BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

JP College of Arts and Science (Autonomous) Ayikudi,Tenkasi B.Com (CA) Syllabus Academic Year 2026 -2027 onwards

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PROGRAMME OBJECTIVE

The B.Com. Computer Application Degree Programme provides ample exposure to courses from the fields of Commerce, Accountancy and Management. The course equips the students for entry level jobs in industry, promotes the growth of their professional career, entrepreneurship and a key contributor to the economic development of the country.

Vision

"To be a center of excellence in commerce and computer applications by nurturing competent, ethical, and innovative professionals equipped to meet the challenges of the digital business world."

Mission

1. To provide quality education in commerce integrated with modern computer application skills.
2. To develop analytical, technical, and managerial competencies required for business and industry.
3. To promote ethical values, professionalism, and lifelong learning among students.
4. To encourage innovation, entrepreneurship, and the effective use of technology in commerce.
5. To prepare graduates for successful careers, higher education, and leadership roles in a rapidly evolving digital economy.

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Programme Outcomes (POs)	**PO1: Disciplinary knowledge:** Capable of demonstrating comprehensive knowledge and understanding of one or more Disciplines that form a part of an Undergraduate Programme of Study **PO2: Communication Skills:** Ability to express thoughts and ideas effectively in writing and orally; Communicative with others using appropriate media: confidently share one's views and express herself / himself; demonstrate the ability to listen carefully, read and write analytically and present complex information in a clear and concise manner to different groups. **PO3: Critical Thinking:** Capability to apply analytic thought to the body of knowledge; analyse and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development. **PO4: Problem Solving:** Capacity to extrapolate from what one has learnt and apply their competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's learning to real life situations. **PO5: Analytical Reasoning:** Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyse and synthesize data from the variety of sources; draw valid conclusion and support them with evidence and examples and addressing opposing viewpoints. **PO6**: Research- related skill: A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating, Ability to recognise cause and effect relationships, define problems, formulate hypothesis, analyses and interpret and draw conclusions from data, establish hypothesis, predict cause and effect relationships, execute and report the results of an experiment or investigation. **PO7: Co-operation/Team work**: Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group, and act together as a group or a team in the interests of a common cause and work efficiently as a member of the team. **PO8**: Scientific reasoning: Ability to analyse, interpret and draw conclusions from quantitative or qualitative data: and critically evaluate ideas, evidence and experiences from an open minded and reasoned perspective. **PO9:** Reflective thinking: Critical sensibility to lived experiences, with self awareness and reflexivity of both self and society. **PO10:** Information/Digital Literacy: Capability to use ICT in variety of learning situations, demonstrate ability to access, evaluate and use a variety of relevant information sources, and use appropriate software for analysis of data. **PO11:** Self- directed learning: ability to work independently, identify appropriate resources required for a project and manage a project through to completion. **PO12:** Multicultural competence: Posse's knowledge of values and belief of multiple cultures and global perspective: and capability to effectively engage in a multicultural society and interact respectfully with diverse groups. **PO13: Moral and Ethical awareness /reasoning**: Ability to embrace moral/ethical values in conducting one's life, formulate a position/argument about an ethical issue from multiple perspectives and use ethical practices in all work. Capable of demonstrating the ability to identify ethical issue's related to one's work, avoid

	unethical behaviour such as fabrication, falsification or misrepresentation of data or committing plagiarist, not adhering to intellectual property rights; appreciating environmental and sustainability issues; and adopting objective, unbiased and truthful actions in all aspects of work. **PO14:** Leadership readiness/qualities: Capability for mapping out the task of the team or an organisation, and setting direction, formulating and inspiring vision, building a team who can help achieve the vision, motivating and inspiring team members to engage with that vision and using management skill to guide people to the right destination in a smooth and efficient way **PO15: Life Long Learning**: Ability to acquire knowledge and skills, including “learning how to learn”, that are necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives and adapting to changing trades and demands of workplace through knowledge/skill development/reskilling.
Programme Specific Outcomes:	**PSO1 – Placement:** To prepare the students who will demonstrate respectful engagement with others’ ideas, behavior’s, beliefs and apply diverse frames of reference to decisions and action. Further the students are encouraged with add-on value based and job-oriented courses which ensure them to sustain in the organization level. **PSO2 – Contribution to Business World:** Apply theoretical concepts to business practices to produce employable, ethical, and innovative professionals to sustain in the dynamic business world. **PSO3 – Contribution to the Society:** To contribute to the development of the society by collaborating with stakeholders for mutual benefit. Become acquainted with commercial knowledge and soft skill to react in the most appropriate way when faced with challenges in the society.

S. No	Type	Name	Total Credit	Total Hour
1	Part I	Tamil / Malayalam / Hindi	12	24
2	Part II	English	12	24
3	Part III	Core Subject	89	104
4	Part IV	SEC, EVS, VBE, NME	30	28
5	Part V	Extension Activity	1	-
Total			**144**	**180**

JP COLLEGE OF ARTS AND SCIENCE
(AUTONOMOUS)
Run by DMI Sisters - Ayikudy, Tenkasi - 627852
Affiliated to Manonmaniam Sundaranar University - Tirunelveli

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Curriculum

Semester–1									
Course Code	**Part**	**Course Category**	**Course Name**	**Hours/ Week**	**Examination**				**Credits**
					Duration in Hours.	**Max Marks**			
						CIA	**ESE**	**Total**	
26U1TL11	I	Language- I	Tamil–I	5	3	50	50	100	3
26U1HD11	I		Hindi –I						
26U1MY11	I		Malayalam–I						
26U1FR11	I		French – I						
26U1EN11	II	Language- II	English–I	5	3	50	50	100	3
26UCCV11	III	Core-I	Financial Accounting - I	6	3	50	50	100	4
26UCCV12	III	Core-II	Principles of Management	5	3	50	50	100	4
26UECV11	III	EC - I	Computer Fundamentals and Applications	3	3	50	50	100	3
26UECV12			Indian Economic Development						
26UECV13			Business Economics						
26USCV11	IV	SEC - I	Digital Banking	2	3	50	50	100	2
26USCVP1	IV		Office Automation		3	50	50		
26UFCV11	IV	FC – I	Fundamentals of Business Studies	2	3	50	50	100	2
26UNCV11	IV	NME - I	Everyday Banking	2	3	50	50	100	2
Total				**30**				**800**	**23**

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Semester–2									
Course Code	**Part**	**Course Category**	**Course Name**	**Hours/ Week**	**Examination**				**Credits**
					Duration in Hours	**Max Marks**			
						CIA	**ESE**	**Total**	
26U1TL121	I	Language-I	Tamil–II	5	3	50	50	100	3
26U1HD21	I		Hindi –II						
26U1MY21	I		Malayalam–II						
26U1FR21	I		French – II						
26U1EN21	II	Language-II	English–II	5	3	50	50	100	3
26UCCV21	III	Core-III	Financial Accounting - II	6	3	50	50	100	4
26UCCV22	III	Core-IV	Business Law	5	3	50	50	100	4
26UECV21	III	EC – II	Digital Marketing and Online Promotion	3	3	50	50	100	3
26UECV22			Programming with C++						
26UECV23			Information and Cyber Laws						
26USCV21	IV	SEC - II	New Venture Planning and Development	2	3	50	50	100	2
26USCV22	IV	SEC - III	Internet Concepts and Applications	2	3	50	50	100	2
26USCV23			Market and Investment Management						
26UNCV21	IV	NME - II	Business Accounting	2	3	50	50	100	2
Total				**30**				**800**	**23**

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Semester–3									
Course Code	Part	Course Category	Course Name	Hours / Week	Examination				Credits
					Duration in Hours	Max Marks			
						CIA	ESE	Total	
26U1TL131	I	Language-I	Tamil–III	5	3	50	50	100	3
26U1HD31	I		Hindi –III						
26U1MY31	I		Malayalam–III						
26U1FR31	I		French – III						
26U1EN31	II	Language-II	English–III	5	3	50	50	100	3
26UCCV31	III	Core-V	Corporate Accounting - I	6	5	50	50	100	4
26UCCV32	III	Core-VI	Company Law	5	3	50	50	100	4
26UECV31	III	EC – III	E-Commerce	3	3	50	50	100	3
26UECV32			Visual Basic						
26UECV33			Business Communication						
26USCV31	IV	SEC - IV	Computerized Accounting System	2	3	50	50	100	2
26USCV32			Clearing and Forwarding in Export and Import						
26USCV33	IV	SEC – V	Computing Skills	2	3	50	50	100	2
26UEVS31	IV	Common	Environmental Studies	2	3	50	50	100	2
Total				**30**				**800**	**23**

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Semester–4									
Course Code	Part	Course category	Course Name	Hours/ Week	Examination				Credits
					Duration in Hours	Max Marks			
						CIA	ESE	Total	
26U1TL41	I	Language – I	Tamil–IV	5	3	50	50	100	3
26U1HD41			Hindi –IV						
26U1MY41			Malayalam–IV						
26U1FR41			French – IV						
26U2EN41	II	Language – II	English–IV	5	3	50	50	100	3
26UCCV41	III	Core– VII	Corporate Accounting – II	6	3	50	50	100	4
26UCCV42	III	Core –VIII	Business Mathematics & Statistics	5	3	50	50	100	4
26UECV41	III	EC - IV	JAVA Programming	3	3	50	50	100	3
26UECV42			Computer Networks						
26UECV43			Operating systems						
26USCV41	III	SEC –VI	Fundamentals of Fin tech	2	3	50	50	100	2
26USCV42			Filling of GST Returns		3	50	50	100	
26USCV43	III	SEC –VII	Employability Skills	2	3	50	50	100	2
26UVBE41	V	Common	Value Based Education	2	3	50	50	100	2
Total				**30**				**800**	**23**

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<table>
<tr><th colspan="11">Semester-5</th></tr>
<tr><th rowspan="3">Course Code</th><th rowspan="3">Part</th><th rowspan="3">Course Category</th><th rowspan="3">Course Name</th><th rowspan="3">Hours / Week</th><th colspan="4">Examination</th><th rowspan="3">Credits</th></tr>
<tr><th rowspan="2">Duration in hrs.</th><th colspan="3">Max Marks</th></tr>
<tr><th>CIA</th><th>ESE</th><th>Total</th></tr>
<tr><td>26UCCV51</td><td>III</td><td>Core IX</td><td>Cost Accounting</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UCCV52</td><td>III</td><td>Core X</td><td>Banking Law and Practice</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UCCV53</td><td>III</td><td>Core XI</td><td>Income Tax Law and Practice I</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UCCVP4</td><td>III</td><td>Core XII</td><td>Mini Project with Viva-Voce</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UECV51</td><td rowspan="2">III</td><td rowspan="2">EC - V</td><td>Object Oriented Programming in C++</td><td rowspan="2">4</td><td rowspan="2">3</td><td rowspan="2">50</td><td rowspan="2">50</td><td rowspan="2">100</td><td rowspan="2">3</td></tr>
<tr><td>26UECV52</td><td>Introduction to Oracle and SQ File</td></tr>
<tr><td>26UECV53</td><td rowspan="2">IV</td><td rowspan="2">EC - VI</td><td>Research Methodology</td><td rowspan="2">4</td><td rowspan="2">3</td><td rowspan="2">50</td><td rowspan="2">50</td><td rowspan="2">100</td><td rowspan="2">3</td></tr>
<tr><td>26UECV54</td><td>Management Information Systems</td></tr>
<tr><td>26UAEC51</td><td>IV</td><td>AEC - I</td><td>Empowered Vocational English</td><td>2</td><td>3</td><td>50</td><td>50</td><td>100</td><td>2</td></tr>
<tr><td>26UFIK51</td><td>IV</td><td>Internship</td><td>Internship/Industrial visit/Field visit/ Knowledge Upgradation Activity</td><td>-</td><td>-</td><td>-</td><td>-</td><td>100</td><td>2</td></tr>
<tr><td colspan="4">Total</td><td>30</td><td></td><td></td><td></td><td>800</td><td>26</td></tr>
</table>

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Semester-6									
Course Code	**Part**	**Course Category**	**Course Name**	**Hours/ Week**	**Examination**				**Credits**
					Duration in hrs.	**Max Marks**			
						CIA	**ESE**	**Total**	
26UCCV61	III	Core XIII	Cost accounting	5	3	50	50	100	4
26UCCV62	III	Core XIV	Management Accounting	5	3	50	50	100	4
26UCCV63	III	Core XV	Income tax law and practice	5	3	50	50	100	4
26UCCVP4	IV	Core XVI	Major Project with Viva-Voce	5	-	50	50	100	5
26UECV61	III	EC -VII	PHP Programming	4	3	50	50	100	3
26UECV62			Web Design						
26UECV63	III	EC - VIII	Cryptography and network security	4	3	50	50	100	3
26UECV64			Introduction to ERP						
26UAEC61	IV	AEC -II	Design Thinking	2	3	50	50	100	2
26U5EV61	V	Common	Extension Activity	-	-	-	100	100	1
Total				**30**				**800**	**26**

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Semester - I

<table>
<tr><th colspan="10">Semester–1</th></tr>
<tr><th rowspan="3">Course Code</th><th rowspan="3">Part</th><th rowspan="3">Course Category</th><th rowspan="3">Course Name</th><th rowspan="3">Hours/ Week</th><th colspan="4">Examination</th><th rowspan="3">Credits</th></tr>
<tr><th rowspan="2">Duration in Hours.</th><th colspan="3">Max Marks</th></tr>
<tr><th>CIA</th><th>ESE</th><th>Total</th></tr>
<tr><td>26U1TL11</td><td>I</td><td rowspan="4">Language- I</td><td>Tamil–I</td><td rowspan="4">5</td><td rowspan="4">3</td><td rowspan="4">50</td><td rowspan="4">50</td><td rowspan="4">100</td><td rowspan="4">3</td></tr>
<tr><td>26U1HD11</td><td>I</td><td>Hindi –I</td></tr>
<tr><td>26U1MY11</td><td>I</td><td>Malayalam–I</td></tr>
<tr><td>26U1FR11</td><td>I</td><td>French – I</td></tr>
<tr><td>26U1EN11</td><td>II</td><td>Language- II</td><td>English–I</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>3</td></tr>
<tr><td>26UCCV11</td><td>III</td><td>Core-I</td><td>Financial Accounting - I</td><td>6</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UCCV12</td><td>III</td><td>Core-II</td><td>Principles of Management</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UECV11</td><td rowspan="3">III</td><td rowspan="3">EC - I</td><td>Computer Fundamentals and Applications</td><td rowspan="3">3</td><td rowspan="3">3</td><td rowspan="3">50</td><td rowspan="3">50</td><td rowspan="3">100</td><td rowspan="3">3</td></tr>
<tr><td>26UECV12</td><td>Indian Economic Development</td></tr>
<tr><td>26UECV13</td><td>Business Economics</td></tr>
<tr><td>26USCV11</td><td>IV</td><td rowspan="2">SEC - I</td><td>Digital Banking</td><td rowspan="2">2</td><td>3</td><td>50</td><td>50</td><td rowspan="2">100</td><td rowspan="2">2</td></tr>
<tr><td>26USCVP1</td><td>IV</td><td>Office Automation</td><td>3</td><td>50</td><td>50</td></tr>
<tr><td>26UFCV11</td><td>IV</td><td>FC – I</td><td>Fundamentals of Business Studies</td><td>2</td><td>3</td><td>50</td><td>50</td><td>100</td><td>2</td></tr>
<tr><td>26UNCV11</td><td>IV</td><td>NME - I</td><td>Everyday Banking</td><td>2</td><td>3</td><td>50</td><td>50</td><td>100</td><td>2</td></tr>
<tr><td colspan="4">Total</td><td>30</td><td></td><td></td><td></td><td>800</td><td>23</td></tr>
</table>

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FIRST YEAR – SEMESTER – I

CORE COURSE– I: FINANCIAL ACCOUNTING-I

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV11	6	0	0	I	4	6	50	50	100

Learning Objectives	
LO1	To Provide fundamental knowledge of accounting principles, concepts, and standards.
LO2	To Develop the ability to record, classify, and summarize business transactions.
LO3	To Enable the preparation of the final accounts of a sole proprietorship with adjustments.
LO4	To Equip students with knowledge of depreciation methods and bills of exchange.
LO5	To Introduce special accounting areas and prepare accounts from incomplete records.

Prerequisites:

Unit	Contents	No. of Hours
I	**Fundamentals of Financial Accounting** Meaning, Objectives and Scope of Accounting; Accounting Principles and Concepts; Basic Accounting Standards (Introduction); Journal, Ledger, Subsidiary Books; Trial Balance; Errors and Rectification; Bank Reconciliation Statement.	18
II	**Final Accounts** Final Accounts of Sole Proprietorship; Capital and Revenue Items; Preparation of Trading, Profit and Loss Account and Balance Sheet with Adjustments; Introduction to Revised Financial Statement Formats.	18
III	**Depreciation and Bills of Exchange** Depreciation – Meaning, Objectives and Methods (Straight Line, Written Down Value, Units of Production); Introduction to Accounting Standards on Depreciation; Bills. of Exchange – Meaning, Features and Accounting Treatment (Discounting, Endorsement, Renewal, Retirement).	18
IV	**Accounting from Incomplete Records** Incomplete Records – Meaning, Features and Limitations; Statement of Affairs Method; Conversion Method; Preparation of Final Accounts from Incomplete Records.	18
V	**Special Accounting Areas** Royalty Accounts – Minimum Rent, Short Workings and Recoupment; Insurance Claims – Loss of Stock (Average Clause); Introduction to Computerized Accounting Concepts.	18
	TOTAL	**90**

THEORY 20% & PROBLEM 80%

Course Outcomes

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CO1	Explain accounting concepts, principles, and standards.
CO2	Record and classify business transactions using journal, ledger, and subsidiary books.
CO3	Prepare final accounts of sole proprietorship with necessary adjustments.
CO4	Apply depreciation methods and account for bills of exchange.
CO5	Prepare accounts from incomplete records and solve special accounting problems.
Textbooks	
➢	T.S. Reddy & A. Murthy – Financial Accounting, Margham Publications, Chennai.
➢	S.P. Jain & K.L. Narang, *Financial Accounting – I*, Kalyani Publishers, New Delhi.
➢	S.N. Maheshwari, *Financial Accounting*, Vikas Publishing House, New Delhi.
Reference Books	
1.	R.K. Sharma & Shashi K. Gupta, *Financial Accounting*, Kalyani Publishers.
2.	M.C. Shukla, T.S. Grewal & S.C. Gupta, *Advanced Accounts*, S. Chand & Company Ltd.
3.	Charles T. Horngren, Gary L. Sundem& John A. Elliott, *Introduction to Financial Accounting*, Pearson Education.

