives, drivers, characteristics, categories, EDI, EFT, comparison with traditional commerce, advantages, disadvantages, security issues and future trends	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
Unit II	e-Business models, e-Services, web-enabled services, auctions, e-commerce framework, media convergence, network infrastructure and I-Way network	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
Unit III	Digital documents, corporate data warehouse, electronic payment systems, types of e-payment methods and applications	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
Unit IV	Current trends such as e-waste, e-surveillance, e-governance, e-care, e-commerce laws and regulations in India, network security and firewalls	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
Unit V	Industry 4.0, Artificial Intelligence technologies, IoT concepts, architecture, applications, security and introduction to Industry 5.0	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6

Alignment of CLO with PLO

CLO/ PLO	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO 10
CLO1	3	1	1	1	1	2	1	1	1	1
CLO2	3	2	1	1	1	2	1	1	1	1
CLO3	3	1	2	1	1	3	1	1	1	1
CLO4	2	1	3	3	1	2	2	1	1	1
CLO5	2	1	2	3	2	1	3	1	1	1
CLO6	2	2	2	3	1	3	1	2	1	2

3 = High, 2 = Medium, 1 = Low, – = Not Applicable

FUNDAMENTALS OF e-COMMERCE (EC26C02) (85 Hours)

Unit I **(17hrs)**

Introduction to e-Commerce

Definition – Perspectives – History of e-Commerce –e-Commerce drivers – Nature & Scope of e-Commerce – Characteristics - Categories of e-Commerce - Electronic data interchange - Electronic funds transfer – 6 P's in e-Commerce – Comparison between traditional and electronic commerce – advantages and disadvantages of e-commerce- Security Issues in e-Commerce - futures in e-Commerce.

Unit II **(17hrs)**

Introduction to e-business

Business models in e-Commerce: B2C – B2B – relationship between B2B e-Commerce with other perspectives - Introduction to e-Services: Categories of e-Services –Web enabled services – Match making services – Information selling on the web – e-Entertainment– Auctions & other specialized services.

e-Commerce Technology

Introduction –Electronic Commerce Framework – Electronic Commerce and Media Convergence. The Network Infrastructure for Electronic Commerce: Components of the I-Way-Working models of I-way network infrastructure- Network Access Equipment-Global Information Distribution Networks.

Unit III **(17 hrs)**

Digital Document

Meaning- Definition- Types of Digital Document. Corporate data Warehouse - Types of data warehouse. Electronic payment system – Introduction – features of e- payment system – Types of e-payment system: e-token – e-cash – e-money - e-cheque – Credit cards – Debit cards – Smart cards. Pros and Cons of EPS- Application of Electronic payment system including online cashless transaction- Designing e-Payment system.

Unit IV **(17 hrs)**

Current Trends in electronic world

e-Waste – e-Surveillance – e-Governance - e-Care. e- Commerce Laws and Regulations in India - Guidelines for consumer protection. Network Security and Firewalls: Client server network security- threats- Firewalls and Data security- Encrypted documents and electronic mail- Technology behind the web.

Unit V **(17 hrs)**

Industry 4.0, IoT and Emerging Trends

Industry 4.0 – Introduction – Definition – Goals, Impact and Design Principles – Technologies of Artificial Intelligence in Industry 4.0 – Reasons for adopting AI – Skills required for Industry 4.0 – Internet of Things: Concepts – Architecture – Technologies – Developing IoT Applications – Security in IoT – Introduction to Industry 5.0 – Quick Commerce: Concept – Features – Role of Industry 4.0 Technologies – Impact and Challenges.

*** Course Alignment with SDGs: 9**

Text Books

S.No.	Authors	Title	Publisher	Year & Edition
1	Dr. U.S. Pandey Er. Saurabh Shukla	e-Commerce and Mobile Commerce Technologies	S. Chand	2015 & 2nd Edn., Reprint
2	P. Kaliraj, T. Devi	Higher Education for Industry 4.0 and Transformation to Education 5.0	Bharathiar University	2020 & 1st Edn.

Reference Books

S.No.	Authors	Title	Publisher	Year & Edition
1	Ravi Ka lakota and Andrew B. Whinston	Frontiers of Electronic Commerce	Pearson Publication Ltd	2013 & 1st Edn.
2	Kenneth C. Laudon, Carol Guercio Traver	E-Commerce 2020-2021 Business.Technology. Society	Pearson Publication Ltd	2021 & 16th Edn.

Related Online References

Introduction to Industry 4.0 and Industrial Internet of Things - By Prof. Sudip Misra, IIT Kharagpur
A Complete Guide to Industry 4.0- Available on Udemy

Skill Components

Understand the key ideas, categories, and evolution of e-commerce and how it shapes today's digital business world.

Learn to use different electronic payment systems and understand how online transactions are carried out securely.

Identify common online threats and learn basic methods to protect information and follow legal rules in e-commerce.

Develop skills to manage digital documents and understand how data is stored and used in business decision-making.