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	0	2
CO2	3	3	2	1	2
CO3	3	2	3	1	2
CO4	3	3	3	2	2
CO5	3	3	3	2	3
Weightage of the course contributed to each PSO	**15**	**13**	**12**	**6**	**11**

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CORE COURSE– II: PRINCIPLES OF MANAGEMENT

<table>
<tr><th rowspan="2">Subject Code</th><th rowspan="2">L</th><th rowspan="2">T</th><th rowspan="2">P</th><th rowspan="2">S</th><th rowspan="2">Credits</th><th rowspan="2">Inst. Hours</th><th colspan="3">Marks</th></tr>
<tr><th>CIA</th><th>External</th><th>Total</th></tr>
<tr><td>26UCCV12</td><td>5</td><td>0</td><td>0</td><td>I</td><td>4</td><td>5</td><td>50</td><td>50</td><td>100</td></tr>
<tr><td colspan="10">Learning Objectives</td></tr>
<tr><td>LO1</td><td colspan="9">To Provide fundamental knowledge of management concepts, theories, and functions.</td></tr>
<tr><td>LO2</td><td colspan="9">To Develop understanding of planning and decision-making techniques.</td></tr>
<tr><td>LO3</td><td colspan="9">To Familiarize students with organizational structure and authority relationships.</td></tr>
<tr><td>LO4</td><td colspan="9">To Explain staffing functions, including recruitment, training, and performance appraisal.</td></tr>
<tr><td>LO5</td><td colspan="9">To Develop skills in directing, leadership, communication, coordination, and control.</td></tr>
<tr><td colspan="10">Prerequisites:</td></tr>
</table>

<table>
<tr><th>Unit</th><th>Contents</th><th>No. of Hours</th></tr>
<tr><td>I</td><td>Introduction to Management:
Meaning – Definitions – Nature and Scope –Levels of Management – Importance - Management: Science or Art –Evolution of Management Thoughts – F. W. Taylor, Henry Fayol, Peter F.Drucker, Elton Mayo – Functions of Management – Trends and Challenges of Management. Managers – Qualification– Duties & Responsibilities.</td><td>15</td></tr>
<tr><td>II</td><td>Planning and Decision Making
Planning – Meaning, Definitions, Nature, Scope and Functions – Importance and Elements of Planning – Types of Plans – Planning Process – Tools and Techniques of Planning – Management by Objectives (MBO) – Decision Making: Meaning, Characteristics and Types – Steps in Decision Making – Forecasting.</td><td>15</td></tr>
<tr><td>III</td><td>Organizing
Organizing – Meaning, Definitions, Nature and Scope – Characteristics and Importance – Types of Organization – Formal and Informal Organization – Organization Chart – Organization Structure: Meaning and Types – Departmentalization – Authority and Responsibility – Centralization and Decentralization – Span of Management.</td><td>15</td></tr>
<tr><td>IV</td><td>Staffing
Concept of Staffing – Staffing Process – Recruitment: Sources and Modern Methods – Selection Procedure: Tests and Interview – Training: Need and Types – Employee Motivation – Promotion – Performance Appraisal: Meaning and Methods – 360-Degree Performance Appraisal – Management Games – Work from Home (WFH) – Managing Remote Workforce.</td><td>15</td></tr>
</table>

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V	**Directing, Coordination, and Control** **Directing** – Meaning and Importance - **Motivation**: Meaning and Theories - **Communication**: Types and Barriers – Measures to Overcome Communication Barriers - **Leadership:** Nature, Types, Theories and Styles – Qualities of a Good Leader – Supervision - **Coordination**: Meaning and Techniques - **Control**: Characteristics, Importance and Process – Requisites of Effective Control – Controlling Techniques – Management by Exception (MBE).	**15**
TOTAL		**75**
Course Outcomes		
CO1	Demonstrate the importance of principles of management.	
CO2	Paraphrase the importance of planning and decision-making in an organization.	
CO3	Comprehend the concept of various authorities and responsibilities of an organization	
CO4	Enumerate the various methods of Performance appraisal	
CO5	Demonstrate the notion of directing, coordination, and control in management.	
Textbooks		
➢	Gupta. C.B, - Principles of Management - L.M. Prasad, S. Chand & Sons Co. Ltd, New Delhi	
➢	P.C. Tripathi & P.N Reddy, Principles of Management. Tata McGraw, Hill, Noida.	
➢	L.M. Prasad, Principles of Management, S. Chand & Sons Co. Ltd, New Delhi.	
Reference Books		
1.	R.K. Sharma, Shashi K. Gupta, Rahul Sharma, Business Management, Kalyani Publications, New Delhi.	
2.	K. Sundhar, Principles of Management, Vijay Nichole Imprints Limited, Chennai.	

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	2	2
CO2	3	3	1	2	2
CO3	3	3	1	3	2
CO4	3	2	1	2	2
CO5	3	2	1	2	2
Weightage of the course contributed to each PSO	**15**	**12**	**5**	**11**	**10**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

ELECTIVE COURSE – I: COMPUTER FUNDAMENTALS AND APPLICATIONS

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECV11	3	0	0	I	3	3	50	50	100

Learning Objectives

LO1	Understand the basic concepts and fundamentals of computers.
LO2	Gain awareness of modern devices and computer units.
LO3	Learn how interconnected networks form global communication systems.
LO4	Understand system software and its applications.
LO5	Acquire knowledge about Internet usage and services.

Prerequisites:

Unit	Contents	No. of Hours
I	**Introduction to Computers** Evolution and generations of computers - Types and characteristics of computers - Basic components: Control Unit, ALU, Memory - Input and output functions - CPU features: speed, word length, memory addressing	9
II	**Input and Output Devices** Input devices: Keyboard, Mouse, Scanner, OCR, OMR, MICR, Barcode Reader, Touch Screen - Output devices: Monitor (types, resolution), Printers (Dot Matrix, Inkjet, Laser), Plotters - Multimedia devices: speakers, digital camera - Display standards: VGA, SVGA, XGA	9
III	**Memory and Storage** Types of memory: RAM, ROM, PROM, EPROM - Primary vs Secondary storage - Storage devices: Hard disk, SSD (basic idea), CD/DVD, Pen drive, Memory card - Overview of legacy devices (floppy, magnetic tape)	9
IV	**Software Concepts** Need and types of software - System software and application software - Operating system and utility programs - Basics of algorithms and flowcharts - Introduction to programming languages, compiler, interpreter - Computer applications in business	9
V	**Internet Fundamentals** Basics of Internet and networking - Internet requirements (hardware, software, ISP) - Search engines and web portals - E-commerce basics - Email: composing, sending, replying, managing.	9
	TOTAL	**45**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

Course Outcomes	
CO1	Describe types and features of computers
CO2	Explain input and output devices
CO3	Differentiate memory and storage types
CO4	Understand software and system functions
CO5	Use Internet and email effectively
Textbooks	
➢	Gupta and Jain, Computer Fundamentals, Sahitya Bahvan Publication, New Delhi.
➢	K.P.Singha, Computer Fundamentals, Taxmann, New Delhi.
➢	R.S.N. Pillai and Bhagavathi. S, Commercial Correspondence, Chand Publications, New Delhi.
Reference Books	
1.	T.C. Bartee – *Digital Computer Fundamentals*
2.	Anita Goel – *Computer Fundamentals*
3.	Ramesh Bangia – *Computer Fundamentals and Information Technology*

CO/PSO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	3	2	1	-	2
CO2	3	3	2	1	3
CO3	3	2	3	2	3
CO4	2	3	3	2	3
CO5	2	3	2	3	3
Weightage of the course contributed to each PSO	**13**	**13**	**11**	**8**	**14**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
ELECTIVE COURSE – I: INDIAN ECONOMIC DEVELOPMENT

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECV12	3	0	0	I	3	3	50	50	100

Learning Objectives

LO1	To introduce basic concepts of economic growth and development.
LO2	To provide awareness of development indicators and population issues.
LO3	To develop understanding of national income concepts.
LO4	To explain basic public finance concepts.
LO5	To familiarize students with money, inflation, and policy basics.

Prerequisites:

Unit	Contents	No. of Hours
I	**Economic Growth and Development** Meaning of Economic Growth and Development – Differences between Growth and Development – Basic Indicators of Development: Per Capita Income, Human Development Index (HDI) – Factors Affecting Economic Development – Introduction to Sustainable Development Goals (SDGs).	9
II	**Population and Development** Developed and Developing Countries – Population and Economic Development – Demographic Transition Theory (Basic) – Human Resource Development – Role of Education and Health.	9
III	**National Income** Meaning and Importance of National Income – Basic Concepts – Simple Methods of Measurement (Overview only) – National Income at Current and Constant Prices – Sectoral Contribution (Primary, Secondary, Tertiary) – National Income and Welfare.	9
IV	**Public Finance** Meaning and Importance of Public Finance – Public Revenue: Direct and Indirect Taxes – Public Expenditure – Budget: Meaning and Importance – Basic Idea of Deficits – Public Debt (Concept only).	9
V	**Money and Inflation** Meaning and Functions of Money – Types of Money (Narrow and Broad – Basic) – Inflation: Meaning, Causes and Effects – Deflation (Concept) – Role of Government in Controlling Inflation.	9
	TOTAL	**45**

Course Outcomes

CO1	Explain basic concepts of economic development.

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Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

CO2	Describe the population and development relationship.
CO3	Understand national income concepts.
CO4	Explain public finance basics.
CO5	Understand money and inflation concepts.
Textbooks	
➢	S.K. Misra & V.K. Puri – *Indian Economy* – Himalaya Publishing House.
➢	Datt & Sundharam – *Indian Economy* – S. Chand Publishing.
➢	Uma Kapila – *Indian Economy: Performance and Policies* – Academic Foundation.
Reference Books	
1.	Michael P. Todaro & Stephen C. Smith – *Economic Development* – Pearson Education.
2.	Rudiger Dornbusch, Stanley Fischer & Richard Startz – *Macroeconomics* – McGraw-Hill.
3.	H.L. Ahuja – *Modern Economics* – S. Chand Publishing.

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	-	2
CO2	3	3	2	2	2
CO3	3	3	3	2	2
CO4	3	2	3	2	3
CO5	2	3	2	2	3
Weightage of the course contributed to each PSO	**14**	**13**	**11**	**8**	**12**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

ELECTIVE COURSE – I: BUSINESS ECONOMICS

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECV13	3	0	0	I	3	3	50	50	100

Learning Objectives

LO1	To introduce the fundamental concepts and scope of Business Economics.
LO2	To develop an understanding of demand, elasticity and forecasting techniques.
LO3	To explain consumer behaviour and utility analysis.
LO4	To familiarize students with production and cost concepts.
LO5	To understand market structures and pricing decisions.

Prerequisites

Unit	Contents	No. of Hours
I	**Introduction to Business Economics** Meaning and Definition of Economics – Wealth, Welfare and Scarcity Views – Positive and Normative Economics – Scope and Importance of Business Economics – Basic Concepts: Opportunity Cost, Accounting Profit and Economic Profit, Marginal and Incremental Concepts – Production Possibility Frontier – Concept of Efficiency – Business Cycle: Meaning and Phases (Boom, Recession, Depression and Recovery).	9
II	**Demand Analysis** Meaning of Demand – Determinants of Demand – Law of Demand and Exceptions – Elasticity of Demand: Meaning, Types (Price, Income and Cross) and Importance – Demand Forecasting: Meaning and Methods (Survey and Trend Analysis – Basic Concepts only).	9
III	**Consumer Behaviour** Utility Analysis: Law of Diminishing Marginal Utility – Law of Equi-Marginal Utility – Indifference Curve Analysis: Meaning, Assumptions and Properties – Consumer Equilibrium (Basic Concept) – Price Effect, Income Effect and Substitution Effect – Types of Goods: Normal, Inferior and Giffen Goods.	9
IV	**Production and Cost Analysis** Concept of Production – Production Function (Basic Concepts only) – Law of Variable Proportions – Returns to Scale – Economies and Diseconomies of Scale – Cost Concepts: Fixed, Variable, Total, Average and Marginal Cost – Relationship between Cost Curves (Basic Understanding).	9
V	**Market Structure and Pricing** Market Structures: Perfect Competition, Monopoly and Monopolistic Competition – Features and Price Determination (Basic Concepts only) –	9

	Objectives of Pricing – Simple Pricing Methods – Introduction to Oligopoly (Features only).	
TOTAL		**45**
Course Outcomes		
CO1	Understand basic economic concepts and business environment.	
CO2	Analyze demand, elasticity and forecasting methods.	
CO3	Explain consumer behaviour using utility and indifference curve analysis.	
CO4	Apply production and cost concepts in business decision-making.	
CO5	Analyze pricing decisions under different market structures.	
Textbooks		
➢	H.L. Ahuja, Business Economics–Micro & Macro-Sultan Chand & Sons, New Delhi.	
➢	C.M. Chaudhary, Business Economics- RBSAPublishers-Jaipur-03.	
➢	Aryamala. T, Business Economics, Vijay Nocole, Chennai.	
➢	T. P Jain, Business Economics, Global Publication Pvt.Ltd,Chennai.	
Reference Books		
1.	Sankaran, S. – *Business Economics*, Margham Publications.	
2.	Mehta, P. L. – *Managerial Economics*, Sultan Chand & Sons.	

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	–	2
CO2	3	3	2	2	2
CO3	3	3	3	2	2
CO4	3	2	3	2	3
CO5	2	3	2	2	3
Weightage of the course contributed to each PSO	**14**	**13**	**11**	**8**	**12**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
SKILL ENHANCEMENT COURSE (SEC)-I: DIGITAL BANKING

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26USCV11	2	0	0	I	2	2	50	50	100

Learning Objectives

LO1	To introduce the concepts and services of digital banking.
LO2	To understand modern payment systems and digital transactions.
LO3	To familiarize students with mobile and internet banking.
LO4	To explain digital payment devices and infrastructure.
LO5	To understand ATM operations and emerging trends in digital banking.

Prerequisites:

Unit	Contents	No. of Hours
I	**Introduction to Digital Banking** Digital Banking – Meaning, Features and Types – Digital Banking Services – Bank Cards (Debit, Credit, Prepaid): Features and Benefits – EMV Technology – Contactless Payments (NFC, Tap and Go) – Digital Lending Process – NPA Concepts (Basic) – Customer Awareness and Financial Literacy.	6
II	**Payment Systems** Overview of Indian and Global Payment Systems – UPI, IMPS, NEFT, RTGS, AEPS, NACH – Digital Wallets – Cross-border Payments (Basic Concepts) – Emerging Payment Technologies.	6
III	**Mobile and Internet Banking** Mobile Banking and Internet Banking – Features and Services – Mobile Applications – Integration with E-commerce – Risk Management – Cyber Security and Fraud Prevention – Basics of Blockchain and Cryptocurrency (Introductory Concepts only).	6
IV	**Digital Payment Devices** POS Terminals – Overview and Features – mPOS and QR Code Payments – Components: Hardware, Software, and User Interface – Cloud-based POS – Applications in Retail and Service Sector.	6
V	**ATM and Digital Banking Trends** ATM, CDM, and Cash Recyclers – Overview and Features – National Financial Switch (NFS) – Value-added Services – Types of ATMs – ATM Network Planning – Security, Surveillance and Fraud Prevention – Emerging Trends in Digital Banking.	6
TOTAL		**30**

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Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

Course Outcomes	
CO1	Explain digital banking concepts, services, and financial literacy.
CO2	Understand various payment systems and digital transactions.
CO3	Analyze mobile and internet banking systems and related risks.
CO4	Understand digital payment infrastructure, such as POS and QR systems.
CO5	Explain ATM operations and emerging trends in digital banking.
Textbooks	
➢	Indian Institute of Banking & Finance (IIBF) – *Digital Banking*.
➢	Gurusamy, S. – *Banking Theory: Law and Practice*, McGraw-Hill.
➢	Kothari, C. R. – *Modern Banking*, Himalaya Publishing House.
Reference Books	
1.	Shekhar, K. C. – *Banking Theory and Practice*, Vikas Publishing.
2.	Sundaram & Varshney – *Banking Theory, Law and Practice*, Sultan Chand.
3.	Agarwal, O. P. – *Modern Banking of India*, Himalaya Publishing.

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	–	2
CO2	3	3	2	2	2
CO3	3	3	2	2	2
CO4	3	2	2	2	2
CO5	2	2	2	2	3
Weightage of the course contributed to each PSO	**14**	**12**	**9**	**8**	**11**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
SKILL ENHANCEMENT COURSE (SEC)-I: OFFICE AUTOMATION

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26USCVP1	0	0	2	I	2	2	50	50	100

Learning Objectives

LO1	To introduce the basic concepts of office automation tools.
LO2	To develop skills in word processing using Microsoft Word.
LO3	To familiarize students with spreadsheet operations using Microsoft Excel.
LO4	To develop data analysis skills using Excel tools.
LO5	To enable students to create effective presentations using Microsoft PowerPoint.

Prerequisites:

Unit	Contents	No. of Hours
I	**Microsoft Word – Basics** Working with Microsoft Word – Creating a New Document – Editing and Formatting Documents – Font Styles and Paragraph Formatting – Page Setup – Page Layout – Watermark, Background and Borders – Headers and Footers – Page Numbering.	6
II	**Microsoft Word – Advanced** Applying Templates – Creating and Formatting Tables – Editing Tables – Inserting WordArt, ClipArt, SmartArt, and Pictures – Find and Replace – Document Sharing – Document Protection (Encryption and Decryption – Basic Concepts) – Mail Merge.	6
III	**Microsoft Excel – Basics** Introduction to Spreadsheet – Creating Worksheets – Auto Fill – Adding and Deleting Rows and Columns – Basic Formulas – Mathematical Operations (Addition, Subtraction, Multiplication, Division) – Cell Formatting – Adjusting Row Height and Column Width – Charts – Page Setup and Printing.	6
IV	**Microsoft Excel – Advanced** Worksheet Views: Normal, Page Layout and Page Break – Freeze Panes – Sorting and Filtering Data – Data Validation – Logical, Text, and Date Functions – Basic Financial Functions – Worksheet Design and Printing.	6
V	**Microsoft PowerPoint** Creating Presentations – Using Templates – Creating Blank Presentations – Opening Existing Presentations – Slide Layouts – Background Design – Inserting Text, Images, Shapes and SmartArt – Applying Themes, Transitions and Animations – Slide Show and Presentation Techniques.	6
	TOTAL	**30**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

LIST OF PRACTICALS

MS WORD

1. Prepare a document (Chairperson's Speech, Auditor's Report, Agenda, Minutes) with formatting features such as bold, underline, font styles, line spacing, header, footer, page numbers, spell check, and find & replace.
2. Design an invitation card using text boxes and images.
3. Create a class timetable and perform table operations (insert, delete, formatting).
4. Prepare a shareholders' meeting letter using Mail Merge.
5. Prepare a Bio-Data using templates.

MS EXCEL

1. Prepare a class mark sheet and calculate total, average, result, and rank using formulas and sorting.
2. Create charts (Line, Pie, Bar) for sales, purchases, and profit.
3. Prepare a bank statement with simple and compound interest.
4. Perform financial calculations using PMT, RATE, NPER, PV, and FV.
5. Apply text, logical, and date/time functions.

MS POWERPOINT

1. Create slides showing the company hierarchy using an organization chart.
2. Prepare news headline slides with transitions and a custom slide show.
3. Create a seminar presentation using animations and design features.

Course Outcomes

CO1	Understand basic office automation tools and applications.
CO2	Create, edit, and format documents using word processing tools.
CO3	Develop spreadsheets and perform calculations.
CO4	Apply data analysis tools such as sorting, filtering, and functions.
CO5	Design professional presentations using multimedia tools.

Textbooks

➢	Saxena, Sanjay (2015). *A First Course in Computers based on Windows 8 and MS Office 2013*. New Delhi: Vikas Publishing House Pvt. Ltd.
➢	Bhullar, M. S. & Kaur, Ramanpreet (2015). *Fundamentals of Information Technology and MS Office*. Ludhiana: Kalyani Publishers.
➢	Lalwani, Lokesh (2019). *Excel 2019 – All-in-One*. New Delhi: BPB Publications.