Discover how Industry 4.0 technologies like AI and IoT are transforming business, and understand their basic uses and benefits.

Pedagogy

The course will be delivered using a combination of traditional and learner-centered teaching methods, including:
Lecture - Chalk and Talk
Power Point presentations
E-content and digital learning resources
Group discussions
Assignments
Quizzes
Peer learning activities
Student seminars

Course Designers & Teaching–Learning Strategies

Course Code & Title	**EC26C02, Core II: Fundamentals of e-Commerce**
Course Designers	Ms. B. Pavithra, Ms. S. Janani
Teaching–Learning Strategies	Participatory Learning : 60 %
	Experiential Learning : 20 %
	Problem-based Learning : 20 %

Course Content and Presentation Schedule

UNIT I						**(17 Hrs)**
Module No.	**Topic**	**CLO Level**	**K Level**	**No. of Hrs**	**Content Delivery Methods**	**Learning Methods**
1	Definition – Perspectives	CLO1, CLO2, CLO 3	K1, K2, K3	2	Lecture, PPT	Participatory Learning
2	History of e-Commerce – e-Commerce drivers	CLO1, CLO2	K1, K2	2	Lecture, PPT	Experiential Learning
3	Nature & Scope of e-Commerce – Characteristics	CLO1, CLO2	K1, K2	2	Lecture, PPT	Experiential Learning,
4	Categories of e-Commerce	CLO1, CLO2	K1, K2	2	Chalk and Talk, PPT	Participatory Learning
5	Electronic data interchange - Electronic funds transfer	CLO1, CLO2	K1, K2	2	Flipped Class, PPT	Participatory Learning

6	6 P's in e-Commerce – Comparison between traditional and electronic commerce	CLO1, CLO2, CLO4	K1, K2, K4	2	Chalk and Talk, PPT	Participatory Learning
7	Advantages and disadvantages of e-commerce	CLO3, CLO4, CLO 5, CLO 6	K3, K4, K5, K6	2	Link,Video	Experiential Learning, Blended Learning
8	Security Issues in e-Commerce - Futures in e-Commerce.	CLO1, CLO2	K1, K2	3	Lecture, PPT	Participatory Learning
UNIT II						**(17 Hrs)**
10	Introduction to e-business –business models in e-Commerce: B2C – B2B	CLO1, CLO2	K1, K2	2	Chalk and Talk, PPT	Participatory Learning
11	Relationship between B2B e-Commerce with other perspectives	CLO1, CLO2, CLO 3	K1, K2, K3	2	Flipped Class, PPT	Participatory Learning
12	Introduction to e-Services: Categories of e-Services	CLO1, CLO2	K1, K2	2	Chalk and Talk, PPT	Participatory Learning
13	Web enabled services – Match making services	CLO1, CLO2	K1, K2	1	Chalk and Talk, PPT	Participatory Learning
14	Information selling on the web- e-Entertainment –Auctions & other specialized services.	CLO1, CLO2	K1, K2	2	Link, Demo	Participatory Learning, Blended Learning
15	E-Commerce Technology: Introduction –Electronic Commerce Framework	CLO1, CLO2	K1, K2	2	Lecture, PPT	Problem Based Learning
16	Introduction to e Commerce Technology-Electronic Commerce and Media Convergence. The Network Infrastructure for Electronic Commerce	CLO1, CLO2, CLO 4	K1, K2, K4	2	Link	Experiential Learning, Blended Learning
17	Components of the I-Way-Working models of	CLO3, CLO4, CLO	K3, K4, K5,	2	Lecture, PPT	Participatory Learning

	I-way network infrastructure	5, CLO 6	K6			
18	Network Access Equipment-Global Information Distribution Networks.	CLO1, CLO2	K1, K2	2	Chalk and Talk, Video	Experiential Learning, Participatory Learning
UNIT III						**(17 Hrs)**
19	Digital Document: Meaning- Definition	CLO2, CLO3	K2, K3	3	Chalk and Talk	Participatory Learning
20	Types of Digital Document. Corporate data Warehouse - Types of data warehouse.	CLO2, CLO3	K2, K3	4	Lecture, PPT	Participatory Learning,
21	Electronic payment system – Introduction – features of e-payment system	CLO2, CLO3	K2, K3	2	Lecture, PPT	Participatory Learning
22	Types of e-payment system: e-token – e-cash – e-money - e-cheque	CLO4, CLO5	K4, K5	3	Link, PPT	Participatory Learning, Blended Learning
23	Credit cards – Debit cards – Smart cards- Pros and Cons of EPS	CLO2, CLO3	K2, K3	3	Link, PPT	Experimental Learning, Blended Learning
24	Application of Electronic payment system including online cashless transaction- Designing e-Payment system.	CLO5, CLO6	K5, K6	2	Lecture, PPT	Problem Based Learning
UNIT IV						**(17 Hrs)**
25	Current Trends in electronic world: e-Waste – e-Surveillance – e-Governance - e-Care.	CLO2, CLO3	K2, K3	3	Lecture, PPT	Participatory Learning
26	e-Commerce Laws and Regulations in India Guidelines for consumer protection.	CLO2, CLO3	K2, K3	3	Chalk and Talk	Participatory Learning

27	Network Security and Firewalls	CLO2, CLO3	K2, K3	2	Chalk and Talk	Participatory Learning
28	Client server network security- threats	CLO4, CLO5	K4, K5	2	Chalk and Talk, Video	Experiential Learning, Participatory Learning
29	Firewalls and Data security	CLO4, CLO6	K4, K6	2	Link, Video	Participatory Learning, Blended Learning
30	Encrypted documents and electronic mail	CLO3, CLO4	K3, K4	3	Lecture, PPT	Participatory Learning
31	Technology behind the web.	CLO5, CLO6	K5, K6	2	Link, Video	Experiential Learning, Blended Learning
UNIT V						**(17 Hrs)**
32	Introduction to Industry 4.0 – Definition	CLO2, CLO3	K2, K3	2	Chalk and Talk	Participatory Learning
33	Goals, Impact and Design Principles	CLO3, CLO4	K3, K4	3	Lecture, PPT	Participatory Learning
34	Technologies of AI in Industry 4.0 – Reasons for Adopting AI in Industry 4.0	CLO3, CLO4	K3, K4	3	Chalk and Talk	Participatory Learning
35	Skills required for adopting Industry 4.0	CLO3, CLO4	K3, K4	2	Link, Video	Participatory Learning, Blended Learning
36	IOT: Concepts - Architecture	CLO4, CLO5	K4, K5	2	Chalk and Talk	Participatory Learning
37	Technologies - Developing IOT Application-- Security in IOT- Introduction to 5.0.	CLO4, CLO6	K4, K6	3	Link, Video	Participatory Learning, Blended Learning
38	Quick Commerce: Concept – Features – Role of Industry 4.0 Technologies – Impact and Challenges.	CLO4, CLO5	K4, K5	2	Chalk and Talk, Video	Experiential Learning, Participatory Learning

Course Code	Course Title	Hours			Credits
		Total	Practical	Examination	
EC26CP1	**Core Practical I: Advanced data analysis Techniques in excel practical**	60	57	3	2

Preamble

The course explains the basics, growth, and scope of e-commerce in the digital business world. It teaches e-business models, online services, digital documents, payment systems, and data management. It also covers legal, security, and ethical issues, along with new technologies like AI, IoT, and Industry 4.0.

Prerequisite

Higher Secondary level knowledge of basic commerce and computer fundamentals, including understanding of business activities, internet usage, and basic digital technologies.

Course Learning Outcomes (CLOs)

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

CLO No	Course Learning Outcome	Bloom's Level
CLO1	List the essential spreadsheet operations for data entry, formatting, and sheet management.	K1
CLO2	Explain the appropriate application of various spreadsheet tools, charts, and functions for representing different types of business data.	K2
CLO3	Apply spreadsheet functions to perform calculations related to finance, such as interest, GST, discounts, and profit, using given data sets.	K3
CLO4	Analyze business data using statistical tools (mean, median, correlation) and pivot tables to identify trends, patterns, and classifications.	K4
CLO5	Evaluate business scenarios by selecting and justifying the appropriate spreadsheet model for forecasting, inventory management, and data interpretation.	K5
CLO6	Create interactive dashboards and reports for business problems by integrating data from multiple sources, using formulas, and applying conditional formatting.	K6
K1 - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create		

Exercise -wise CLO Mapping

Alignment of CLO with PLO

Program	Coverage	Mapped CLOs
Program 1	Data entry, Formatting (bold, alignment), Sheet management (rename, insert, move, delete, hide/unhide), Column width adjustment.	CLO1
Program 2	Creating and interpreting various charts (Column, Line, Pie, Bar, Area, Scatter) for sample data.	CLO2
Program 3	Creating a tracker and calculating Simple and Compound Interest.	CLO1, CLO2 CLO3
Program 4	Calculating total, average, and assigning grades based on student marks.	CLO1, CLO2 CLO3, CLO4
Program 5	Sorting data by name, age, department, and using the RAND function for randomization.	CLO1, CLO2 CLO3
Program 6	Calculating GST, total price, and discount for electronic items.	CLO1, CLO2 CLO3
Program 7	Calculating revenue, cost, and profit for a supermarket.	CLO1, CLO2 CLO3
Program 8	Sales forecasting using Moving Average and Growth Rate methods.	CLO1, CLO2 CLO3, CLO4, CLO5
Program 9	Creating Pivot Tables for total, state-wise, and product-wise sales analysis.	CLO1, CLO2 CLO3, CLO4, CLO5, CLO6
Program 10	ABC classification for inventory management based on total value.	CLO1, CLO2 CLO3, CLO4, CLO5
Program 11	Calculating mean, median, min, max, and standard deviation for race timings.	CLO1, CLO2 CLO3, CLO4
Program 12	Calculating mean, median, mode, variance, and standard deviation for monthly sales data.	CLO1, CLO2 CLO3, CLO4
Program13	Calculating the correlation coefficient between advertising expense and sales revenue.	CLO1, CLO2 CLO3, CLO4
Program 14	Calculating canteen occupancy percentage and applying color-coded alerts (Conditional Formatting).	CLO1, CLO2 CLO3, CLO4, CLO5, CLO6
Program 15	Calculating monthly electricity bills using different slabs and late payment charges.	CLO1, CLO2 CLO3, CLO4, CLO5