Reference Books

1.	Sterling, F. C. C. A. (2016). *Advanced Excel: How to Use VLOOKUP and INDEX-MATCH Functions*. USA: Straight Publications.
2.	Urban, Chris (2016). *Advanced Excel for Productivity*. USA.
3.	Lalwani, Lokesh (2019). *Excel 2019 All-in-One*. New Delhi: BPB Publications.

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Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	–	2
CO2	3	3	2	2	2
CO3	3	3	2	2	2
CO4	3	2	2	2	2
CO5	2	2	2	2	3
Weightage of the course contributed to each PSO	**14**	**12**	**9**	**8**	**11**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
FOUNDATION COURSE (FC) – I – FUNDAMENTALS OF BUSINESS STUDIES

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UFCV11	2	0	0	I	2	2	50	50	100

Learning Objectives	
LO1	To provide a basic understanding of commerce, business, and forms of organization.
LO2	To introduce fundamental concepts of accounting and bookkeeping.
LO3	To familiarize students with marketing and advertising concepts.
LO4	To provide knowledge of auditing and entrepreneurial development.
LO5	To introduce basic concepts of Income Tax and its administration, and provide a basic understanding of banking concepts and services.

Prerequisites:

Unit	Contents	No. of Hours
I	**Commerce: Introduction** Definition of Commerce – Importance of Commerce – Meaning of Barter System – Business, Industry, Trade – Hindrances of Trade – Branches of Commerce – Forms of Business Organization: Sole Proprietorship, Partnership, Joint Stock Company.	6
II	**Accounting: Introduction** Book Keeping: Meaning, Definition, Objectives – Accounting: Meaning, Definition, Objectives, Importance, Functions – Advantages and Limitations – Methods of Accounting: Single Entry and Double Entry – Steps in Double Entry System – Advantages of Double Entry – Meaning of Debit and Credit – Types of Accounts and Rules: Personal, Real, and Nominal Accounts.	6
III	**Marketing and Advertising** Meaning and Definition of Marketing – Functions of Marketing – Meaning of Consumer – Standardization and Grading – Pricing and Kinds of Pricing – Advertising: Meaning, Objectives, Functions, Advantages – Kinds of Advertising – Advertising Media and Types.	6
IV	**Auditing and Entrepreneurial Development** Worksheet Views: Normal, Page Layout, and Page Break – Freeze Panes – Sorting and Filtering Data – Data Validation – Logical, Text, and Date Functions – Basic Financial Functions – Worksheet Design and Printing.	6
V	**Income Tax Law and Practice** Tax History – Types of Taxes – Important Terms in Taxation – Exempted Income under Section 10 – Canons of Taxation – Income Tax Authorities and Administration – Slab Rates – Filing of Returns –	6

	Residential Status.	
TOTAL		**30**
Course Outcomes		
CO1	Explain the fundamentals of commerce and business organizations.	
CO2	Understand basic accounting principles and apply rules of debit and credit.	
CO3	Describe marketing functions and advertising strategies.	
CO4	Understand auditing concepts and entrepreneurial skills.	
CO5	Explain basic income tax concepts, filing, and administration.	
Textbooks		
➢	L.M. Prasad – Principles of Management, S. Chand & Sons Co. Ltd., New Delhi, 2022.	
➢	2. S.P. Jain & K.L. Narang – Financial Accounting–I, Kalyani Publishers, New Delhi, 2023	
➢	T. Srinivasan – Income Tax Law and Practice, Vijay Nicole Imprints Pvt. Ltd., Chennai, 2024.	
Reference Books		
1.	NCERT – Business Studies (Class XI & XII), NCERT Publications.	
2.	Poonam Gandhi – Fundamentals of Business Studies, VK Global Publications.	
3.	T.S. Grewal – Business Studies, Sultan Chand & Sons, New Delhi.	

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	-	2
CO2	3	**3**	2	**2**	3
CO3	3	3	**3**	2	3
CO4	3	2	3	2	3
CO5	2	3	2	2	3
Weightage of the course contributed to each PSO	**14**	**13**	**11**	**8**	**14**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

NON-MAJOR ELECTIVE COURSE (NME) – I – EVERYDAY BANKING

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UNCV11	2	0	0	I	2	2	50	50	100

Learning Objectives

LO1	To provide a basic understanding of banking concepts and services.
LO2	To familiarize students with different types of bank accounts and operations.
LO3	To introduce digital banking and modern payment systems.
LO4	To create awareness about financial security and safe banking practices.
LO5	To develop practical knowledge for managing personal finances through banking.

Prerequisites:

Unit	Contents	No. of Hours
I	**Introduction to Banking** Meaning and Importance of Banking – Functions of Commercial Banks – Types of Banks – Role of Banks in Economic Development – Introduction to Central Banking – Overview of Reserve Bank of India.	6
II	**Bank Accounts and Operations** Types of Bank Accounts – Savings, Current, Fixed Deposit, Recurring Deposit – Procedure for Opening an Account – KYC Norms – Passbook and Cheque Book – ATM and Debit Cards – Nomination Facility.	6
III	**Digital Banking and Payments** Internet Banking – Mobile Banking – UPI – NEFT, RTGS, IMPS – Debit and Credit Cards – E-Wallets – Digital Payment Apps – Advantages and Risks of Digital Banking.	6
IV	**Loans and Advances** Meaning of Loans – Types of Loans – Personal, Education, Housing, and Vehicle Loans – Interest Rates – EMI Concept – Credit Score – Basics of Loan Application Process.	6
V	**Safe Banking and Financial Awareness** Banking Frauds – Cyber Security – Safe Banking Practices – PIN and Password Protection – Consumer Rights – Banking Ombudsman – Financial Literacy – Introduction to Insurance and Pension Schemes.	6
	TOTAL	**30**

Course Outcomes

CO1	Understand basic banking concepts and functions.
CO2	Operate different types of bank accounts effectively.

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CO3	Use digital banking tools and payment systems.
CO4	To identify banking services such as loans and deposits.
CO5	To practice safe and secure banking habits.
Textbooks	
➢	Indian Institute of Banking & Finance – *Principles of Banking*
Reference Books	
1	Gordon & Natarajan – Banking Theory, Law and Practice

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	-	2
CO2	3	2	2	-	3
CO3	2	3	2	1	3
CO4	3	2	2	-	2
CO5	2	3	2	2	3
Weightage of the course contributed to each PSO	**13**	**12**	**9**	**3**	**13**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

Semester-II

<table>
<tr><th colspan="11">Semester–2</th></tr>
<tr><th rowspan="3">Course Code</th><th rowspan="3">Part</th><th rowspan="3">Course Category</th><th rowspan="3">Course Name</th><th rowspan="3">Hours/ Week</th><th colspan="4">Examination</th><th rowspan="3">Credits</th></tr>
<tr><th rowspan="2">Duration in Hours</th><th colspan="3">Max Marks</th></tr>
<tr><th>CIA</th><th>ESE</th><th>Total</th></tr>
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<tr><td>26U1HD21</td><td>I</td><td>Hindi –II</td></tr>
<tr><td>26U1MY21</td><td>I</td><td>Malayalam–II</td></tr>
<tr><td>26U1FR21</td><td>I</td><td>French – II</td></tr>
<tr><td>26U1EN21</td><td>II</td><td>Language-II</td><td>English–II</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>3</td></tr>
<tr><td>26UCCV21</td><td>III</td><td>Core-III</td><td>Financial Accounting - II</td><td>6</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UCCV22</td><td>III</td><td>Core-IV</td><td>Business Law</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UECV21</td><td rowspan="3">III</td><td rowspan="3">EC – II</td><td>Digital Marketing and Online Promotion</td><td rowspan="3">3</td><td rowspan="3">3</td><td rowspan="3">50</td><td rowspan="3">50</td><td rowspan="3">100</td><td rowspan="3">3</td></tr>
<tr><td>26UECV22</td><td>Programming with C++</td></tr>
<tr><td>26UECV23</td><td>Information and Cyber Laws</td></tr>
<tr><td>26USCV21</td><td>IV</td><td>SEC - II</td><td>New Venture Planning and Development</td><td>2</td><td>3</td><td>50</td><td>50</td><td>100</td><td>2</td></tr>
<tr><td>26USCV22</td><td rowspan="2">IV</td><td rowspan="2">SEC - III</td><td>Internet Concepts and Applications</td><td rowspan="2">2</td><td rowspan="2">3</td><td rowspan="2">50</td><td rowspan="2">50</td><td rowspan="2">100</td><td rowspan="2">2</td></tr>
<tr><td>26USCV23</td><td>Market and Investment Management</td></tr>
<tr><td>26UNCV21</td><td>IV</td><td>NME - II</td><td>Business Accounting</td><td>2</td><td>3</td><td>50</td><td>50</td><td>100</td><td>2</td></tr>
<tr><td colspan="4">Total</td><td>30</td><td></td><td></td><td></td><td>800</td><td>23</td></tr>
</table>

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
FIRST YEAR – SEMESTER – II

CORE COURSE– III: FINANCIAL ACCOUNTING-II

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV21	6	0	0	II	4	6	50	50	100

Learning Objectives

LO1	To understand the accounting treatment of Hire Purchase and Instalment systems.
LO2	To acquire knowledge on branch and departmental accounting.
LO3	To understand accounting procedures relating to the admission, retirement, and death of partners.
LO4	To apply accounting principles in the dissolution of partnership firms.
LO5	To familiarize with accounting standards and financial reporting practices.

Prerequisites

Unit	Contents	No. of Hours
I	**Hire Purchase and Instalment System** Hire Purchase System – Meaning and Features – Accounting Treatment – Calculation of Interest – Default and Repossession – Hire Purchase Trading Account – Instalment System – Calculation of Profit.	18
II	**Branch and Departmental Accounts** Branch Accounts: Meaning – Types – Dependent Branches – Debtors System – Stock and Debtors System – Distinction between Wholesale Profit and Retail Profit – Independent Branches (excluding foreign branches). Departmental Accounts: Meaning – Basis of Allocation of Expenses – Inter-departmental Transfer at Cost or Selling Price.	18
III	**Partnership Accounts I** Admission of a Partner: Accounting Treatment – Treatment of Goodwill – Calculation of Hidden Goodwill. Retirement of a Partner: Death of a Partner – Accounting Treatment.	18
IV	**Partnership Accounts II** Dissolution of Partnership – Methods – Settlement of Accounts – Realisation Account – Treatment of Goodwill – Preparation of Balance Sheet. Insolvency of Partners – One or more partners insolvent – All partners insolvent – Application of Garner vs Murray Rule – Piecemeal Distribution – Surplus Capital Method – Maximum Loss Method.	18
V	**Accounting Standards and Financial Reporting** Objectives and Uses of Financial Statements – Role of Accounting Standards – Development of Accounting Standards in India – Role of IFRS	18

	– IFRS Adoption vs Convergence – Implementation Plan in India – Ind AS: Introduction – Difference between Ind AS and IFRS. *(Theory Only)*	
TOTAL		**90**
THEORY 20% & PROBLEM 80%		
Course Outcomes		
CO1	Apply accounting techniques for Hire Purchase and Instalment systems.	
CO2	Prepare branch and departmental accounts.	
CO3	Analyze partnership changes such as admission, retirement, and death.	
CO4	Solve problems related to dissolution of partnership, including insolvency.	
CO5	Understand the role and application of accounting standards in financial reporting.	
Textbooks		
➢	S.P. Jain & K.L. Narang – *Advanced Accountancy*, Kalyani Publishers, New Delhi.	
➢	T.S. Reddy & A. Murthy – *Financial Accounting*, Margham Publications, Chennai.	
➢	R.L. Gupta & M. Radhaswamy – *Advanced Accountancy*, Sultan Chand & Sons, New Delhi.	
Reference Books		
1.	Shukla, Grewal & Gupta – *Advanced Accounts*, S. Chand & Company Ltd., New Delhi.	
2.	S.N. Maheshwari & S.K. Maheshwari – *Financial Accounting*, Vikas Publishing House, New Delhi.	

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	-	2
CO2	3	3	2	2	2
CO3	3	3	3	2	2
CO4	3	2	3	2	3
CO5	2	3	2	2	3
Weightage of the course contributed to each PSO	**14**	**13**	**11**	**8**	**12**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
CORE COURSE– IV: BUSINESS LAW

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV22	5	0	0	II	4	5	50	50	100

Learning Objectives

LO1	To provide knowledge of the basic concepts and essentials of the Indian Contract Act, 1872.
LO2	To understand the performance, discharge, and remedies of contracts.
LO3	To familiarize students with special contracts such as indemnity, guarantee, bailment, and pledge.
LO4	To develop an understanding of the Sale of Goods Act, 1930, and its applications.
LO5	To enable students to apply legal principles in business situations.

Prerequisites:

Unit	Contents	No. of Hours
I	**Elements of Contract:** Indian Contract Act, 1872 – Definition of Contract – Essentials of Valid Contract – Classification of Contract – Offer and Acceptance – Consideration – Capacity to Contract – Free Consent – Legality of Object – Contingent Contracts – Void Contracts.	15
II	**Performance of Contract** Meaning of Performance – Offer to Perform – Devolution of Joint Liabilities and Rights – Time and Place of Performance – Reciprocal Promises – Assignment of Contracts – Remedies for Breach of Contract – Termination and Discharge of Contract – Quasi Contracts.	15
III	**Contract of Indemnity and Guarantee** Contract of Indemnity and Contract of Guarantee – Extent of Surety's Liability – Kinds of Guarantee – Rights of Surety – Discharge of Surety.	15
IV	**Bailment and Pledge** Bailment – Meaning, Essentials, Classification – Duties and Rights of Bailor and Bailee – Law of Pledge – Meaning and Essentials – Pledge and Lien – Rights of Pawner and Pawnee.	15
V	**Sale of Goods Act, 1930** Definition of Contract of Sale – Formation – Essentials – Conditions and Warranties – Transfer of Property – Contracts involving Sea Routes – Sale by Non-owners – Rights and Duties of Buyer – Rights of an Unpaid Seller.	15
	TOTAL	**75**

Course Outcomes

CO1	Explain the fundamental principles of contract law and valid contract formation.

CO2	Analyse the performance and discharge of contracts and remedies for breach.
CO3	Interpret legal provisions relating to indemnity, guarantee, bailment, and pledge.
CO4	Evaluate the legal aspects of the sale of goods, including the rights and duties of buyers and sellers.
CO5	Apply legal knowledge to solve practical business problems.
Textbooks	
➢	N.D. Kapoor – *Elements of Mercantile Law*, Sultan Chand & Sons, New Delhi.
➢	P.C. Tulsian – *Business Law*, McGraw-Hill Education, New Delhi.
➢	M.C. Kuchhal – *Business Law*, Vikas Publishing House Pvt. Ltd., New Delhi.
Reference Books	
1.	Avtar Singh – *Mercantile Law*, Eastern Book Company, Lucknow.
2.	R.K. Bangia – *Indian Contract Act*, Allahabad Law Agency.
3.	Bare Acts – *Indian Contract Act, 1872, and Sale of Goods Act, 1930*, Government Publications.

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	-	2
CO2	3	3	2	2	2
CO3	3	2	3	2	2
CO4	3	3	2	2	3
CO5	2	3	3	2	3
Weightage of the course contributed to each PSO	**14**	**13**	**11**	**8**	**12**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
ELECTIVE COURSE – II: DIGITAL MARKETING AND ONLINE PROMOTION

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECV21	3	0	0	II	3	3	50	50	100

Learning Objectives	
LO1	To understand the fundamentals and importance of digital marketing
LO2	To gain knowledge of online advertising platforms and formats
LO3	To develop skills in social media marketing strategies
LO4	To learn effective email marketing techniques
LO5	To understand mobile marketing concepts and emerging trends

Prerequisites

Unit	Contents	No. of Hours
I	**Introduction to Digital Marketing & SEO** Importance of digital/web marketing - Basics of Search Engine Optimization (SEO) - On-page SEO techniques and link building - Overview of digital marketing tools	9
II	**Display and Video Advertising** Introduction to display advertising - Types: banner ads, image ads, video ads - Mobile and YouTube advertising basics - Ad targeting and performance basics	9
III	**Social Media Marketing** Social media platforms for marketing - Content creation strategies - Do's and Don'ts in social media marketing - Target audience analysis and engagement	9
IV	**Email Marketing** Basics of email marketing - Designing email campaigns - Writing effective email content - Measuring campaign performance	9
V	**Mobile Marketing** Introduction to mobile marketing - Mobile devices and user behavior - SMS and app-based marketing - Mobile advertising and trends	9
TOTAL		**45**

Course Outcomes	
CO1	Explain the importance of digital marketing and SEO
CO2	Identify various types of digital advertisements
CO3	Analyze social media marketing strategies
CO4	Evaluate email marketing campaigns and techniques
CO5	Describe mobile marketing concepts and trends

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

Textbooks	
➢	**Dave Chaffey & Fiona Ellis-Chadwick** – *Digital Marketing: Strategy, Implementation and Practice*
➢	**Seema Gupta** – *Digital Marketing* (McGraw Hill)
➢	**Puneet Singh Bhatia** – *Fundamentals of Digital Marketing* (Pearson)
Reference Books	
1.	**Ryan Deiss & Russ Henneberry** – *Digital Marketing For Dummies*
2.	**Philip Kotler et al.** – *Marketing 4.0*
3.	**Jason McDonald** – *Social Media Marketing Workbook*

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	-	2
CO2	3	3	2	1	3
CO3	2	3	3	2	3
CO4	2	3	3	2	3
CO5	2	2	2	3	3
Weightage of the course contributed to each PSO	**12**	**13**	**11**	**8**	**14**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

ELECTIVE COURSE – II: PROGRAMMING IN C++

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECV22	3	0	0	II	3	3	50	50	100

Learning Objectives

LO1	To understand object-oriented programming concepts and applications
LO2	To learn basic syntax and structure of C++ programming
LO3	To understand data conversions and function concepts in C++
LO4	To gain knowledge of inheritance and polymorphism
LO5	To learn file handling and exception concepts

Prerequisites:

Unit	Contents	No. of Hours
I	**Introduction to C++ Programming** Basics of C++ programming - Tokens, keywords, identifiers - Variables, data types, operators - Expressions and control structures - Simple C++ programs	9
II	**Functions in C++** Structure of functions and main function - Function prototyping - Parameter passing methods - Inline functions - Friend and virtual functions	9
III	**Classes and Objects** Introduction to classes and objects - Constructors and destructors - Function overloading and overriding - Operator overloading - Type conversions	9
IV	**Inheritance and Polymorphism** Types of inheritance: single, multilevel, multiple, hierarchical, hybrid-Pointers and virtual functions - Polymorphism concepts - Console input/output operations	9
V	**File Handling and Exception Basics** File stream classes - Opening and closing files - File pointers and EOF detection Updating files - Error handling in file operations - Introduction to command-line arguments	9
	TOTAL	**45**

Course Outcomes

CO1	Recall fundamentals of C++ programming language
CO2	Apply functions and modular programming concepts
CO3	Implement classes, objects, and OOP principles
CO4	Analyze inheritance and polymorphism techniques
CO5	Use file handling and basic exception handling in programs

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

Textbooks	
➢	E. Balagurusamy – Object-Oriented Programming with C++ (McGraw Hill)
➢	Robert Lafore – Object-Oriented Programming in C++ (SAMS / Pearson)
➢	Bjarne Stroustrup – The C++ Programming Language (Addison-Wesley)
Reference Books	
1.	**Stanley B. Lippman, Josée Lajoie, Barbara Moo** – *C++ Primer* (Addison-Wesley)
2.	**Herbert Schildt** – *C++: The Complete Reference* (McGraw Hill)
3.	**Paul Deitel & Harvey Deitel** – *C++ How to Program* (Pearson)

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	-	2
CO2	3	3	2	2	2
CO3	3	3	3	2	2
CO4	3	2	3	2	3
CO5	2	3	2	2	3
Weightage of the course contributed to each PSO	**14**	**13**	**11**	**8**	**12**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

ELECTIVE COURSE – II: INFORMATION AND CYBER LAWS

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECV23	3	0	0	II	3	3	50	50	100

Learning Objectives

LO1	To introduce the fundamental concepts of Informatics and digital systems.
LO2	To create awareness about the digital knowledge society and its influence on education and business.
LO3	To understand the role of Social Informatics in shaping IT and society.
LO4	To develop awareness about the Cyber World, including cyber ethics and cyber security issues.
LO5	To provide knowledge of Cyber Laws and regulations for safe and legal use of digital technologies.