CLO/ PLO	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO 10
CLO1	1	1	1	1	1	3	1	1	1	1
CLO2	1	3	1	1	1	2	1	1	1	1
CLO3	3	1	1	1	1	3	1	2	1	2
CLO4	1	1	3	2	2	2	1	1	2	1
CLO5	2	1	1	3	2	1	2	1	2	1
CLO6	1	3	1	1	1	3	1	3	1	1

3 = High, 2 = Medium, 1 = Low, – = Not Applicable

Advanced data analysis Techniques in excel practical (EC26CP1) (57 Hrs)

Enter the data with following fields:

Serial no

Name

Address

City

Date of Joining

Salary

Course

Duration

No of students

Total fees

Perform the following:

Change font as bold

Arrange the alignment as center

Rename the sheet

Insert a new sheet

Move a sheet

Delete a sheet

Hide/Unhide Column

Change Column Width

Draw different graphs Column Chart, Line Chart, Pie Chart, Bar Chart, Area Chart, Scatter Chart, for a sample data.

Create a children's savings tracker for 5 children with 6 months data and calculate simple and compound interest at 2%.

Enter 5 students' quiz marks for 4 subjects and calculate total, average, and assign grades (A, B, C, F).

Create a list of 10 employees with age and sort by name, age, department, and randomize using RAND function.

Calculate GST amount, total price, and discount for 10 electronic items.

Calculate weekly supermarket revenue, cost (40%), and profit.

Calculate sales forecast for next 3 months using moving average method and 10% growth rate method.

Calculate total sales, state-wise sales, and product-wise sales using pivot table.

Classify 8 books into A, B, C categories based on total value for inventory management.

Calculate mean, median, min, max, standard deviation for 8 students' race timings.

Calculate mean, median, mode, variance, and standard deviation for monthly sales data of 12 months.

Calculate correlation coefficient between advertising expense and sales revenue for 10 products.

Calculate canteen occupancy % for 7 time slots and show color-coded alerts.

Calculate monthly electricity bill with different slabs and late payment charges.

*** Course Alignment with SDGs: 4**

Skill Component

Clean, organize, and manage datasets efficiently using advanced Excel tools.

Apply complex formulas and functions for accurate data analysis tasks.

Create interactive charts and dashboards to visualize data insights clearly.

Analyze data effectively using Pivot Tables and advanced analytical tools.

Automate repetitive tasks using macros and basic VBA programming concepts.

Pedagogy

The course will be delivered using a combination of traditional and learner-centered teaching methods, including:
Hands on practice
Lecture and Demo

Course Designers & Teaching–Learning Strategies

Course Code & Title	**EC26CP1, Core Practical I: Advanced data analysis Techniques in excel practical**
Course Designers	Ms. T. Subamathi , Ms. S. Janani

Teaching–Learning Strategies	Participatory Learning : 50 %
	Experiential Learning : 50 %

Course content and presentation schedule

Module No.	Topic	CLO Level	K Level	No. of Hrs	Content Delivery Methods	Learning Methods
1	Enter the data with following fields	CLO 1	K1	3	Presentation	Participatory Learning, Experimental Learning
2	Draw different graphs Column Chart, Line Chart, Pie Chart, Bar Chart, Area Chart, Scatter Chart, for a sample data.	CLO 1	K1	3	Presentation	Participatory Learning, Experimental Learning
3	Create children's savings tracker with interest for six months data	CLO 1	K1	3	Presentation	Participatory Learning, Experimental Learning
4	Calculate students quiz marks with totals averages and grade assignment	CLO 2	K2	4	Presentation	Participatory Learning, Experimental Learning
5	Create employee list with sorting by name age department randomization	CLO 2	K2	4	Presentation	Participatory Learning, Experimental Learning
6	Calculate GST discount total price for ten electronic items list	CLO 2	K2	4	Presentation	Participatory Learning, Experimental Learning
7	Calculate weekly supermarket revenue cost percentage and profit analysis report	CLO 3	K3	4	Presentation	Participatory Learning, Experimental Learning
8	Calculate sales forecast using moving average and growth rate methods	CLO 3	K3	4	Presentation	Participatory Learning, Experimental Learning
9	Create pivot table to analyze total state and product sales	CLO 4	K4	4	Presentation	Participatory Learning, Experimental Learning
10	Create book inventory classification into categories based on total value	CLO 4	K4	4	Presentation	Participatory Learning, Experimental Learning