Prerequisites:

Unit	Contents	No. of Hours
I	**Introduction To Informatics** Meaning, features, and importance of Informatics - Computer networks and Internet basics - Wireless and cellular technologies - Mobile phone technology overview - Technology selection: purchase, license, warranty, guarantee - Recent developments in Informatics	9
II	**Digital Knowledge And Higher Education** Data, Information, and Knowledge concepts - Knowledge management basics - Internet access methods: Dial-up, DSL, Cable, ISDN, Wi-Fi - Internet as a knowledge source - Academic search techniques and cyber presence - Open access publishing and academic resources - Educational software and IT in teaching-learning - Academic networks: INFLIBNET, NICNET, BRNET	9
III	**Social Informatics** IT and Society: issues and concerns - Digital divide and its impact - Role of IT in development and national integration - Applications of IT in: Healthcare, medicine, Business, commerce, industry, Defense and law enforcement, Communication and media, Education and disability support, - Emerging technologies: AI, Virtual Reality, Bio-computing (overview) - Health issues due to IT usage and safety guidelines - E-waste and green computing - Impact of IT on language and culture (localization issues)	9
IV	**Cyber World** Cyber space and information overload - Cyber ethics and responsible usage - Cyber addiction and its effects - Cyber crimes: Against individuals (harassment, stalking, threats), Against property (hacking, fraud), Against	9

	government (cyber attacks) - Basic cyber security: privacy and safety awareness	
V	**Cyber Laws And Regulations** Introduction to Cyber laws - IT Act 2000: basic provisions - Cyber-related provisions under IPC - Digital security and compliance basics - Intellectual Property Rights in cyberspace - Safe and legal use of digital technologies	9
	TOTAL	**45**

Course Outcomes

CO1	Understand fundamental concepts of Informatics, computer networks, Internet, and emerging technologies.
CO2	Apply digital knowledge systems and academic resources for effective learning and research.
CO3	Analyze the impact of Information Technology on society and various application domains.
CO4	Identify cyber threats and demonstrate awareness of cyber ethics, security, and cyber crimes.
CO5	Apply Cyber Laws, IT Act provisions, and digital regulations in real-world contexts.

Textbooks

➢	Ramesh Bangia – *Learning Computer Fundamentals*
➢	Rajaraman – *Introduction to Information Technology*
➢	Alexis Leon & Mathews Leon – *Fundamentals of Information Technology*

Reference Books

1.	Barbara Wilson – *Information Technology: The Basics*
2.	George Beekman & Eugene Rathswohl – *Computer Confluence*
3.	Rohas Nagpal – *IPR & Cyberspace – Indian Perspective*

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	1	1
CO2	2	3	2	1	2
CO3	2	2	3	2	2
CO4	1	2	2	3	3
CO5	1	1	2	3	3
Weightage of the course contributed to each PSO	**09**	**10**	**10**	**10**	**11**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
SKILL ENHANCEMENT COURSE (SEC)-II:
NEW VENTURE PLANNING AND DEVELOPMENT

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26USCV21	2	0	0	II	2	2	50	50	100

Learning Objectives

LO1	To provide knowledge on entrepreneurial concepts and venture creation.
LO2	To understand opportunity identification and creativity in entrepreneurship.
LO3	To familiarize students with legal and financial aspects of starting a business.
LO4	To analyze marketing strategies for new ventures.
LO5	To develop skills in preparing business plans.

Prerequisites:

Unit	Contents	No. of Hours
I	**Introduction to Entrepreneurship and New Ventures** Starting New Ventures – Meaning and Features – Opportunity Identification – Search for New Ideas – Sources of Innovative Ideas – Techniques for Generating Ideas – Entrepreneurial Imagination and Creativity – Role of Creative Thinking – Developing Creativity – Barriers to Creativity – Pathways to New Ventures – Creating New Ventures – Acquisition of Existing Venture – Advantages and Evaluation of Acquisition.	6
II	**Legal Aspects of Business** Legal Challenges in Setting up Business – Intellectual Property Rights: Patents, Trademarks and Copyrights – Requirements and Procedures for Registration – Legal Acts Governing Business in India.	6
III	**Financing of New Ventures** Search for Entrepreneurial Capital – Venture Capital – Evaluation of Venture Capital Proposals – Stages of Financing – Alternative Sources of Finance – Bank Finance – Government Policy Packages – State Financial Corporations (SFCs) – Business Incubators and Facilitators.	6
IV	**Marketing of New Ventures** Marketing Aspects of New Ventures – Developing a Marketing Plan – Customer Analysis – Geographical Analysis – Economic Analysis – Linguistic Analysis – Sales Analysis – Competition Analysis – Market Research – Sales Forecasting – Pricing Decisions.	6
V	**Business Plan Preparation** Business Plan – Concept and Importance – Benefits of Business Plan – Pitfalls to Avoid – Developing a Business Plan – Elements: Executive Summary – Business Description – Market Niche and Market Share –	6

	Research, Design, and Development.	
	TOTAL	**30**
Course Outcomes		
CO1	Explain the process of starting and managing new ventures.	
CO2	Identify and evaluate business opportunities using creative thinking.	
CO3	Understand legal requirements and sources of entrepreneurial finance.	
CO4	Develop marketing strategies for new ventures.	
CO5	Prepare a comprehensive business plan.	
Textbooks		
➢	Vasant Desai – *Dynamics of Entrepreneurial Development and Management*, Himalaya Publishing House.	
➢	S.S. Khanka – *Entrepreneurial Development*, S. Chand & Company Ltd.	
➢	Rajeev Roy – *Entrepreneurship*, Oxford University Press.	
Reference Books		
1.	Robert D. Hisrich – *Entrepreneurship*, McGraw Hill Education.	
2.	Donald F. Kuratko – *Entrepreneurship: Theory, Process and Practice*, Cengage Learning.	
3.	Nandan H – *Fundamentals of Entrepreneurship*, PHI Learning.	

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	-	2
CO2	3	3	2	2	2
CO3	3	3	3	2	2
CO4	3	2	3	2	3
CO5	2	3	2	2	3
Weightage of the course contributed to each PSO	**14**	**13**	**11**	**8**	**12**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
SKILL ENHANCEMENT COURSE (SEC)-III: INTERNET CONCEPTS AND APPLICATIONS

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26USCV22	2	0	0	II	2	2	50	50	100

Learning Objectives	
LO1	To provide a basic understanding of internet concepts, connectivity, and networking.
LO2	To familiarize students with e-mail communication and internet services.
LO3	To develop knowledge on web technologies, browsers, and search engines.
LO4	To enable students to use internet resources for business and academic purposes effectively.
LO5	To create awareness about the secure and efficient use of internet tools.

Prerequisites:

Unit	Contents	No. of Hours
I	**Internet Concepts:** Introduction to the Internet – Internet Connection Concepts – Connecting to Dial-up Internet Accounts – High-Speed Connections: ISDN, ADSL, and Cable Modes – Intranets: Connecting LANs to the Internet.	6
II	**E-mail Concepts:** E-mail Concepts – E-mail Addressing – Sending and Receiving Files by E-mail – Controlling E-mail Volume – Sending and Receiving Secure E-mail.	6
III	**Internet Services:** Online Chatting and Conferencing Concepts – E-mail Mailing Lists – Usenet Newsgroup Concepts – Reading Usenet Newsgroups – Video Conferencing.	6
IV	**Web Concepts and Browsers:** World Wide Web Concepts – Elements of Web – Clients and Servers – URL and HTTP – Web Browsers – Netscape Navigator and Communicator – Microsoft Internet Explorer – Functions and Applications.	6
V	**Search Engines and Web Resources** Search Engines – Web Directories – Microsoft Internet Explorer – Searching for Information – Bigfoot, Infospace, Yahoo – Subscriptions and Channels – Websites – Use of Web Resources – News, Weather, Sports, Personal Finance and Investing.	6
	TOTAL	**30**

Course Outcomes	
CO1	Explain the fundamentals of the Internet and its applications.

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Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

CO2	Demonstrate the use of e-mail and online communication tools.
CO3	Understand web technologies, browsers, and internet protocols.
CO4	Apply search techniques to retrieve relevant information from the internet.
CO5	Use internet services effectively for business, education, and research.
Textbooks	
➢	The Internet Book – Douglas E. Comer
➢	Using the Internet and World Wide Web – Gary B. Shelly & Thomas J. Cashman
➢	Internet and Web Technologies – S. K. Basandra
Reference Books	
1.	Computer Fundamentals – P. K. Sinha & Priti Sinha
2.	Data Communications and Networking – Behrouz A. Forouzan
3.	E-Commerce: An Indian Perspective – Ravi Kalakota & Andrew B. Whinston

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	-	2
CO2	3	3	2	2	2
CO3	3	3	3	2	2
CO4	3	2	3	2	3
CO5	2	3	2	2	3
Weightage of the course contributed to each PSO	**14**	**13**	**11**	**8**	**12**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with
Choice Based Credit System (CBCS)
SKILL ENHANCEMENT COURSE (SEC)-III: MARKET AND INVESTMENT MANAGEMENT

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26USCV23	2	0	0	II	2	2	50	50	100

Learning Objectives

LO1	To introduce the concepts and types of securities and the securities market in India.
LO2	To explain the functioning and importance of the primary market and IPOs.
LO3	To provide knowledge of the secondary market, trading mechanics, and broker roles.
LO4	To familiarize students with regulatory frameworks and SEBI guidelines.
LO5	To understand dematerialization, depositories, and demat trading procedures.

Prerequisites:

Unit	Contents	No. of Hours
I	**Introduction to Securities Market:** Concept and types of Securities; Concept of return; Concept, types and measurement of risk; Development of Securities market in India	6
II	**Primary Market** Concept, functions, and importance of the primary market - New Issue Market: IPO, FPO, OFS - Methods of floatation: Fixed price method, Book building method - Pricing of issues - Offer documents - Role of merchant bankers, underwriters, lead managers, syndicate members, brokers, registrars, bankers	6
III	**Secondary Market** Concept, functions, and importance - Mechanics of stock market trading: types of orders, screen-based trading, internet-based trading, settlement procedure - Types of brokers	6
IV	**Regulatory Framework** SEBI (Issue of Capital and Disclosure Requirements) Regulations 2018 - Stock exchanges and intermediaries - SEBI and investor protection - Securities Contract Regulation Act - SEBI (Listing Obligations and Disclosure Requirements) Regulations 2015	6
V	**Dematerialization** Demat trading concept and significance - Role of depositories and custodians - SEBI guidelines and other regulations related to demat trading - Procedure of demat trading, account details	6
	TOTAL	**30**

Course Outcomes

CO1	Explain the fundamentals of securities, risk, and return concepts.
CO2	Describe the functions and procedures of the primary market and IPO issuance.

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Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

CO3	Analyze secondary market operations, trading methods, and broker functions.
CO4	Apply knowledge of SEBI regulations, investor protection, and legal frameworks.
CO5	Demonstrate understanding of dematerialization and the demat trading process.
Textbooks	
➢	Digital Marketing: Strategy, Implementation & Practice – Dave Chaffey & Fiona Ellis-Chadwick
➢	Understanding Digital Marketing – Damian Ryan
➢	Marketing 4.0: Moving from Traditional to Digital – Philip Kotler
Reference Books	
1.	The Art of SEO – Eric Enge, Stephan Spencer & Jessie Stricchiola
2.	Epic Content Marketing – Joe Pulizzi
3.	Digital Marketing for Dummies – Ryan Deiss & Russ Henneberry

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	-	2
CO2	3	3	2	2	2
CO3	3	3	3	2	2
CO4	2	3	2	3	3
CO5	2	2	3	3	3
Weightage of the course contributed to each PSO	**13**	**13**	**11**	**10**	**12**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
NON-MAJOR ELECTIVE COURSE (NME) – II – BUSINESS ACCOUNTING

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UNCV21	2	0	0	II	2	2	50	50	100

Learning Objectives	
LO1	To introduce the basic concepts and principles of accounting.
LO2	To develop the ability to record business transactions systematically.
LO3	To familiarize students with the preparation of basic financial statements.
LO4	To provide knowledge on error rectification and bank reconciliation.
LO5	To enable students to understand the financial position of a business.
Prerequisites:	

Unit	Contents	No. of Hours
I	**Introduction to Accounting** Meaning and Objectives of Accounting – Accounting Concepts and Conventions – Accounting Cycle – Types of Accounts – Rules of Debit and Credit – Accounting Equation.	6
II	**Journal and Ledger** Journal – Meaning and Format – Journal Entries (Simple Problems) – Ledger Posting – Balancing of Ledger Accounts – Subsidiary Books (Purchase, Sales, Cash Book – Simple Introduction).	6
III	**Trial Balance** Trial Balance – Meaning and Objectives – Preparation of Trial Balance.	6
IV	**Bank Reconciliation Statement** Meaning and Need for BRS – Causes for Difference between Cash Book and Pass Book – Preparation of BRS (Simple Problems).	6
V	**Final Accounts** Final Accounts of Sole Trader – Trading Account – Profit and Loss Account – Balance Sheet (Simple Adjustments)	6
TOTAL		**30**

Course Outcomes	
CO1	Understand the basic concepts and principles of accounting.
CO2	Record business transactions using the journal and ledger.
CO3	Prepare a trial balance and identify accounting errors.
CO4	Prepare a bank reconciliation statement.
CO5	Prepare simple final accounts of a business.
Textbooks	
➢	T.S. Reddy & A. Murthy – Financial Accounting

➢	S.P. Jain & K.L. Narang – Advanced Accountancy
Reference Books	
1.	R.L. Gupta & V.K. Gupta – Financial Accounting

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	1	-	2
CO2	3	3	2	-	3
CO3	3	2	2	1	2
CO4	2	3	2	1	2
CO5	3	2	3	1	2
Weightage of the course contributed to each PSO	**14**	**12**	**10**	**3**	**11**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
Semester-III

Semester–3									
Course Code	Part	Course Category	Course Name	Hours / Week	Examination				Credits
					Duration in Hours	Max Marks			
						CIA	ESE	Total	
26U1TL131	I	Language-I	Tamil–III	5	3	50	50	100	3
26U1HD31	I		Hindi –III						
26U1MY31	I		Malayalam–III						
26U1FR31	I		French – III						
26U1EN31	II	Language-II	English–III	5	3	50	50	100	3
26UCCV31	III	Core-V	Corporate Accounting - I	6	5	50	50	100	4
26UCCV32	III	Core-VI	Company Law	5	4	50	50	100	4
26UECV31	III	EC – III	E-Commerce	3	3	50	50	100	3
26UECV32			Visual Basic						
26UECV33			Business Communication						
26USCV31	IV	SEC - III	Computerized Accounting System	2	3	50	50	100	2
26USCV32			Clearing and Forwarding in Export and Import						
26USCV33	IV	SEC – IV	Computing Skills	2	3	50	50	100	2
26UEVS31	IV	Common	Environmental Studies	2	3	50	50	100	2
Total				**30**				**800**	**23**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
SECOND YEAR – SEMESTER – III

CORE – V: CORPORATE ACCOUNTING I

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV31	6	0	0	III	4	6	50	50	100

Learning Objectives

LO1	To understand consolidation of accounts and preparation of consolidated financial statements.
LO2	To learn banking company accounts as per the Banking Regulation Act.
LO3	To study life and general insurance company accounts.
LO4	To understand Double Account System in electricity and railway companies.
LO5	To gain knowledge of Indian and International Accounting Standards and inflation accounting.

Prerequisites:

Unit	Contents	No. of Hours
I	**Issue of Shares** Issue of Shares – Premium - Discount - Forfeiture - Reissue – Pro-rata Allotment - Underwriting of Shares and Debentures – Underwriting Commission - Types of Underwriting - Issue of Shares for Consideration Other than Cash	18
II	**Issue & Redemption of Preference Shares & Debentures-** Redemption of Preference Shares–Provisions of Companies Act – Capital - Redemption Reserve – Minimum Fresh Issue – Redemption at Par, Premium and Discount. Debentures: Issue and Redemption – Meaning – Methods – In-One lot–in Instalment Purchase in the Open Market includes Ex-Interest and Cum-Interest Sinking Fund Investment Method.	18
III	**Final Accounts** Introduction – Final Accounts – Form and Contents of Financial Statements as Per Schedule III of Companies Act 2013 – Part I Form of Balance Sheet –Part II Form of Statement of Profit and Loss–Ascertaining Profit for Managerial Remuneration	18
IV	**Valuation of Goodwill & Shares** Valuation of Goodwill – Meaning – Need for Valuation of Goodwill – Methods of Valuing Goodwill – Average Profit – Super Profit – Annuity and Capitalisation Method. Valuation of Shares – Need for Valuation of Shares – Methods of Valuation of Shares – Net Assets Method–Yield and Fair Value Methods- Accounting Treatment of Goodwill – As per accounting standards	18
V	**Indian Accounting Standards** International Financial Reporting Standard (IFRS)–Meaning and its	18

	Applicability in India - Indian Accounting Standards – Meaning – Objectives – Significance – Procedures for Formulation of Standards – Ind AS –, Ind AS – 2ValuationofInventories, Ind AS –7 Cash Flow Statement, Ind AS – 8 Accounting Policies, Changes in Accounting Estimate and Errors, Ind AS – 16 – Property, Plant & Equipment, Ind AS 38 – Intangible Assets Ind AS – 103, Business Combinations Ind AS 110, Consolidated Financial Statement.(Theory Only)	
TOTAL		**90**
Course Outcomes		
CO1	Understand accounting for issue of shares as per Companies Act, 2013.	
CO2	Apply concepts of redemption of preference shares and debentures.	
CO3	Prepare final accounts as per Schedule III.	
CO4	Calculate valuation of goodwill and shares.	
CO5	Understand basics of Ind AS and IFRS.	
Textbooks		
1	Reddy,T.S. and Murthy,A.2015. Corporate Accounting, Revised Edn. Margham Publications, Chennai.	
2	Pillai. R.S.N, Bagavathi and Uma.S, Fundamentals of Advanced Accounting, Third Revised Edition 2014,S.Chand& Company Private Limited, New Delhi.	
Reference Books		
1	Anilkumar, Rajeshkumar, Advanced Corporate Accounting, Himalaya Publishing house, Mumbai	
2	M.C.Shukla, Advanced Accounting,S.Chand, New Delhi	