11	Calculate statistical measures for students race timings including standard deviation	CLO 5	K5	4	Presentation	Participatory Learning, Experimental Learning
12	Calculate monthly sales data mean median mode variance and deviation	CLO 5	K5	4	Presentation	Participatory Learning, Experimental Learning
13	Calculate correlation coefficient between advertising expenses and sales revenue data	CLO 5	K5	4	Presentation	Participatory Learning, Experimental Learning
14	Calculate canteen occupancy percentage for time slots with color alerts	CLO 6	K6	4	Presentation	Participatory Learning, Experimental Learning
15	Calculate electricity bill using slabs including late payment charges	CLO 6	K6	4	Presentation	Participatory Learning, Experimental Learning

Course Code	Course Title	Hours			Credit
		Total	Lecture	Examination	
TH26A07	**Generic Elective: Mathematics for Commerce**	**75**	**70**	**5**	**4**

Preamble

Provides foundational mathematical tools and techniques essential for commerce students.

Builds an interest calculation, differentiation, integration, and optimization methods such as linear programming and assignment problems.

Develops an analytical, problem-solving, and decision-making skills applicable in business, finance, and economics.

Emphasizes both theoretical understanding and practical applications to real-world commercial scenarios.

Prerequisite

Basic knowledge of algebra, arithmetic, and functions.

Understanding of high school-level mathematics including sequences, simple equations, and basic graphs.

Course Learning Outcomes (CLOs)

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

CLO No	Course Learning Outcome	Bloom's Level
CLO1	Recall definitions, formulas, and basic concepts related to simple and compound interest, annuities, differentiation, integration, and linear programming.	K1
CLO2	Explain the principles and properties of limits, continuity, differentiation, integration, and optimization techniques in commerce applications.	K2
CLO3	Apply mathematical methods such as differentiation, integration, and linear programming to solve practical problems in commerce like marginal cost, revenue, and assignment problems.	K3
CLO4	Analyze commercial scenarios using mathematical models to determine maxima, minima, and optimal resource allocation through linear programming and assignment problems.	K4
CLO5	Evaluate alternative solutions in optimization problems, compare methods, and justify decisions in commercial contexts using mathematical reasoning.	K5
CLO6	Formulate and design mathematical models to solve real-world commerce problems, integrating concepts from interest calculations, calculus, and linear programming.	K6

Unit–CLO Mapping

Unit	Coverage	Mapped CLOs
Unit I	Simple Interest, Compound Interest, Annuities	CLO1, CLO2, CLO3
Unit II	Differentiation: Limits, Continuity, Derivatives, Marginal cost/revenue, Maxima & Minima, Elasticity	CLO1, CLO2, CLO3, CLO4
Unit III	Integration: Standard results, Substitution, Parts, Partial fractions, Definite integrals, Applications to Cost/Revenue	CLO1, CLO2, CLO3, CLO4, CLO6
Unit IV	Linear Programming: Formulation, Graphical & Simplex methods, Transportation problem	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
Unit V	Assignment Problem: Formulation, Algorithms, Maximization, Unbalanced Models	CLO2, CLO3, CLO4, CLO5, CLO6

Alignment of CLO with PLO

CLO / PLO	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9
CLO1	2	1	1	1	1	1	1	1	1
CLO2	2	2	1	1	1	1	1	1	1
CLO3	1	1	3	1	1	2	1	1	1
CLO4	1	1	3	2	1	1	1	1	1
CLO5	1	1	1	3	1	1	1	1	1
CLO6	1	1	2	3	2	1	1	1	1

3 = High, 2 = Medium, 1 = Low, – = Not Applicable

Generic Elective: Mathematics for Commerce-(TH26A07)- 70 Hrs

Unit I **13 Hrs**

Simple Interest- Compound Interest- Annuities.

Unit II **14 Hrs**

Differentiation: Introduction – Limits – Limits of a function – properties of limits – Standard limit theorems – Continuity – Properties of Continuous functions – Differentiation - Derivatives of x^n- Derivatives of e^x – Derivatives of log e^x – product rule – quotient rule – Applications of Derivatives – Marginal cost – Marginal revenue –Elasticity – Relation between marginal revenue and elasticity of demand -. Maxima and minima – Point of inflection (Excluding Trigonometric functions).

Unit III **15 Hrs**

Integration: Arbitrary constant – Two general rules – Some standard results – Integration by Substitution – I – Integration by substitution - II - Integration by Partial fractions - Integration by parts – Definite integral – properties of definite integrals (problems only) – An Application of integration – Marginal cost – Total cost and average cost – Marginal revenue, Total revenue and Average revenue (Excluding Trigonometric functions).

Unit IV **15 Hrs**

Linear Programming: Meaning and Formulation of LPP - Graphical Method - Simplex Method - Transportation problem: Mathematical formulation of the problem - Initial Basic feasible solution (Matrix Minima Method - North – West Corner rule and VAM)- Simple problems only.

Unit V **13 Hrs**

Assignment Problem: Introduction- Mathematical formulation of assignment problem-

Assignment algorithm- unbalanced Assignment model- maximization case in assignment problems-Simple problems only.