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	2	2	2	2	3	2	2
CO2	3	2	3	2	2	2	2	2	3	2	2
CO3	3	2	3	2	3	2	2	2	3	2	2
CO4	3	1	3	2	3	2	2	2	3	2	2
CO5	3	3	3	2	3	2	2	2	3	2	2
Weightage of the course contributed to each PSO	15	11	15	10	13	10	10	10	15	10	10

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
CORE – VI: COMPANY LAW

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV31	5	0	0	III	4	5	50	50	100

Learning Objectives	
LO1	To be familiar with the Companies Act of 2013 and Company Law of 1956
LO2	To comprehend the process of establishing a business
LO3	To comprehend the meeting and resolution requirements
LO4	To become familiar with the process for selecting and dismissing directors
LO5	To become acquainted with the different winding up modes

Prerequisites:

Unit	Contents	No. of Hours
I	**Introduction to Company law** Companies Act 2013 – Definition of a Company, Characteristics of Company – Lifting or Piercing the Corporate Veil – Company Distinguished from Partnership and Limited Liabilities Partnerships – Classification of Companies – Based on Incorporation, Liability, Number of Members, Control.	15
II	**Formation of Company** Formation of a Company–Promoter – Incorporation Documents e-filing–Memorandum of Association – Contents – Alteration –Legal Effects – Articles of Association - Certificate of Incorporation – Prospectus – Contents-Kinds–Liabilities– Share Capital–Kinds –Issue– Alteration–Dividend– Debentures.	15
III	**Meeting** Meeting and Resolution – Types – Requisites – Voting & Poll – Quorum– Proxy - Resolution – Ordinary & Special - Audit & Auditors – Qualification, Disqualification, Appointment and Removal of an Auditor - Role of Company Secretary in Meetings-Types of Audit	15
IV	**Management & Administration** Management & Administration – Directors – Legal Position – Board of Directors – Appointment/ Removal – Disqualification – Director Identification Number – Directorships – Powers – Duties – Board Committees – Related Party Transactions – Contract by One Person Company – Insider Trading- Managing Director – Manager – Secretarial Audit –Administrative Aspects and Winding Up – National Company Law Tribunal (NCLT) – National Company Law Appellate Tribunal (NCLAT) – Special Courts.	15
V	**Winding up**	15

	Meaning – Modes – Compulsory Winding Up – Voluntary Winding Up – Consequences of Winding Up Order – Powers of Tribunal – Petition for Winding Up– Company Liquidator -Types of Liquidation	
TOTAL		**75**
Course Outcomes		
CO1	Recognize how firms are categorized under the act	
CO2	Review the information in the articles of association and the memorandum of association.	
CO3	Understand the criteria used to qualify and exclude auditors	
CO4	Recognize how the National Company Law Appellate Tribunal (NCLAT) operates.	
CO5	Examine the methods of winding up	
Textbooks		
1	N.D.Kapoor, Business Laws, Sultan Chand and Sons, Chenna	
2	R.S.N.Pillai – Business Law, S.Chand, NewDelhi	
Reference Books		
1	Gaffoor&Thothadri, Company Law, Vijay Nichole Imprints Limited, Chennai	
2	M.R.Sreenivasan, Business Laws, Margham Publications, Chennai	

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	3	3	2	3	3	2	2
CO2	3	2	3	2	3	3	2	3	3	2	2
CO3	3	2	3	2	3	3	2	3	3	2	2
CO4	3	2	3	2	3	3	2	3	3	2	2
CO5	3	2	3	2	3	3	2	3	3	2	2
TOTAL	15	10	15	10	15	15	10	15	15	10	10
AVERAGE	3	2	3	2	3	3	2	3	3	2	2

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
ELECTIVE III - E-COMMERCE

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV31	3	0	0	III	3	3	50	50	100

Learning Objectives

LO1	To acquire the basic concept of E-Business and related information technology
LO2	To Understand the different e-commerce business models
LO3	To enhance the student's knowledge on the concept of ecommerce marketing
LO4	To analyze the electronic data interchange and security systems
LO5	To instill the ethical concepts in students

Prerequisites:

Unit	Contents	No. of Hours
I	**Introduction to E-Commerce** Defining E-Commerce; Main Activities of Electronic Commerce; Benefits of E-Commerce; Broad Goals of Electronic Commerce; Main Components of E-Commerce; Functions of Electronic Commerce - Process of E-Commerce - Types of E- Commerce; The World Wide Web, The Internet and the Web: Features, Role of Automation & Artificial Intelligence in E-Commerce	9
II	**E-Commerce Business Models & Consumer Oriented E Commerce** E-commerce Business Models, Major Business to Consumer (B2C) business models, Major Business to Business(B2B) business models, Business models in emerging E-commerce areas -E-tailing: Traditional retailing and e-retailing, Benefits of e-retailing, Models of e-retailing, Features of e retailing.	9
III	**E-Commerce marketing concepts** The Internet Audience and Consumer Behaviour, Basic Marketing Concepts, Internet Marketing Technologies–Marketing Strategy-E-services: Categories of e-services, Web-enabled services, Information-selling on the web	9
IV	**Electronic Data Interchange &Security** Benefits of EDI, EDI technology, EDI standards, EDI communications, EDI Implementation, EDI Agreements, EDI Security. Electronic Payment Systems, Need of Electronic Payment System-Digital economy-Threats in Computer Systems: Virus, Cyber Crime Network Security: Encryption, Protecting Web server with a Firewall, Firewall and the Security Policy, Network Firewalls and Application Firewalls, Proxy Server.	9
V	**Ethics in E-Commerce** Issues in E-Commerce Understanding Ethical, Social and Political	9

	issues in E- Commerce: A model for Organizing the issues, Basic Ethical Concepts, Analyzing Ethical Dilemmas, Candidate Ethical principles Privacy and Information Rights: Information collected at E-Commerce Websites	
TOTAL		**45**
CO	**Course Outcomes**	
CO1	Illustrate the basic concept of E-Business and its applications	
CO2	Compare and contrast the different models of e-commerce	
CO3	Apply the different concepts of e-commerce marketing	
CO4	Enumerate the benefits of EDI and its technology	
CO5	Describe the ethical practice in E-commerce	
Text book		
1	Whitley, David (2000). E-Commerce Strategy, Technologies and Applications. Tata Mc Graw Hill.	
2	Schneider Gary P. and Perry, James T(1stEdition2000). Electronic Commerce. Thomson Learning.	
3	Bajaj, Kamlesh Kand Nag, Debjani (IstEdition1999). E-Commerce:The Cutting Edge of Business. Tata Mc Graw Hill, Publishing Company Ltd.,New Delhi.	
4	“Frontiers of Electronic Commerce”, Kalakota&Whinston,PearsonEducation,2002.	
5	EffyOz,“FoundationsofE-Commerce”,PHI,2001.	
Reference book		
1	Dr.C.S.Rayudu,”E-Commerce & E-Business”, Himalaya Publishing House, NewDelhi, 2004.	
2	https://ecommerceguide.com/guides/what-is-ecommerce/	
3	Kamalesh K.Bajaj ,“E-Commerce:The Cutting Edge & Business”,Tata McGraw-Hill, 2003.	

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	3	3	2	3	3	2	2
CO2	3	2	3	2	3	3	2	3	3	2	2
CO3	3	2	3	2	3	3	2	3	3	2	2
CO4	3	2	3	2	3	3	2	3	3	2	2
CO5	3	2	3	2	3	3	2	3	3	2	2
TOTAL	15	10	15	10	15	15	10	15	15	10	10
AVERAGE	3	2	3	2	3	3	2	3	3	2	2

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)
ELECTIVE III – VISUAL BASIC

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV31	3	0	0	III	3	3	50	50	100

Learning Objectives

LO1	To conceptualize the working of visual basic
LO2	To provide knowledge about various variables used in visual basic
LO3	To understand about various controls in visual basic
LO4	To have more insights about working with forms and procedures
LO5	To impart more information about database connecting tools

Prerequisites

Unit	Contents	No.of Hours
I	**Introduction to Visual Basic:** Introduction Graphics User Interface (GUI), Programming Language (Procedural, Object Oriented, Event Driven), The Visual Basic Environment IDE; Introduction to VB Controls: Textboxes, Frames, check Boxes, Option Buttons, setting a Border & Style, the shape Control, the line control, working with multiple controls and their properties, Designing the user Interface, Keyboard access, tab controls. Default & controls property, Coding for Controls, list box and combo box and their properties, filing the list box using property window/ add item method, picture/ image box and their properties.	9
II	**Variables, Constants and Calculations**: Variables, Variables Public, Private, Static, Constants, Data Types, naming rules/ conventions, Named & intrinsic, Declaring variables, Scope of variables, Val Function, Arithmetic operations, formatting Data. Error functions and types. Introducing to menu editor	9
III	**Decision & conditions and Controls:** If Statement, If then-else Statement, Comparing String, Compound conditions (and, or Not), Nested if Statements, Case Structure, Using If Statements with option Buttons & Check Boxes, Displaying Message in Message Box testing whether input is valid or not. Using call Statement to call a procedure. Do loop, while and for next loop	9
IV	**Working with forms and procedures**: Introducing to forms and types of forms and setting form properties, Creating, adding, removing Forms in project, hide, Show Method, Load Unload, Statement, Me Keywords Referring to objects on a Different Forms	9
V	**Introduction to database connecting tools** (ADO, DAO, ADODC, ADODB), Creating the database file for use by Visual Basic (Using MS Access),Using the Data control, Setting its property, Using Data control with forms, using list boxes & combo boxes as data bound controls, updating a database file (adding, deleting records):PS–(Basic concepts only)	9
	TOTAL	**45**

BACHELOR OF COMMERCE COMPUTER APPLICATION
Learning Outcomes Based Curriculum Framework–(LOCF) model with Choice Based Credit System (CBCS)

Course Outcomes	
CO1	Recall working in visual basics
CO2	Comparing various kind of variables in visual basics
CO3	Applying control in visual basic
CO4	Analyzing work with forms and procedures
CO5	Design the database file.
Text books	
1	MohammedAzam,ProgrammingwithVisualBasic6.0.–IKASpublishinghouse(P)Ltd.
2	GaryCornell,"VisualBasic6fromthe Groundup",FirstEdition,1999,TataMcGraw-Hill.
3	StevenHolzner, "VisualBasic6BlackBook",SecondEdition,1999,Oreilly.
Reference Books	
1	NoelJerke,"VisualBasic6(TheCompleteReference)",SecondEdition,1999,TataMcGraw-Hill.
2	OverlandBrian,"VisualBasic6inPlainEnglish", ThirdEdition,1999,JohnWiley
NOTE: Latest Edition of Text books May be Used	
Web Resources	
1	www.tutorialspoint.com/listtutorials/visual-basic
2	https://www.google.co.in/books/edition/Beginning_Visual_Basic_2015/Ax4FCAAAQBAJ?hl=en&gbpv=1&dq=Visual%20basic&pg=PR1&printsec=frontcover
3	https://www.google.co.in/books/edition/Visual_Basic_6_Programming_Black_Book_Wi/a5iIRThV0RoC?hl=en

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	2	2	2	2	2	3	2
CO2	3	2	3	2	3	2	2	2	2	3	2
CO3	3	2	3	2	3	2	2	2	2	3	2
CO4	3	2	3	2	2	2	2	2	2	3	2
CO5	3	2	3	2	2	2	2	2	2	3	2
TOTAL	15	10	15	10	12	10	10	10	10	15	10
AVERAGE	3	2	3	2	2.4	2	2	2	2	3	2

ELECTIVE III-BUSINESS COMMUNICATION

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV31	3	0	0	III	3	3	50	50	100

Learning objectives

LO1	To enable the students to know about the principles, objectives and importance of communication in Commerce and trade.
LO2	To develop the students to understand about trade enquiries
LO3	To make the students aware about various types of business correspondence.
LO4	To develop the students to write business reports.
LO5	To enable the learners to update with various types of interviews

Perquisites:

Unit	Content	No of hours
I	**Introduction to Business Communication** Definition–Meaning–Importance of Effective Communication – Modern Communication Methods–Barriers to Communication–E-Communication-Business Letters: Need-Functions–Essentials of Effective Business Letters–Layout	9
II	**Trade Enquiries** Trade Enquiries–Orders and their Execution–Credit and Status Enquiries–Complaints and Adjustments–Collection Letters–Sales Letters–Circular Letters	9
III	**Banking Correspondence** Banking Correspondence–Types–Structure of Banking Correspondence–Elements of a Good Banking Correspondence–Insurance–Meaning and Types –Insurance Correspondence–Difference between Life and General Insurance–Meaning of Fire Insurance–Kinds–Correspondence Relating to Marine Insurance–Agency Correspondence–Introduction–Kinds–Stages of Agent Correspondence – Terms of Agency Correspondence	9
IV	**Secretarial Correspondence** Company Secretarial Correspondence – Introduction – Duties of Secretary – Classification of Secretarial Correspondence – Specimen letters – Agenda and Minutes of Report writing–Introduction–Types of Reports–Preparation of Report Writing	9
V	**Application Letters** Application Letters – Preparation of Resume – Interview: Meaning – Objectives and Techniques of Various Types of Interviews–Public Speech – Characteristics of a Good Speech	9
	TOTAL	45

Course Outcomes

CO1	Acquire the basic concept of business communication.
CO2	Exposed to effective business letter

CO3	Paraphrase the concept of various correspondences.
CO4	Prepare Secretarial Correspondence like agenda, minutes and various business reports.
CO5	Acquire the skill of preparing an effective resume
Textbooks	
1	Rajendra Pal & J.S.Korlahalli, Essentials of Business Communication-Sultan Chand & Sons-New Delhi.
2	Gupta and Jain, Business Communication, Sahitya bahvan publication,NewDelhi.
3	K.P.Singha, Business Communication, Taxmann, NewDelhi.
4	R.S.N.PillaiandBhagavathi.S,CommercialCorrespondence,ChandPublications,New Delhi.
5	M.S.RameshandR.Pattenshetty,EffectiveBusinessEnglishandCorrespondence,S.Chand &Co, Publishers,New Delhi.
Reference Books	
1	V.K.JainandOmPrakash, Businesscommunication,S.Chand, NewDelhi.
2	RithikaMotwani,Businesscommunication,Taxmann,NewDelhi.
3	ShirleyTaylor,CommunicationforBusiness-PearsonPublications-NewDelhi.
4	Bovee,Thill,Schatzman,BusinessCommunicationToday-PearsonEducation,PrivateLtd-NewDelhi.
5	Penrose,Rasbery,Myers,AdvancedBusinessCommunication,Bangalore.
NOTE:Latest Edition of Textbooks May be Used	
WebResources	
1	https://www.testpreptraining.com/business-communications-practice-exam-questions
2	https://bachelors.online.nmims.edu/degree-programs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	2	3	2	2	2	2	2	2	2
CO2	3	3	2	3	2	2	2	3	2	2	2
CO3	3	3	2	3	2	2	2	2	2	2	2
CO4	3	3	2	3	2	2	2	2	2	2	2
CO5	3	3	2	3	2	2	2	2	2	2	2
TOTAL	15	15	15	15	10	10	10	11	10	10	10
AVERAGE	3	3	3	3	2	2	2	2.2	2	2	2

SKILL ENHANCEMENT COURSE (SEC-III)

COMPUTERISED ACCOUNTING SYSTEM

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26USCV31	0	0	2	III	2	2	50	50	100

Learning Objectives

LO1	To instruct students on how clearing and forwarding agents operate in ports
LO2	To learn how the exporter prepares the export documentation and how the shipping and forwarding agents manage these documents.
LO3	To learn about import documents
LO4	To understand how the shipping and forwarding agents charge the fears
LO5	To comprehend the Risk in Import and Export

Prerequisites

Unit	Contents	No. of Hours
I	Spreadsheet concepts, Managing worksheets; Formatting, Entering data, Editing, and Printing a worksheet; Handling operators in formula, Project involving multiple spreadsheets, Organizing Charts and graphs - Graphical representation of data; Frequency distribution and its statistical parameters; Correlation and Regression	6
II	Basics of presentations: Slides, Fonts, Drawing, Editing, Inserting: Tables, Images, texts, Symbols, Media; Design; Transition; Animation; and Slideshow. Creating Business Presentations using above facilities-Slide Layouts and Master Slides	6
III	Financial accounting Packages- An Introduction – Introduction to Tally – Bookkeeping and Accounting – Starting Tally converses the Gateway & Menu – Creation of a Company – Account Groups and Ledger Creation – Setting of Company – Features and Configuration-Accounting Principles in Tally Environment	6
IV	Creation of ledger –Stock categories, Group, items, Voucher – Accounting Vouchers – New vouchers creation- Voucher – Bill wise Details - units of measures.	6
V	Generation of Report – Preparation of Final Accounts-Configuring for Printing– diverse reports- Maintaining back up - security passwords. - Cash Flow and Fund Flow Statements	6
	TOTAL	**30**

Course Outcomes

CO1	Recognize what a spreadsheet is and how to enter, format, update, and print data.
CO2	Makes presentation slides
CO3	Use a computerized accounting system to produce backup files, prepare final accounts, and prepare ratios.
CO4	Utilizing computerized accounting to establish ratios

Textbooks	
1.	Rizwan Ahamed P.2018, Tally ERP 9MarghamPublications, Chennai
Reference Books	
1.	Palanivel S.2018 Tally accounting software, Margham Publications, Chennai
2.	MichaelJardon,2018ComputerAccounting, Osborne Books Ltd, New Delhi

List of Practical

1. Construct a graphical representation of frequency distribution table for ten employees Score by using Count if and Frequency Function in Spreadsheet.
2. Prepare a data set with Correlation and regression function in spreadsheet.
3. Prepare a poster presentation by inserting Tables, Images, texts and Symbols.
4. Create a Business Plan Presentation with the help of Slides, Fonts, Drawing, editing; Media; Design; Transition; Animation and Slideshow features.
5. Creating a new Company in Tally and creating groups and Ledger accounts.
6. Prepare Stock categories, Groups and Stock items in Tally.
7. Create Accounting Vouchers for the trading business transactions in Tally.
8. Creation of Trial Balance in Tally
9. Create an invoice (Purchase /Sales) in Tally.
10. Prepare Final Accounts with adjustment in Tally.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2	2	3	3	3	2	3	3	3	2	2
CO2	2	2	3	3	3	2	3	3	3	2	3
CO3	3	3	3	3	3	2	3	3	3	2	2
CO4	3	3	3	2	2	2	3	3	3	2	2
CO5	2	3	3	2	3	2	3	3	3	2	3
TOTAL	12	13	15	13	14	10	15	15	15	10	12
AVERAGE	2.4	2.6	3	2.6	2.8	2	3	3	3	2	2.4

SKILL ENHANCEMENT COURSE (SEC-III)

CLEARING AND FORWARDING IN EXPORT AND IMPORT

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26USCV32	2	0	0	III	2	2	50	50	100

Learning Objectives

LO1	To instruct students on how clearing and forwarding agents operate in ports
LO2	To learn how the exporter prepares the export documentation and how the shipping and forwarding agents manage these documents.
LO3	To learn about import documents
LO4	To understand how the shipping and forwarding agents charge the fears
LO5	To comprehend the Risk in Import and Export

Prerequisites

Unit	Contents	No. of Hours
I	Learning and Forwarding Introduction to clearing and forwarding – Role and importance of Clearing and Forwarding in International Trade- Logistics and Supply Chain Management- Roles and responsibilities of clearing and forwarding agents- Relevant legal and regulatory frame work Documents required for clearing and forwarding	**6**
II	Documentsrequiredforexport-CommercialInvoice-Packinglist-CertificateofOrigin - GMP Certificate- Bill of Lading – Insurance – USFDA Registration Certificate- ISO 9000 certification- Export Licensing procedures and formalities	**6**
III	Import Documentation–Import Licence under Advance Authorization-Customs Inspection, Examination and Audits – General Provisions regarding Import - Import Trade Policy and Regulatory Framework- Bill of Entry	**6**
IV	Freight forwarding services in import and export – Mode of Transport- Air, Sea-Freight rates- INCO terms – Packaging, labelling and cargo handling requirements -Role and Functions of Freight Forwarders and Logistics Providers	**6**
V	Risk Assessment – Insurance coverage and claims – Methods of Export and Import Payments- Export Earning Foreign Currency – Letter of credit and international payments system- Managing trade related financial documents	**6**
	TOTAL	**30**

Course Outcomes

CO1	Explain the role of clearing agents in ports
CO2	Discuss the export procedure and documentation
CO3	Explain the import documentation procedure
CO4	Equip Freight forwarding services
CO5	Discuss the determinants of Risk Management

Textbooks

➢	Mahajan M.I, 2021, Export Policy, Procedure and Documentation, Snow white Publications, Mumbai

➢	Natarajan L 2022, Import and Export Procedure (Import Management), Margham Publications, Chennai.
Reference Books	
➢	Rathor B.S and Rathor, J.S 2022, Export Marketing, Himalaya Publishing House, New Delhi.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2	2	3	3	3	2	3	3	3	2	2
CO2	2	2	3	3	3	2	3	3	3	2	3
CO3	3	3	3	3	3	2	3	3	3	2	2
CO4	3	3	3	2	2	2	3	3	3	2	2
CO5	2	3	3	2	3	2	3	3	3	2	3
TOTAL	12	13	15	13	14	10	15	15	15	10	12
AVERAGE	2.4	2.6	3	2.6	2.8	2	3	3	3	2	2.4

SKILL ENHANCEMENT COURSE (SEC-IV) – COMPUTING SKILLS

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26USV33	2	0	0	III	2	2	50	50	100

Learning Objectives

LO1	To provide basic knowledge of computer fundamentals and digital concepts
LO2	To develop practical skills in office automation tools.
LO3	To enhance data handling and spreadsheet analysis abilities.
LO4	To improve presentation and documentation skills using software tools.
LO5	To promote safe and responsible use of internet technologies.