Text Books

<table>
<tr><th>S. No</th><th>Author</th><th>Title of the book</th><th>Publishers</th><th>Year of Publication</th></tr>
<tr><td>1.</td><td>P.R. Vittal</td><td>Business Mathematics and Statistics</td><td>Margham Publications</td><td>2002</td></tr>
<tr><td></td><td colspan="4">UNIT I: Chapter -8,9 &10
UNIT -II: Chapter -15 (P.No.-236-258, 304-328) (Excluding Trigonometric functions)
UNIT -III: Chapter -16 (P.No.-337-354, 363-396) (Excluding Trigonometric functions)</td></tr>
<tr><td rowspan="2">2.</td><td>V. Sunderesan, K.S. GanapathySubramaniam , K. Ganesan</td><td>Operations research</td><td>A.R. Publications, 3rd Edition</td><td>2005</td></tr>
<tr><td colspan="4">UNIT IV: Chapter 2 Section: 2.1 -2.8, Chapter - 3 : Section: 3.1.1 -3.1.4 ,
Chapter 5 - Section :5.1
UNIT V: Chapter 6 section 6.1-6.7</td></tr>
</table>

Mooc learning

https://nptel.ac.in/courses/111/107/111107128/

(4 Lectures by Prof.Kusum Deep, Department of Mathematics, Indian Institution of Technology Roorkee)

Lecture 03 Graphical method Lecture 05 Simplex method Lecture 28 Transportation Problem Lecture 29 Assignment Problem

Pedagogy

The course will be delivered using a combination of traditional and learner-centered teaching methods, including:

Lecture - Chalk and Talk

PowerPoint presentations

E-content and digital learning resources

Numerical problem-solving exercises

Group discussions

Assignments

Quizzes

Peer learning activities

Student seminars

Module No.	Topic	CLO Level	K Level	No. of Hours	Content delivery methods	Learning Methods
Unit I						**(13 Hrs)**
1	Simple Interest	CLO1, CLO2, CLO3, CLO4	K1, K2, K3, K4	5	Lecture – Chalk and Talk / Problem Solving	Participatory Learning
2	Compound Interest	CLO1, CLO2, CLO3, CLO4, CLO5	K1, K2, K3, K4, K5	6	Discussion/ Chalk and Talk / Problem Solving	Participatory Learning
3	Annuities	CLO1, CLO2, CLO3, CLO4, CLO6	K1, K2, K3, K4, K6	3	Discussion/ Chalk and Talk / Problem Solving	Participatory Learning
Unit II						**(14 Hrs)**
4	Differentiation: Introduction	CLO1	K1	1	Discussions	Participatory Learning
5	Limits of a function – properties of limits - Standard limit theorems	CLO1, CLO2	K1, K2	1	Chalk and Talk / Problem solving	Participatory Learning
6	Continuity - Properties of Continuous functions	CLO1, CLO2	K1, K2	1	Chalk and Talk / Problem solving	Participatory Learning

7	Differentiation- Derivatives of x^n	CLO1, CLO2, CLO3, CLO4	K1, K2, K3, K4	1	Chalk and Talk / Problem solving / Quiz	Experiential Learning
8	Derivatives of e^x	CLO1, CLO2, CLO3, CLO4	K1, K2, K3, K4	1	Chalk and Talk / Problem solving / Quiz	Problem-based Learning
9	Derivatives of log e^x	CLO1, CLO2, CLO3, CLO4	K1, K2, K3, K4	1	Chalk and Talk / Problem solving / Quiz	Problem-based Learning
10	Product rule – quotient rule	CLO1, CLO2, CLO3, CLO4, CLO5	K1, K2, K3, K4, K5	1	Chalk and Talk / Problem solving / PPT	Experiential Learning
11	Function of a function rule	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6	K1, K2, K3, K4, K5, K6	1	Chalk and Talk / Problem solving	Problem-based Learning
12	Differentiation of Implicit function	CLO1, CLO2, CLO3, CLO4	K1, K2, K3, K4	1	Chalk and Talk / Problem solving	Experiential Learning
13	Relation between dy/dx and dx/dy	CLO1, CLO2, CLO3, CLO4	K1, K2, K3, K4	1	Chalk and Talk / Problem solving / PPT	Participatory Learning
14	Successive Differentiation	CLO1, CLO2, CLO3, CLO4	K1, K2, K3, K4	1	Chalk and Talk / Problem solving / PPT	Problem-based Learning