Prerequisites

Unit	Contents	No. of Hours
I	**Fundamentals of Computers** Introduction to Computers – Characteristics and Applications – Types of Computers – Components of Computer System – Input and Output Devices – Memory and Storage Devices – Software: System and Application Software – Operating System Basics.	**6**
II	**Word Processing** Introduction to Word Processing – Creating, Editing and Formatting Documents – Page Setup – Tables – Mail Merge – Inserting Images and Objects – Printing Documents.	**6**
III	**Spreadsheet Applications** Introduction to Spreadsheets – Creating Worksheets – Entering and Editing Data – Formulas and Functions – Sorting and Filtering – Charts and Graphs – Basic Data Analysis.	**6**
IV	**Presentation Tools** Basics of Presentation Software – Creating Slides – Slide Layout and Design – Inserting Text, Images, Charts – Animations and Transitions – Slide Show and Printing.	**6**
V	**Internet and Cyber Security** Introduction to Internet – Web Browsers and Search Engines – Email and Communication Tools – Cloud Computing Basics – Cyber Security Concepts – Online Safety and Digital Etiquette.	**6**
	TOTAL	**30**

Course Outcomes

CO1	Understand basic computer components and operating systems.
CO2	Create and format professional documents using word processing software.
CO3	Perform calculations and analyze data using spreadsheet tools.
CO4	Design effective presentations using presentation software.
CO5	Use internet services securely for academic and professional purposes.

Textbooks

1	Alexis Leon & Mathews Leon, *Fundamentals of Information Technology*, Vikas Publishing House.
2	Sinha P.K. & Sinha Priti, *Computer Fundamentals*, BPB Publications.
Reference Books	
1	Rajaraman V., *Fundamentals of Computers*, PHI Learning.
2	Peter Norton, *Introduction to Computers*, McGraw Hill Education.
3	Sanjay Saxena, *MS Office for Everyone*, Vikas Publishing House.

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	1	2	2	1	1
CO2	2	1	2	2	1	1
CO3	2	1	2	2	1	1
CO4	2	1	2	2	1	1
CO5	2	1	2	2	1	1
Weightage of course contributed to each PSO	10	5	10	10	5	5

COMMON - ENVIRONMENTAL STUDIES

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UEVS31	2	0	0	III	2	2	50	50	100

Learning Objectives	
LO1	To study the multidisciplinary nature of environmental studies, including the scope, importance, and sustainable management of natural resources such as forests, water, minerals, food, energy, and land.
LO2	To understand different types of ecosystems, energy flow, ecological succession, food chains, food webs, and ecological pyramids.
LO3	To examine the levels of biodiversity, its distribution in India and globally, threats to biodiversity, and conservation strategies including in-situ and ex-situ methods.
LO4	To identify causes, effects, and control measures of various types of pollution, and to understand solid waste management and disaster management techniques.
LO5	To analyze social and environmental issues such as climate change, global warming, and population growth, along with environmental protection laws and sustainable development practices.

Prerequisites:

Unit	Contents	No. of Hours
I	**THE MULTIDISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES** Definition, scope and importance Natural resources and associated problems: a) Forest resources: Use and over-exploitation, deforestation, timber extraction, dams and their effects on forests and tribal people. b) Water resources: Use and over-utilization of surface and ground water, floods, drought, dams-benefits and problems, water conservation and watershed management. c) Mineral resources: Use and exploitation, environmental effects. d) Food resources: World food problems, changes, effects of modern agriculture, fertilizer-pesticide problems. e) Energy resources: Growing energy needs, renewables lion renewable energy sources, alternate energy sources. f) Land resources: Land as a resource, land degradation, man-induced landslides, soil erosion and desertification.	6
II	**ECOSYSTEMS** a) Forest Ecosystem b) Grassland Ecosystem c) Desert ecosystem d) Aquatic Ecosystem (Ponds, rivers, oceans, estuaries) Energy flow in the ecosystem Ecological succession Food Chains, Food Webs and Ecological Pyramids.	6

III	**BIODIVERSITY AND ITS CONSERVATION** Introduction Definition: Genetic, species and ecosystem diversity. Biogeographically classification of India ,Values of Biodiversity, Biodiversity at global, national and local levels India as a mega-diversity nation, Hot-Spots of biodiversity Threats to biodiversity Endangered and endemic species of India , Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity	**6**
IV	**ENVIRONMENTAL POLLUTION** Definition- Causes, effects and control measures of: - a) Air Pollution b) Water Pollution c) Soil Pollution d) Marine Pollution e) Noise Pollution f) Thermal Pollution Solid Waste Management, Disaster Management: Floods, earthquake, cyclone and landslides.	**6**
V	**SOCIAL ISSUES AND THE ENVIRONMENT** Climatic change, global warming, acid rain, ozone depletion. Wasteland reclamation Consumerism and Waste products, use and through plastics Environment Protection Act Air (Prevention and Control of Pollution) Act Water (Prevention and Control of Pollution) Act Wildlife Protection Act Forest Conservation Act Population Explosion - Family Welfare Programme Human Rights	**6**
	TOTAL	**30**

Course Outcomes

CO1	Students will be able to explain the scope and importance of environmental studies and analyze the use, over-exploitation, and conservation of natural resources.
CO2	Students will be able to describe ecosystem types, energy flow, ecological succession, and relationships such as food chains, food webs, and ecological pyramids.
CO3	Students will be able to assess biodiversity at different levels, identify threats, and explain conservation methods including in-situ and ex-situ approaches.
CO4	Students will be able to identify various types of pollution, analyze their causes and effects, and suggest control measures along with waste and disaster management practices.
CO5	Students will be able to evaluate major environmental issues such as climate change and population growth, and understand environmental protection laws and sustainable practices.

Reference Books

1	G.S. Vijayalakshmi, A.G. Murugesan and N. Sukumaran. 2006. Basics of Environmental Science, ManonmaniamSundaranar University Publications, Tirunelveli , pp.160.
2	Agarwal. K.C. 2001. Environmental Biology, Nidi Publications Limited, Bikaner
3	A.K.De. 1999. Environmental Chemistry, Wiley Eastern Limited, India.
4	Jadhav,H. and Bhosale, V.M.1995. Environmental Protection and Laws, Himalaya Publishing House, Delhi. pp284
5	Odum, E.P.1971. Fundamentals of Ecology, W.B.Saunders Co., USA. pp.574.

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	2	2	2	2	2
CO2	2	3	2	2	2	2
CO3	2	3	3	3	2	2
CO4	2	3	2	2	2	2
CO5	3	3	2	2	2	2
Weightage of course contributed to each PSO	12	14	11	11	10	10

Semester - IV

Semester–4									
Course Code	**Part**	**Course category**	**Course Name**	**Hours/ Week**	**Examination**				**Credits**
					Duration in Hours	**Max Marks**			
						CIA	**ESE**	**Total**	
26U1TL41	I	Language – I	Tamil–IV	5	3	50	50	100	3
26U1HD41			Hindi –IV						
26U1MY41			Malayalam–IV						
26U1FR41			French – IV						
26U2EN41	II	Language – II	English–IV	5	3	50	50	100	3
26UCCV41	III	Core– VII	Corporate Accounting – II	6	3	50	50	100	4
26UCCV42	III	Core –VIII	Business Mathematics & Statistics	5	3	50	50	100	4
26UECV41	III	EC - IV	JAVA Programming	3	3	50	50	100	3
26UECV42			Computer Networks						
26UECV43			Operating systems						
26USCV41	III	SEC –V	Fundamentals of Fin tech	2	3	50	50	100	2
26USCV42			Filling of GST Returns		3	50	50	100	
26USCV43	III	SEC –VI	Employability Skills	2	3	50	50	100	2
26UVBE41	V	Common	Value Based Education	2	3	50	50	100	2
Total				**30**				**800**	**23**

SECOND YEAR – SEMESTER – IV

CORE COURSE VII – CORPORATE ACCOUNTING II

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV41	6	0	0	IV	4	6	50	50	100

Learning Objectives	
LO1	To understand the various forms of internal and external reconstruction and amalgamation
LO2	To be aware of financial companies' final statements
LO3	To comprehend how insurance company accounts are treated in accounting
LO4	To comprehend the steps involved in creating a consolidated balance sheet
LO5	To gain knowledge about how to wind up a business

Prerequisites:

Unit	Contents	No. of Hours
I	**Amalgamation, Absorption Reconstruction** – Meaning - Purchase Consideration - Lump sum Method, Net Assets Method, Net Payment Method, Intrinsic Value Method - Methods of Accounting for Amalgamation- The Purchase Method (Excluding Inter-Company Holdings). Internal & External Reconstruction- Conversion of Stock – Increase and Decrease of Capital – Reserve Liability - Accounting Treatment of External Reconstruction (Simple problem)	18
II	**Accounting of Banking Companies** Accounting of Banking Companies Final Statements of Banking Companies (As Per New Provisions) - Non-Performing Assets-Rebate on Bills Discounted-Profit and Loss a/c - Balance Sheet as Per Banking Regulation Act 1949.	18
III	**Insurance Company Accounts:** Meaning of Insurance – Principles – Types – Preparation of Final Accounts of Insurance Companies – Accounts of Life Insurance Business – Calculation of Premium – Factors and Methods -Accounts of General Insurance Companies -New Format.	18
IV	**Consolidated Financial Statements** Introduction - Principles of Consolidation-Holding & Subsidiary Company-Legal Requirements Relating to Preparation of Accounts -Preparation of Consolidated Balance Sheet (Excluding Inter-Company Holdings)	18
V	**Liquidation of Companies** Meaning-Modes of Winding Up – Preparation of Statement of Affairs and Statement of Deficiency or Surplus (List H) Order of Payment–Liquidators Remuneration - Liquidator's Final Statement of Accounts.	18
	TOTAL	**90**

Course Outcomes	
CO1	Recognize how amalgamation and internal and external rebuilding are handled.
CO2	Build the banking companies' profit and loss statement and balance sheet according to the guidelines.
CO3	Compile and prepare the insurance firms' final accounts according to the guidelines.
CO4	Provide the controlling companies combined financial statements
CO5	Creating the liquidator's final financial statement

Textbooks	
1	S.P. Jain and K.L Narang. Advanced Accountancy, Kalyani Publishers, New Delhi.
2	Dr.K.S. Raman and Dr.M.A.ArulAnandam, AdvancedAccountancy,Vol.II, Himalaya PublishingHouse,Mumbai.
Reference Books	
1	B.Raman,CorporateAccounting,Taxmann,NewDelhi
2	M.C.Shukla,AdvancedAccounting,S.Chand,NewDelhi

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	2	2	3	2	3	2	2
CO2	3	2	3	2	3	2	3	2	3	2	2
CO3	3	2	3	2	3	2	3	2	3	2	2
CO4	3	2	3	2	2	2	3	2	3	2	2
CO5	3	2	3	2	2	2	3	2	3	2	2
TOTAL	15	10	15	10	12	10	15	10	15	10	10
AVERAGE	3	2	3	2	2.4	2	3	2	3	2	2

CORE VIII-BUSINESS MATHEMATICS & STATISTICS

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV42	5	0	0	IV	4	5	50	50	100

Learning Objectives

LO1	To impart knowledge on the basics of ratio, proportion, indices and proportions
LO2	To learn about simple and compound interest and arithmetic, geometric and harmonic progressions.
LO3	To familiarize with the measures of central tendency
LO4	To conceptualize with correlation co-efficient
LO5	To gain knowledge on time series analysis

Prerequisite: Should have studied Commerce in XII Std

Unit	Contents	No. of Hours
I	**Ratio:** Ratio, Proportion and Variations, Indices and Logarithms.	**15**
II	**Interest and Annuity** Banker's Discount–Simple and Compound Interest Arithmetic, Geometric and Harmonic Progressions. Annuity-Meaning –Types of Annuity Applications.	**15**
III	**Business Statistics Measures of Central Tendency** Arithmetic Mean, Geometric Mean - Harmonic Mean- Mode and Median – Quartiles – Deciles - Percentiles. Measures of Variation – Range – Quartile Deviation and Mean Deviation-Variance and Standard Deviation & Co-efficient.	**15**
IV	**Correlation and Regression** Correlation-Karl Pearson's Coefficient of Correlation–Spearman's Rank Correlation – Regression Lines and Coefficients.	**15**
V	**Time Series Analysis and Index Numbers** Time Series Analysis: Secular Trend – Seasonal Variation – Cyclical Variations-Index Numbers–Aggregative and Relative Index–Chain and Fixed Index–Wholesale Index–Cost of Living Index.	**15**
	TOTAL	**75**

Course Outcomes

CO1	Learn the basics of ratio, proportion, indices and logarithm
CO2	Familiarize with calculations of simple and compound interest and arithmetic, geometric and harmonic progressions.
CO3	Determine the various measures of central tendency
CO4	Calculate the correlation and regression co-efficient.
CO5	Assess problems on time series analysis

Textbooks

1	Dr.B.N.Gupta, Busines Mathematics & Statistics, Shashibhawan publishing house, Chennai
2	Asim Kumar Manna, Business Mathematics & Statistics, Mc Grawhill education, Noida
3	A.V.Rayarikarand Dr.P.G.Dixit, Business Mathematics & Statistics, Nirali Prakashan publishing, Pune

4	Dr.S.Sachdeva, Business Mathematics & Statistics, Lakshmi Narain Agarwal, Agra
5	P.R.Vittal, Business Mathematics & Statistics, Margham Publications, Chennai
Reference Books	
1	J.K.Sharma, Fundamentals of business statistics, Vikas publishing, Noida
2	Peter Waxman, Business Mathematics & Statistics, Prentice Hall, New York
3	Andre Francis, Business Mathematics & Statistics, Cengage Learning EMEA, Andover
4	Aggarwal BM, Business Mathematics & Statistics, Ane Book Pvt. Ltd., New Delhi
5	R.S.Bhardwaj, Business Mathematics & Statistics, Excel Books Publisher, New Delhi
NOTE: Latest Edition of Text books May be Used	
Web Resources	
1	https://www.britannica.com/biography/Henry-Briggs
2	https://corporatefinanceinstitute.com/resources/data-science/central-tendency/
3	https://www.expressanalytics.com/blog/time-series-analysis/

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PSO1**	**PSO2**	**PSO3**
CO1	3	2	3	2	2	2	3	2	3	2	2
CO2	3	2	3	2	3	2	3	2	3	2	2
CO3	3	2	3	2	3	2	3	2	3	2	2
CO4	3	2	3	2	2	2	3	2	3	2	2
CO5	3	2	3	2	2	2	3	2	3	2	2
TOTAL	15	10	15	10	12	10	15	10	15	10	10
AVERAGE	3	2	3	2	2.4	2	3	2	3	2	2

ELECTIVE CORE - IV - JAVA PROGRAMMING

<table>
<tr><th rowspan="2">Subject Code</th><th rowspan="2">L</th><th rowspan="2">T</th><th rowspan="2">P</th><th rowspan="2">S</th><th rowspan="2">Credits</th><th rowspan="2">Inst. Hours</th><th colspan="3">Marks</th></tr>
<tr><th>CIA</th><th>External</th><th>Total</th></tr>
<tr><td>26UECV41</td><td>3</td><td>0</td><td>0</td><td>IV</td><td>3</td><td>3</td><td>50</td><td>50</td><td>100</td></tr>
</table>

Learning Objectives	
LO1	To get in-depth Knowledge about the evolution of java and its Features
LO2	Bring out the difference and similarities between C, C++ and java.
LO3	Develop programmers in Java with its special Features.
LO4	To apply the exception handling in Programming
LO5	Implementing the code in internet using Applet with AWT controls.

Perquisites:

Unit	Contents	No. of Hours
I	**Introduction to Java** - Features of Java – Java Environment - Lexical Issues or tokens- Data Types - Variables - Arrays - Operators – Conditional Statements-Iterative Statements-General Structure of a Java Program.	9
II	**Classes and Objects** – Fields and Methods Declaration -Constructors – Method Overloading - Static keyword – Final keyword -String Class - String Buffer Class. Java Utilities: Scanner, Stack, Date, Vector, Enumeration. Inheritance: Keyword extends -Types of Inheritance–Keyword super-Overriding of methods Abstract class and methods.	9
III	**User-Defined Packages**: Creating and accessing Packages. Interface: Defining Interface-Keyword implements -Multiple Inheritance using Interface. Threads: Introduction- Thread States or life cycle of thread Creation of threads using Thread class and Runnable interface –Thread methods -Thread Priorities -Thread Synchronization.	9
IV	**Exception Handling:** Types of errors - Syntax of Exception handling code – Built-in Exceptions – Multiple catch statements – Nested try block – Finally statement- Throwing our own exception using throw – Method throwing exception using throws keyword - Managing Errors.	9
V	**Applets**: Difference between applet and application -Applet life cycle - Building Applet code using Applet tag – Passing parameters to Applets Drawing various shapes using Graphics Class. AWT Controls: Buttons, Labels, Text Field, Text Area, Choice, Check Box, List, Scroll Bar and Layout Managers.	9
	TOTAL	**45**

Course Outcomes	
CO1	Importance of Java comparing the other language.
CO2	Develop program using constructors and its types.
CO3	Implementing the concept Exception handling various application.
CO4	Analyzing different types of inheritance.

CO5	Life Build Applet code using AWT controls and Layout managers
Textbooks	
1	E.Balagurusamy,"Programming with Java", FourthEdition,2010,TataMcGraw-Hill
2	PRadhaKrishna,"ObjectOrientedProgrammingthroughJava",SecondEdition,2007, UniversitiesPress.
3	JohnRHubbard,Programming with Java–Schuam'sOutlineSeries
Reference Books	
1	K.ArnoldandJ.Gosling,"TheJavaProgrammingLanguage",SecondEdition,1996,Addison Wesley
2	P.NaughtonandH.Schildt,"Java2(T heCompleteReference)",EightEdition,2005,Tata McGraw Hill
3	KathySierraandBertBates, "HeadFirstJava",SecondEdition, 2003,Oreilly
NOTE:Latest EditionofTextbooksMaybeUsed	
WebResources	
1	www.tutorialspoint.com/java/java-quick-guide.htm
2	www.ntu.edu.sg/home/ehchua/programming/java/J3a_OOPBasics.html
3	www.tutorialspoint.com/java/java_overview.htm

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	2	2	3	2	3	2	2
CO2	3	2	2	2	3	2	3	2	3	2	2
CO3	3	2	3	2	3	2	3	2	3	2	2
CO4	3	2	2	2	2	2	3	2	3	2	2
CO5	3	2	3	2	2	2	3	2	3	2	2
TOTAL	15	10	13	10	12	10	15	10	15	10	10
AVERAGE	3	2	2.6	2	2.4	2	3	2	3	2	2

ELECTIVE CORE IV- COMPUTER NETWORKS

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECV42	3	0	0	IV	3	3	50	50	100

Learning Objectives

LO1	Study the basic tax no my and terminology of the computer networking and enumerate the layers of OSI model
LO2	To Acquire knowledge of physical layer
LO3	To Apply the data link layer in Networks
LO4	To analyze the network layer and design issues
LO5	To imply of transport layer and transport protocol

Prerequisite:

Unit	Contents	No of Hours
I	Introduction–Uses of Computer Networks–Network Hardware-Network Software OSI Reference Model – TCP/IP Reference Model	9
II	Physical Layer–Guided Transmission media–Wireless Transmission–Public switched Telephone Network –Local Loop – Trunks – Multiplexing- Switching.	9
III	ink Layer –Design Issues-Error Detection and Correction-Simplex Stop and Wait l- Sliding Window Protocol.	9
IV	Network Layer–Design Issues–Routing Algorithm-IP Protocol–IP Addresses Internet Control Protocols.	9
V	Transport Layer: Addressing- Connection Establishment-Connection Release. Internet Transport Protocol: UDP-TCP. Application Layer: DNS-Electronic Mail-World Wide Web	9
	TOTAL	**45**

Course Outcomes

CO1	Illustrate the usage of computer networks and functions of each layer in OSI and TCP/IP model
CO2	Implications of Physical layer, and apply the min real time applications.
CO3	Design of Data link layer
CO4	Design of network link layers and generate IP Address
CO5	Design of transport layer and Protocols needed for end –end delivery of packets Role of layer in real time applications

Textbooks

1	AndrewS. Tanenbaum, “Computer Networks”,FourthEdition, 2008,PHI
2	BehrouzandForouzan,“DataCommunicationandNetworking”,ThirdEdition, 2006, TMH
3	Tanenbaum,A.S.(2004).ComputerNetworks.PearsonEducation

Reference Books

1	Couch DigitalandAnalogcommunicationsystems, MacMillanpublishingCo,1990.

2	William Stallings, Data and Computer Communications, Mac Millan Publishing Co, second editi on 1989
3	Prokis, J.Q,Digital Communications, Mcgraw Hill, 1983
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	http://ceit.aut.ac.ir/~91131079/SE2/SE2%20Website/Lecture%20Slides.html
2	https://www.google.co.in/books/edition/Computer_Networks/J_1SAAAAMAAJ?hl=en&gbpv=0&bsq = computer%20networks

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PSO1**	**PSO2**	**PSO3**
CO1	3	2	3	2	2	2	2	2	3	2	2
CO2	3	2	2	2	3	2	2	2	3	2	2
CO3	3	2	3	2	3	2	2	2	3	2	2
CO4	3	2	2	2	2	2	2	2	3	2	2
CO5	3	2	3	2	2	2	2	2	3	2	2
TOTAL	15	10	13	10	12	10	10	10	15	10	10
AVERAGE	3	2	2.6	2	2.4	2	2	2	3	2	2

ELECTIVE CORE IV-OPERATING SYSTEMS

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECV43	3	0	0	IV	3	3	50	50	100

Learning Objectives

LO1	To state the Services provided to the user and hardware by operating system.
LO2	To communicate with the process through system calls
LO3	To define dead locks and identify its presence in the system
LO4	To design appropriate memory management scheme
LO5	To learn the mechanisms of OS to handle processes and threads and their communication

Prerequisite:

Unit	Contents	No. of Hours
I	**Introduction-** views and goals - Operating-System Services - User and Operating-System interface – System Call- Types of System Calls – Operating System Design and Implementation - Operating- System Structure. Process Management: Process concept Process Scheduling - Operations on Processes- Inter process Communication. Threads: Types of threads	9
II	**Process Scheduling:** Basic Concepts- Scheduling Criteria - Scheduling Algorithms Multiple-Processor Scheduling–CPU Scheduling. Synchronization: TheCritical-SectionProblemSynchronizationHardware–Semaphores-Classic Problem of Synchronization	9
III	**Deadlocks:** Deadlock Characterization-Methods for Handling Deadlocks- Deadlock Prevention- Deadlock Avoidance - Deadlock Detection - Recovery from Deadlock.	9
IV	**Memory-Management Strategies:** Swapping-Contiguous Memory Allocation – Segmentation- Paging - Structure of the Page Table. Virtual-Memory Management: Demand Paging - Page Replacement - Allocation of Frames - Thrashing.	9
V	**Storage Management:** File System- File Concept - Access Methods- Directory and Disk Structure-File Sharing-Protection. Allocation Methods - Free- Space Management - Efficiency and Performance – Recovery	9
	TOTAL	**45**

Course Outcomes

CO1	Illustrate OS with its view and goals and services rented by it Deign of OS with its structure.
CO2	Allocation of process through scheduling algorithms and analyze critical section problems and its Usage
CO3	Know the Mutual exclusion, Deadlock detection and agreement protocols for deadlock prevention and its avoidance
CO4	Strategies of memory management schemes and the usage of virtual memory and Apply prepare replacement to algorithms to avoid thrashing

CO5	Apply prepare Replacement to algorithms to avoid thrashing and Methods to allocate files for Proper protection.
Textbooks	
1	A.Silberschatz P.B.Galvin,Gange. “OperatingSystemConcepts”,NinthEdition,2013,Addison Wesley Publishing Co.
2	H.M.Deitel,“AnIntroductiontoOperatingSystem”,SecondEdition, AddisonWesley
3	ChandraMohanI, OperatingSystems,PHILearningPVT Ltd,2013
References books	
1	AndrewS.Tanenbaum,“ModernOperatingSystems”,Prentice HallofIndiaPvt.Ltd,2003.
2	William Stallings, “Operating System”, Prentice HallofIndia,4 Edition, 2003.
3	Pramod Chandra Bhatt– “An Introduction to Operating Systems, Concepts and Practice”, PHI, 2003
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	http://www.cs.kent.edu/~farrell/osf03/oldnotes/
2	https://it325blog.fles.wordpress.com/2012/09/operating-system-concepts-7-th-edition.pdf
3	https://www.google.co.in/books/edition/OPERATING_SYSTEMS/eei_jHVJi3oC?hl=en&gbpv=1&dq=operating%20systems&pg=PR2&printsec=frontcover

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	3	2	2	2	3	3	2
CO2	3	2	2	2	3	2	2	2	3	3	2
CO3	3	2	3	2	3	2	2	2	3	3	2
CO4	3	2	2	2	3	2	2	2	3	3	2
CO5	3	2	3	2	3	2	2	2	3	3	2
TOTAL	15	10	13	10	15	10	10	10	15	15	10
AVERAGE	3	2	2.6	2	3	2	2	2	3	3	2

SKILL ENHANCEMENT COURSE (SEC-V) – FUNDAMENTALS OF FINTECH

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26USCV41	2	0	0	IV	2	2	50	50	100

Learning Objectives

LO1	To educate the students to introduce Fin tech
LO2	To gain knowledge in Financial Technology and Digital payments
LO3	To acquire knowledge in Crypto currencies
LO4	To know the knowledge in Block chAin Technology
LO5	To understand the effects off in techno various sectors

Prerequisites:

Unit	Contents	No. of Hours
I	Introduction – Meaning of FinTech - Definitions - The History and Evolution of the Fintech Industry - FinTech Ecosystem - Recent Developments - FinTech in India - FinTech Market Trends in India – Types of FinTech or Transformation of Financial Services - Benefits of FinTech - Drawbacks of FinTech	06
II	Introduction -Artificial Intelligence (AI) in FinTech-Machine Learning in FinTech - Machine Learning in Accounting and Finance - Robotic Process Automation (RPA) –- Financial Data Analytics - Data Science and Big Data in FinTech - Digital Payments - Cashless Society -The Story of Mobile Money -RTGS networks.	06
III	Crypto currencies – features - benefits - disadvantages- Outline of crypto currency – types- wallet - Legal and Regulatory Implications - legal position of crypto currencies in India - Impact on crypto currencies -Centralized and Decentralized Exchanges-Risks associated with exchanges	06
IV	Block chain Technology in FinTech – An understanding of Block chain technology, its potential, and applications - Working mechanism of block chain-BCT in Banking – Benefits of BCT in banking- BCT in Indian Banking Sector - BCT in supply chain management	06
V	Effects of Fin-tech on Payment Innovations – The Implications of Fintech on Real Estate, Insurance, Health, And Payment Innovations - The effects of Fin-tech on Payment Innovations – Health- Real Estate- Insurance Sector-Capital Market - Key Fin-tech trends - FinTech Around the Globe: Asia, Middle East, South America, Europe, Southeast Asia / Australia and Africa	06
	TOTAL	**30**

Course Outcomes

CO1	Identify the benefits of Fin Tech industry.
CO2	Enable a better understanding of Financial Technology and Digital Payments
CO3	Analyze the functioning of Crypto currency
CO4	Explain the impact of Block Chain Technology
CO5	Evaluate the effects of Fintech on various sectors

Textbooks	
➢	DheenadhayalanVand Vijay C,2022 Fintech, Vijay Nicole Imprints Pvt. Ltd, Chennai
➢	Sanjay Phadke.,2020 Fintech Future: The Digital DNA of Finance Paper back
Reference Books	
➢	Agustin Rubini, 2021 Fintech in a Flash: Financial Technology Made Easy (new edition) Kindle Edition

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	2	2	3	2	3	2	2
CO2	2	2	3	3	3	2	3	2	3	2	2
CO3	2	2	2	3	3	2	3	2	3	2	2
CO4	3	2	2	2	2	2	3	2	3	2	2
CO5	3	2	2	2	2	2	3	2	3	2	2
TOTAL	13	10	12	12	12	10	15	10	15	10	10
AVERAGE	2.6	2	2.4	2.4	2.4	2	3	2	3	2	2

SKILL ENHANCEMENT COURSE (SEC-V) – FILING OF GST RETURNS

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26USCV42	2	0	0	IV	2	2	50	50	100

Learning Objectives

LO1	To explain the concept and significance of Goods and Services Tax (GST).
LO2	To develop the ability to prepare and organize data required for GSTR forms.
LO3	To demonstrate knowledge of the procedures for filing GST returns.
LO4	To describe the step-by-step process involved in GST filing.
LO5	To analyze the penalties and consequences of late filing of GST returns.

Prerequisites

Contents

1. Forms and due dates
2. GSTR Registration Forms
3. ITC Forms
4. Steps involved in filing GST return
5. GSTR1: Return for Outward Supplies
6. Difference between GSTR2A and GSTR2B
7. GSTR3B: Summary of inward and Outward Supplies
8. GSTR4: Return for Composition Dealers
9. GSTR5: Return for Non-Resident Taxable Persons
10. GSTR6: Return for Input Service Distributors
11. GSTR7: Return for Taxpayers Deducting TDS
12. GSTR8: Return for E-Commerce Operators Collecting TCS
13. Penalty for late Filing of GST Return
14. Interest on Outstanding Tax

30 Hours

Course Outcomes

CO1	Demonstrate the ability to file GST returns through the online portal.
CO2	Prepare and file various GSTR forms (GSTR-1 to GSTR-11).
CO3	Explain the step-by-step procedure involved in GSTR filing.
CO4	Assess the penalties applicable for late filing of GST returns.
CO5	Explain the concept and calculation of interest on outstanding tax.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	2	2	3	2	2	2	3
CO2	3	3	2	2	3	2	3	2	3	2	3
CO3	3	3	2	2	3	2	3	2	2	2	2
CO4	3	3	3	2	2	2	3	2	3	2	2
CO5	3	2	2	2	2	2	3	2	3	2	2
TOTAL	15	13	12	10	12	10	15	10	13	10	12
AVERAGE	3	2.6	2.4	2	2.4	2	3	2	2.6	2	2.4

SKILL ENHANCEMENT COURSE VI– EMPLOYBILITY SKILLS

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECV44	2	0	0	IV	2	2	50	50	100

Learning Objectives	
LO1	To equip students with essential skills required for employability.
LO2	To develop professional communication and interpersonal abilities.
LO3	To enhance analytical thinking and problem-solving skills.
LO4	To prepare students for recruitment and workplace expectations
LO5	To foster ethical values and adaptability in professional life.
Prerequisites:	

Unit	Contents	No. of Hours
I	**Communication and Interpersonal Skills** Meaning and Importance of Communication – Verbal and Non-Verbal Communication – Listening Skills – Barriers to Communication – Business Communication – Professional Etiquette.	6
II	**Personality and Self-Development** Self-Awareness – Self-Motivation – Positive Attitude – Emotional Intelligence – Goal Setting – Stress Management.	6
III	**Resume Writing and Interview** Resume and CV Writing – Cover Letter – Job Application Process – Types of Interviews – Group Discussion – Body Language and Interview Etiquette.	6
IV	**Resume Writing and Interview Skills** Resume and CV Writing – Cover Letter – Job Application Process – Types of Interviews – Group Discussion – Body Language and Interview Etiquette.	6
V	**Resume Writing and Interview Skills** Resume and CV Writing – Cover Letter – Job Application Process – Types of Interviews – Group Discussion – Body Language and Interview Etiquette.	6
	TOTAL	**30**

Course Outcomes	
CO1	Communicate effectively in professional and workplace environments.
CO2	Demonstrate confidence, teamwork, and leadership qualities.

CO3	Prepare job applications, resume, and perform effectively in interviews.
CO4	Apply problem-solving and decision-making skills in real-life situations.
CO5	Exhibit professional ethics and continuous learning attitude.
Textbooks	
1	Barun K. Mitra, *Personality Development and Soft Skills*, Oxford University Press.
2	S.P. Dhanavel, *English and Soft Skills*, Orient Black Swan
Reference Books	
1	K. Alex, *Soft Skills: Know Yourself and Know the World*, S. Chand Publishing
2	Dale Carnegie, *How to Win Friends and Influence People*, Simon & Schuster.
3	Dr. K. Ravindran & Dr. N. Prabhakaran, *Employment Skills*, Scitech Publications.

CO/PSO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**	**PSO 6**
CO1	2	1	2	2	1	1
CO2	2	1	2	2	1	1
CO3	2	1	2	2	1	1
CO4	2	1	2	2	1	1
CO5	2	1	2	2	1	1
Weightage of course contributed to each PSO	10	5	10	10	5	5

COMMON - VALUE BASED EDUCATION

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UVBE41	2	0	0	IV	2	2	50	50	100

Learning Objectives

LO1	To provide basic knowledge of the Indian Constitution and its framework.
LO2	To understand fundamental rights, duties, and directive principles.
LO3	To create awareness about human rights and their protection mechanisms.
LO4	To develop analytical skills regarding constitutional and human rights issues.
LO5	To promote values of equality, justice, and democracy among students.

Prerequisites:

Unit	Contents	No. of Hours
I	**Introduction to Indian Constitution** **Introduction**: Meaning and importance of Constitution - Historical background of Indian Constitution - Making of the Constitution (Constituent Assembly) - Salient features of Indian Constitution - Preamble – Meaning, Objectives and Values.	6
II	**Fundamental Rights and Duties** Fundamental Rights – Types and significance - Right to Equality, Freedom, Religion, Cultural & Educational Rights - Right to Constitutional Remedies - Fundamental Duties – Meaning and importance.	6
III	**Directive Principles of State Policy** Meaning and objectives - Classification of Directive Principles - Relationship between Fundamental Rights and DPSP - Role in governance and welfare state.	6
IV	**Human Rights – Concepts and Development** Meaning and definition of Human Rights - Evolution of Human Rights - Universal Declaration of Human Rights (UDHR) - Types of Human Rights – Civil, Political, Economic, Social & Cultural	6
V	**Human Rights in India:** Human Rights Protection Act, 1993 - National Human Rights Commission (NHRC) – Structure and functions - Role of NGOs in Human Rights protection - Issues: Women, Children, Minorities & Environment - Contemporary Human Rights challenges in India	6
	TOTAL	**30**

Course Outcomes

CO1	Explain the structure and features of the Indian Constitution.
CO2	Identify and interpret Fundamental Rights and Duties.
CO3	Analyze the role of Directive Principles in governance.
CO4	Understand the concept and importance of Human Rights.
CO5	To create a congenial climate in the organization

Textbooks

- Durga Das Basu – *Introduction to the Constitution of India*

Reference Books	
1	V.N. Shukla – *Constitution of India*
2	M. Laxmikanth – *Indian Polity*
3	UpendraBaxi – *The Future of Human Rights*
4	H.O. Agarwal – *Human Rights*
5	P.M. Bakshi – *The Constitution of India*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	2	2	3	2	2	2	3
CO2	3	3	2	2	3	2	3	2	3	2	3
CO3	3	3	2	2	3	2	3	2	2	2	2
CO4	3	3	3	2	2	2	3	2	3	2	2
CO5	3	2	2	2	2	2	3	2	3	2	2
TOTAL	15	13	12	10	12	10	15	10	13	10	12
AVERAGE	3	2.6	2.4	2	2.4	2	3	2	2.6	2	2.4