15	Applications of Derivatives - Marginal cost – Marginal revenue – Elasticity	CLO2, CLO3, CLO4	K2, K3, K4	1	Chalk and Talk / PPT/ Problem solving / Video lectures	Participatory Learning
16	Relation between marginal revenue and elasticity of demand	CLO2, CLO3, CLO4	K2, K3, K4	1	Chalk and Talk / Problem solving	Problem-based Learning
17	Maxima and minima	CLO2, CLO3, CLO4, CLO5, CLO6	K2, K3, K4, K5, K6	1	Chalk and Talk / Problem solving / Quiz	Experiential Learning
18	Point of inflexion	CLO2, CLO3, CLO4, CLO5	K2, K3, K4, K5	1	Chalk and Talk / PPT/ Problem solving / Video lectures	Problem-based Learning
Unit III						**(15 Hrs)**
19	Integration : Arbitrary constant	CLO1	K1	1	Discussions	Participatory Learning
20	Two general rules – Some standard results	CLO1, CLO2	K1, K2	1	Chalk and Talk / Discussions	Participatory Learning
21	Integration by Substitution – I	CLO1, CLO2, CLO3	K1, K2, K3	1	Chalk and Talk / Problem solving	Experiential Learning
22	Integration by substitution - II	CLO1, CLO2, CLO3, CLO4	K1, K2, K3, K4	1	Chalk and Talk / Problem solving	Problem-based Learning

23	Integration by substitution – III	CLO1, CLO2, CLO3, CLO4	K1, K2, K3, K4	1	Chalk and Talk / Problem solving	Problem-based Learning
24	Standard results	CLO1, CLO2, CLO3	K1, K2, K3,	1	Chalk and Talk / Problem solving / Quiz	Experiential Learning
25	Integration of rational function of the type	CLO1, CLO2, CLO3,	K1, K2, K3,	1	Chalk and Talk / Problem solving	Participatory Learning
26	Integration by Partial fractions	CLO1, CLO2, CLO3, CLO4, CLO5	K1, K2, K3, K4, K5	1	Chalk and Talk / Problem solving / Quiz	Problem-based Learning
27	Integration by parts	CLO1, CLO2, CLO3, CLO4, CLO5	K1, K2, K3, K4, K5	1	Chalk and Talk / Problem solving / Quiz	Experiential Learning
28	Definite integral	CLO1, CLO2	K1, K2	1	Discussions	Participatory Learning
29	Properties of definite integrals	CLO1, CLO2, CLO3	K1, K2, K3	1	Chalk and Talk / Problem solving	Problem-based Learning
30	An Application of integration	CLO2, CLO3, CLO4, CLO5, CLO6	K2, K3, K4, K5, K6	1	Chalk and Talk / Problem solving, Video lectures	Problem-based Learning
31	Marginal cost	CLO2, CLO3, CLO4	K2, K3, K4	1	Chalk and Talk / Problem solving / PPT	Experiential Learning
32	Total cost and average cost	CLO2, CLO3, CLO4	K2, K3, K4	1	Chalk and Talk / Problem solving / PPT	Participatory Learning

33	Marginal revenue, Total revenue and Average revenue	CLO2, CLO3, CLO4, CLO5	K2, K3, K4, K5	1	Chalk and Talk / Problem solving / PPT / Quiz	Problem-based Learning
Unit IV						**(15 Hrs)**
34	Linear Programming: Meaning and Formulation of LPP	CLO1, CLO2, CLO3, CLO4	K1, K2, K3, K4	3	Chalk and Talk / PPT	Participatory Learning
35	Graphical Method	CLO1, CLO2, CLO3	K1, K2, K3	3	Chalk and Talk / Problem solving / PPT	Participatory Learning
36	Canonical Form	CLO1, CLO2, CLO3	K1, K2, K3,	1	Chalk and Talk / Problem solving / PPT	Experiential Learning
37	Simplex Method - Algorithm	CLO1, CLO2, CLO3, CLO5, CLO6	K1, K2, K3, K5, K6	3	Chalk and Talk / Problem solving / PPT	Participatory Learning
38	Transportation problem: Mathematical formulation of the problem	CLO1, CLO2	K1, K2	2	Chalk and Talk / Problem solving / PPT	Participatory Learning
39	Initial Basic feasible solution	CLO1, CLO2, CLO3, CLO4	K1, K2, K3, K4	3	Chalk and Talk / Problem solving / PPT	Participatory Learning
Unit V						**(13 Hrs)**
40	Assignment Problem: Introduction	CLO1, CLO2	K1, K2	1	Chalk and Talk / Problem solving / PPT	Participatory Learning

41	Mathematical formulation of assignment problem	CLO2, CLO3	K2, K3	1	Chalk and Talk / Problem solving / PPT	Participatory Learning
42	Assignment algorithm, Problems	CLO1, CLO2	K1, K2	3	Chalk and Talk / Problem solving / PPT	Participatory Learning
43	unbalanced Assignment model	CLO2, CLO3, CLO4, CLO5	K2, K3, K4, K5	2	Chalk and Talk / Problem solving / PPT	Experiential Learning
44	maximization case in assignment problems	CLO2, CLO3, CLO4	K2, K3, K4	3	Chalk and Talk / Problem solving / PPT	Experiential Learning
45	Travelling Salesman Problem	CLO1, CLO2, CLO4, CLO5, CLO6	K1, K2, K4, K5, K6	4	Chalk and Talk / Problem solving / PPT	Problem-based Learning

Course Designers & Teaching–Learning Strategies

Course Code & Title	**TH26A07, & Generic Elective: Mathematics for Commerce**
Course Designers	Mrs. K. Sharmilaa & Mrs. M. Mohanapriya
Teaching–Learning Strategies	Participatory Learning: **25 %**
	Experiential Learning: **25 %**
	Problem-based Learning: **50 %**

Course Code	Course Title	Hours			Credits
		Total	Lecture	Examination	
NME26ES	**Introduction to Entrepreneurship**	**30**	**30**	**-**	**2**

Preamble

To introduce the basic concepts and importance of entrepreneurship in economic and social development.

To familiarize students with entrepreneurial traits, types of entrepreneurs, and the process of starting small enterprises.

To provide awareness about entrepreneurship development programmes, institutional support, and financial assistance available for entrepreneurs.

Prerequisite

Basic awareness of business activities, economic environment, and interest in entrepreneurial initiatives.

Course Learning Outcomes (CLOs)

CLO No	Course Learning Outcome	Bloom's Level
CLO1	Define the fundamental concepts, characteristics, and types of entrepreneurship and entrepreneurs.	**K1**
CLO2	Explain the role of entrepreneurship development programmes, institutional support systems, and government incentives for entrepreneurs.	**K2**
CLO3	Apply creative thinking and innovation techniques to identify entrepreneurial opportunities and solve business problems.	**K3**
CLO4	Analyze the significance of intellectual property rights and institutional support in promoting entrepreneurial ventures.	**K4**
CLO5	Evaluate different project ideas and assess their feasibility using basic project appraisal concepts.	**K5**
CLO6	Develop a basic project report for a small entrepreneurial venture based on identified opportunities.	**K6**
K1 - Remember; **K2** - Understand; **K3 -** Apply; **K4 -** Analyze; **K5 -** Evaluate; **K6** - Create		

Unit –CLO Mapping

Unit	Coverage	Mapped CLOs

Unit I	Introduction to Entrepreneurship, factors, barriers, entrepreneurial traits and types, steps for starting small industries, MSMEs, social entrepreneurship	**CLO1, CLO2**
Unit II	Entrepreneurship Development Programmes, institutional framework (IFCI, ICICI, IDBI, IRBI, EXIM Bank, NSIC, SIDBI, SFC, SIPCOT, TIIC), incentives and subsidies	**CLO1, CLO2, CLO3, CLO4**
Unit III	Innovation, types of innovation, creative problem solving, incubators, angel investors, venture capital	**CLO1, CLO2 CLO3, CLO4**
Unit IV	Intellectual Property Rights – copyright, patents, trademarks, design and registration procedures	**CLO1, CLO2, CLO3, CLO4**
Unit V	Project identification and classification, project formulation, project appraisal, project report presentation	**CLO1, CLO2, CLO3, CLO4, CLO5, CLO6**

Alignment of CLO with PLO

CLO / PLO	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CLO1	3	1	1	1	1	1	1	1	1	1
CLO2	2	1	1	1	3	1	1	1	1	1
CLO3	1	1	1	3	1	2	1	1	1	1
CLO4	1	1	2	3	1	1	1	1	1	1
CLO5	1	1	2	3	1	1	1	1	1	1
CLO6	1	2	1	2	3	1	1	1	1	1

3 = High, 2 = Medium, 1 = Low, – = Not Applicable

INTRODUCTION TO ENTREPRENEURSHIP - NME23ES (30 HRS)

Unit I **(6 hrs)**

Entrepreneurship – Introduction – Factors – Barriers - Entrepreneurial Traits and Types - Steps for starting a Small Industry- MSMEs – Social entrepreneurship.

Unit II **(6 hrs)**

Entrepreneurship Development Programmes - Institutional Framework (IFCI, ICICI, IDBI, IRBI, EXIM Bank, NSIC, SIDBI, SFC, SIPCOT AND TIIC) - Role of Incentives and

Subsidies

Unit III **(6 hrs)**

Innovation - Types – Role - Creative Problem Solving - Incubators - Angel Investors - Venture Capital.

Unit IV **(6 hrs)**

Intellectual Property- Meaning- Copy Right Registration- Patents- Trademark- Design and Procedure for registration.

Unit V **(6 hrs)**

Project Preparation

Project identification and Classification - Project Formulation- Project Appraisal- Project Report Presentation.

Text Books

Sl. No.	Author(s)	Title of the Book	Publisher	Year of Publication& Edition
1.	Gupta. C.B and Srinivasan.N. P	Entrepreneurial Development	Sultan Chand and Sons	2020
2	Sauhari Vinnie and Bhushan Sudhashu	Innovation Management	Oxford	2014

Reference Books

Sl. No.	Author(s)	Title of the Book	Publisher	Year of Publication & Edition
1.	KolbBonitaM	Entrepreneurship for the creative and cultural industries	Routedge	2015
2.	P.T.Vijayashree & M.Alagammai	Entrepreneurship and Small Business Management	Margham	2020