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<tr><th colspan="11">Semester-5</th></tr>
<tr><th rowspan="3">Course Code</th><th rowspan="3">Part</th><th rowspan="3">Course Category</th><th rowspan="3">Course Name</th><th rowspan="3">Hours / Week</th><th colspan="4">Examination</th><th rowspan="3">Credits</th></tr>
<tr><th rowspan="2">Duration in hrs.</th><th colspan="3">Max Marks</th></tr>
<tr><th>CIA</th><th>ESE</th><th>Total</th></tr>
<tr><td>26UCCV51</td><td>III</td><td>Core IX</td><td>Cost Accounting</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UCCV52</td><td>III</td><td>Core X</td><td>Banking Law and Practice</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UCCV53</td><td>III</td><td>Core XI</td><td>Income Tax Law and Practice I</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UCCVP4</td><td>III</td><td>Core XII</td><td>Mini Project with Viva-Voce</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UECV51</td><td rowspan="2">III</td><td rowspan="2">EC - V</td><td>Object Oriented Programming in C++</td><td rowspan="2">4</td><td rowspan="2">3</td><td rowspan="2">50</td><td rowspan="2">50</td><td rowspan="2">100</td><td rowspan="2">3</td></tr>
<tr><td>26UECV52</td><td>Introduction to Oracle and SQ File</td></tr>
<tr><td>26UECV53</td><td rowspan="2">IV</td><td rowspan="2">EC - VI</td><td>Research Methodology</td><td rowspan="2">4</td><td rowspan="2">3</td><td rowspan="2">50</td><td rowspan="2">50</td><td rowspan="2">100</td><td rowspan="2">3</td></tr>
<tr><td>26UECV54</td><td>Management Information Systems</td></tr>
<tr><td>26UAEC51</td><td>IV</td><td>AEC - I</td><td>Empowered Vocational English</td><td>2</td><td>3</td><td>50</td><td>50</td><td>100</td><td>2</td></tr>
<tr><td>26UFIK51</td><td>IV</td><td>Internship</td><td>Internship/Industrial visit/Field visit/ Knowledge Upgradation Activity</td><td>-</td><td>-</td><td>-</td><td>-</td><td>100</td><td>2</td></tr>
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CORE IX-COST ACCOUNTING

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<tr><th rowspan="2">Subject Code</th><th rowspan="2">L</th><th rowspan="2">T</th><th rowspan="2">P</th><th rowspan="2">S</th><th rowspan="2">Credits</th><th rowspan="2">Inst. Hours</th><th colspan="3">Marks</th></tr>
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<tr><td>26UCCV51</td><td>5</td><td>0</td><td>0</td><td>V</td><td>4</td><td>5</td><td>50</td><td>50</td><td>100</td></tr>
<tr><td colspan="10">Learning Objectives</td></tr>
<tr><td>LO1</td><td colspan="9">To understand the various concepts of cost accounting.</td></tr>
<tr><td>LO2</td><td colspan="9">To prepare and reconcile Cost accounts.</td></tr>
<tr><td>LO3</td><td colspan="9">To gain knowledge regarding valuation methods of material.</td></tr>
<tr><td>LO4</td><td colspan="9">To familiarize with the different methods of calculating labour cost.</td></tr>
<tr><td>LO5</td><td colspan="9">To know the apportionment of Overheads.</td></tr>
<tr><td colspan="10">Prerequisite:</td></tr>
</table>

Unit	Contents	No. of Hours
I	**Introduction of Cost Accounting** Definition-Nature and Scope – Principles of Cost Accounting – Cost Accounting and Financial Accounting - Cost Accounting Vs Management Accounting – Installation of Costing System–Classification of Costs– Cost Centre– Profit Centre -Preparation of Cost Sheet.	15
II	**Cost Sheet and Methods of Costing** Preparation of Cost Sheet-Tenders &Quotations-Reconciliation of Cost and Financial Accounts –Unit Costing-Job Costing.	15
III	**Material Costing** Material Control– Meaning and Objectives – Purchase of Materials – EOQ –Stores Records–Reorder Levels –ABC Analysis- Issue of Materials–Methods of Issue – FIFO – LIFO – Base Stock Method – Specific Price Method – Simple and Weighted Average Method.	15
IV	**Labour Costing** Direct Labour and Indirect Labour – Time Keeping – Methods and Calculation of Wage Payments – Time Wages – Piece Wages – Incentives – Different Methods of Incentive Payments - Idle time–Overtime – Labour Turnover - Meaning, Causes and Measurement.	15
V	**Overheads Costing** Overheads – Definition – Classification – Allocation and Apportionment of Overheads – Basis of Apportionment – Primary and Secondary Distribution – Absorption of Overheads–Methods of absorption Preparation of Overheads Distribution Statement– Machine Hour Rate – Computation of Machine Hour Rate.	15
	TOTAL	**75**

Course Outcomes

CO1	Remember and recall the various concepts of cost accounting
CO2	Demonstrate the preparation and reconciliation of cost sheet.
CO3	Analyze the various valuation methods of material.
CO4	Examine the different methods of calculating labour cost.
CO5	Critically evaluate the apportionment of Overheads.

Textbooks	
1	JainS.P. andNarangK.L,CostAccounting.KalyaniPublishers, NewDelhi
2	KhannaB.S.,PandeyI.M.,AhujaG.K.,andAroraM.N.,PracticalCosting,S.Chand&Co,New Delhi,
3	Dr.S.N.Maheswari,PrinciplesofCostAccounting,SultanChandPublications,NewDelhi
4	T.S.ReddyandY.HariPrasad Reddy, CostAccounting,Marghampublications,Chennai
5	S.P.Iyengar,CostAccounting, SultanChandPublications, NewDelhi
Reference Books	
1	Polimeni,CostAccounting:ConceptsandApplicationsforManagerialDecisionMaking,1991, McGraw–Hill, New York.
2	JainS.P.andNarangK.L.CostAccounting, LatestEdition.2013,KalyaniPublishers,NewDelhi,
3	V.K.SaxenaandC.D.Vashist, CostAccounting,SultanChandpublications, NewDelhi
4	MurthyA&GurusamyS,CostAccounting,VijayNicoleImprintsPvt.Ltd.Chennai
5	Prasad.N.KandPrasad.V.K, CostAccounting, BookSyndicate,Kolkata
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://study.com/learn/lesson/cost-accounting-principles-examples-what-is-cost-accounting.html
2	https://www.accountingtools.com/articles/what-is-material-costing.html
3	https://www.freshbooks.com/hub/accounting/overhead-cost

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	2	2	2	2	3	2	2
CO2	3	2	2	2	2	2	2	2	3	2	2
CO3	3	2	3	2	2	2	2	2	3	2	2
CO4	3	2	2	2	2	2	2	2	3	2	2
CO5	3	2	3	2	2	2	2	2	3	2	2
TOTAL	15	10	13	10	10	10	10	10	15	10	10
AVERAGE	3	2	2.6	2	2	2	2	2	3	2	2

CORE X-BANKING LAW AND PRACTICE

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV52	5	0	0	V	4	5	50	50	100

Learning Objectives

LO1	To help the students understand various provision of Banking Regulation Act 1949 applicable to Banking companies including cooperative banks
LO2	To trace the evolution of central bank concept and prevalent central banking system around the World and their roles and function
LO3	To throw light on Central Bank in India, it formation, nationalizing its organization structure, role of bank to government, role in promoting agriculture and industry, role in financial inclusion
LO4	To understand how capital fund of commercial banks, objectives and process of Asset securitization etc
LO5	To explore practical banking systems relationship of bankers and customers, crossing of cheques, endorsement etc.

Unit	Contents	No. of Hours
I	**Introduction to Banking** History of Banking- Provisions of Banking Regulations Act 1949 - Components of Indian Banking - Indian Banking System-Phases of Development - Banking Structure in India - Payment Banks and Small Banks - Commercial Banking: Definition-Classification of Banks. Banking System - Universal Banking - Commercial Banking functions - Role of Banks in Economic Development. Central Banking: Definition–Need-Principles-Central Banking Vs Commercial Banking-Functions of Central Bank.	15
II	**RBI** Establishment – objective - Legal framework – Functions – SBI - Origin and History – Establishment Indian subsidiaries - Foreign subsidiaries -Non-Banking-Subsidiaries-Personal banking International banking-Trade Financing-Correspondent banking - Co-operative banks-Meaning and definition-Features-Co-operative banks vs Commercial banks-Structure.-NBFC-Role of NBFCRBI Regulations-Financial sector reforms-Sukhmoy committee 1985-Narasimham committee I and II-Prudential norms: capital adequacy norms -classification of assets and provisioning–Meaning, Structure of Interest Rates - Short term and Long Term – Impacts of Savings and Borrowings.	15
III	**Bank Account** Opening – Types of Accounts-FDR-Steps in opening Account-Saving vs Current Account-'Donatio Mortis Causa'-Passbook-Bank Customer Relationship-Special Types of currents –KYC norms. Bank Lending – Lending Sources-Bank Lending Principles-Forms of lending-Loan evaluation process-securitiesoflending-Factorsinfluencingbanklending–Negotiable Instruments –Meaning –Characteristics-Types. Crossing –Definition –	15

	Objectives-Crossing and negotiability-Consequences of Crossing.	
IV	**Endorsement** Meaning-Components-Kinds of Endorsements-Cheques payable to fictitious person Endorsement by legal representative –Negotiation bank-effect of endorsement-Rules regarding Endorsement - Paying banker-Banker’s duty-Dishonouring of Cheques-Discharge of paying banks Payments of a crossed cheque payment. Collecting bankers-Statutory protection under section85 -Refusal of cheques Payment. Collecting Banker-Statutory protection under section131-Collectingbankers’duty–RBI instruction–Paying BankerVs Collecting Banker- Customer Grievances-Grievance Redressal –Banking Ombudsman.	**15**
V	**E-Banking** Meaning-Services-e-bankingandFinancialservices-Initiatives-Opportunities-Internet banking Meaning-Internet banking Vs Traditional Banking-Services-Drawbacks-Frauds in Internet banking. Mobile banking–Anywhere Banking-Any Time Banking- Electronic Mobile Wallets. ATM Evolution -Concept-Features - Types-. Electronic money-Meaning-Categories-Merits of e-money -National Electronic Funds Transfer (NEFT) Real Time Gross Settlement (RTGS) Difference between NEFT & RTGS-Meaning- Steps–Benefits-Monetary policies- final sector reforms-Chakravarthycommittee1985-NarasimhamCommitteeI&IIPrudential Norms capital adequacy norms-classification of assets &provisions.	**15**
	TOTAL	**75**
Course Outcomes		
CO1	Aware of various provision of Banking Regulation Act 1949 applicable to banking companies including cooperative banks	
CO2	Analyse the evolution of Central Banking concept and prevalent Central Banking system in India and their roles and function	
CO3	Gain knowledge about the Central Bank in India, it formation, nationalizing its organization structure, role of bank to government, role in promoting agriculture and industry, role in financial inclusion	
CO4	Evaluate the role of capital fund of commercial banks, objectives and process of Asset securitization etc	
CO5	Define the practical banking systems relationship of bankers and customers, crossing of cheques, endorsement etc.	
Textbooks		
1	Gurusamy S, Banking Theory: Law and Practice, Vijay Nicole Publication, Chennai	
2	Muraleedharan, Modern Banking: Theory and Practice, Prentice Hallie India Learning Private Ltd, New Delhi	
3	Gupta P.K. Gordon E.Banking and Insurance, Himalaya publication, Kolkata	
4	Gajendra, A Text on Banking Theory Law& Practice, Vrinda Publication, Delhi	
5	K P Kandasami, S Natarajan & Parameswaran, Banking Law and Practice, S Chand publication, NewDelhi	
Reference Books		
1	B.Santhanam, Banking & Financial System, Margam Publication, Chennai	

2	Katait Sanjay, Banking Theory and Practice, Lambert Academic Publishing,
3	Henry Dunning Macleod, The Theory and Practice of Banking, Hard Press Publishing, Old New Zealand
4	William Amasa Scott, Money and Banking: An Introduction To The Study of Modern Currencies, Kesinger publication, USA
5	Nektarios Michail, Money, Credit, and Crises: Understanding the Modern Banking System, Palgrave Macmillan, London
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://www.rbi.org.in/
2	https://businessjargons.com/e-banking.html
3	https://www.wallstreetmojo.com/endorsement/

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	3	2	2	2	3	3	2
CO2	3	2	2	2	3	2	2	2	3	3	2
CO3	3	2	3	2	3	2	2	2	3	3	2
CO4	3	2	2	2	3	2	2	2	3	3	2
CO5	3	2	3	2	3	2	2	2	3	3	2
TOTAL	15	10	13	10	15	10	10	10	15	15	10
AVERAGE	3	2	2.6	2	3	2	2	2	3	3	2

CORE XI-INCOME TAX LAW AND PRACTICE I

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV53	5	0	0	V	4	5	50	50	100

Learning Objectives

LO1	To understand the basic concepts & definitions under the IncomeTaxAct,1961.
LO2	To compute the residential status of an assessee and the incidence of tax.
LO3	To compute income under the head salaries.
LO4	To learn the concepts of Annual value, associated deductions and the calculation of income from House property.
LO5	To compute the income from Business & Profession considering its basic principles& specific disallowances.

Prerequisite:

Unit	Contents	No. of Hours
I	**Introduction to Income Tax** Introduction to Income Tax–History–Objectives of Taxation-Features of Income Tax–Meaning of Income–Types–Important Definitions Under the Income Tax Act– Assessee – Types– Incomes Exempted under Section10.	15
II	**Residential Status** Residential Status–Residential Status of an Individual–Company–HUF–Basic Conditions–Additional Conditions–Incidence of Tax and Residential Status – Problems on Residential Status and Incidence of Tax.	15
III	**Income from Salary** Computation of Salary Income – Features of Salary – Allowances – Types of Allowances -Perquisites–Kinds of Perquisites–Types of Provident Fund- Gratuity– Pension– Encashment of earned leave salary -Commutation of Pension– Deduction of Salary- Profits in Lieu of Salary.	15
IV	**Income from House Property** Income from House Property–Basis of Charge–Annual Value–Gross Annual Value, Net Annual Value of Let-out Property, Self–Occupied Property–Amenities–Deductions.	15
V	**Profits and Gains from Business or Profession** Income from Business or Profession – Allowable Expenses – Not Allowable Expenses - General Deductions – Provisions Relating to Depreciation – Deemed BusinessProfits - Undisclosed Incomes – Investments – Compulsory Maintenance of Books of Accounts – Audit of Accounts of Certain Persons – Special Provisions for Computing Incomes on Estimated Basis –Computation of Income from Business or Profession.	15
	TOTAL	**75**

Course Outcomes	
CO1	Demonstrate the understanding of the basic concepts and definitions under the Income Tax Act.
CO2	Assess the residential status of an assessee & the incidence of tax.
CO3	Compute income of an individual under the head salaries.
CO4	Ability to compute income from house property.
CO5	Evaluate income from a business carried on or from the practice of a Profession.
Text books	
1	V.P.Gaur, Narang, Puja Gaurand Rajeev Puri – Income Tax Law and Practice, Kalyani Publishers, New Delhi.
2	T.S.Reddy and Hariprasad Reddy, Income Tax Law and Practice, Margham Publications, Chennai.
3	Dinkar Pagare, Income Tax Law and Practice, Sultan & Chand Sons, New Delhi.
4	H.C.Mehrotra, Dr.Goyal S.P, Income Tax Law and Accounts, Sahitya Bhavan Publications, Agra.
5	T. Srinivasan – Income Tax & Practice – Vijay Nicole Imprints Private Limited, Chennai.
Reference Books	
1	Hariharan N, Income Tax Law & Practice, Vijay Nicole Imprints Pvt. Ltd. Chennai
2	Bhagwati Prasad, Income Tax Law and Practice, Vishwa Prakasan. New Delhi.
3	VinodK. Singhania, Students Guide to Income Tax., U.K.Bharghava Taxman.
4	Dr.Vinod K Singhania, Dr.Monica Singhania, Taxmann's Students' Guide to Income Tax, NewDelhi.
5	Mittal Preethi Rani and Bansal Anshika, Income Tax Law and Practice, Sultan & Chand Sons, New Delhi.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://cleartax.in/s/residential-status/
2	https://www.legalraasta.com/itr/income-from-salary/
3	https://taxguru.in/income-tax/income-house-properties.html

PART III – MAJOR CORE - XII (ANY ONE)

MINI PROJECT WITH VIVA VOCE

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCVP5	5	0	0	v	4	5	50	50	100

Objectives

1. To impart knowledge and develop understanding of research methodology and its applications

2. To study the methods of data collection and its interpretation to develop analytical skills in generalization of things and concepts

Guidelines for group project

1. The topic should be subject related.

2. Each group should consist of a maximum number of 5 students

3. The project report should have minimum 30 pages.

4. Each group must have a guide/project supervisor.

5. The project should necessarily contain title, statement of the problem, brief and representative review of literature, and objectives of the study, research methodology (sampling, collection of data and tools of analysis), scope / rationale / limitations of proposed study, contents (chapters) and bibliography.

6. The project report must have the following- Cover page, declaration by the guide and candidate, preface and acknowledgement, table of contents, main body (chapters), research instruments (questionnaire), appendix and annexure (if needed), bibliography.

7. Evaluation will be based on the project report, presentation and viva voce.

ELECTIVE V -OBJECT ORIENTED PROGRAMMING USING C++

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECV51	4	0	0	V	3	4	50	50	100

Learning Objectives	
LO1	To understand the object technology
LO2	To impart the information on codes and arrays
LO3	To enhance the user functions
LO4	To analyze the classes and objects
LO5	To Enhance reusability features using the concept inheritance

Prerequisite:

Unit	Contents	No.of Hours
I	Introduction to Object Technology: Object Oriented Programming Concepts–OOP Benefits and OOP applications. Elementary C++ Programming: Keywords-Variables- Constants/ Literals - Operators- Fundamental Data Types - Expressions- General Format of a C++ program.	12
II	Conditional/Decision Making Statements: if, if-else, else-if ladder nested if and switch Statements. Loop Statements: while, do-while, for loop. Jump Statements: break, continue, goto statements -Arrays.	12
III	User-Defined Functions: Function Prototyping – Function call - Parameters Passing methods- Inline Functions- Function Overloading – Function Overriding–Strings.	12
IV	Classes and Objects: -Declaring class and objects -Member functions-Friend Functions-Passing object to function – Returning object from function. Constructors: Features of constructors – Types of Constructors. Destructors: Features of Destructor.	12
V	Inheritance: Single Inheritance-Multi level inheritance-Multiple Inheritance-Hierarchical Inheritance - Hybrid Inheritance – Polymorphism.	12
	TOTAL	**60**

Course Outcomes	
CO1	Recall the basics of Building any programming language
CO2	Explain about Arrays with illustration
CO3	Analyze the benefits of using Friend Function
CO4	Develop programs for overloading Unary and Binary Operators
CO5	Access the memory Address of any variable using pointers

Textbooks	
1	E.Balaguruswamy,“ObjectOrientedProgramminginC++”,SixthEdition,2012,TMH

2	H.Schildt, “TheCompleteReferenceC++”, FourthEdition,2002,TMH
3	KanetkarY,”LetusC++”,ThirdEdition,1999,BPBPublishers.
Reference Books	
1	JohnRHubbard,“ProgrammingwithC++”, ThirdEdition,2009,TMH.
2	GradyBooch,"ObjectOrientedAnalysisand Design", AddisonWesley
3	JamesRumboughEtal,"Object OrientedModellingandDesign"
NOTE: Latest Edition of Text books May be Used	
WebResources	
1	http://en.highscore.de/cpp/boost/
2	http://bookboon.com/en/structural-programming-with-c-plus-plus-ebook

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PSO1**	**PSO2**	**PSO3**
CO1	3	2	3	2	3	2	3	3	3	2	2
CO2	3	2	2	2	2	2	2	2	3	2	3
CO3	3	3	3	2	3	2	3	3	3	2	2
CO4	3	2	2	2	2	2	2	2	3	2	2
CO5	3	3	3	2	3	2	3	3	3	2	3
TOTAL	15	12	13	10	13	10	13	13	15	10	12
AVERAGE	3	2.2	2.6	2	2.6	2	2.6	2.6	3	2	2.4

ELECTIVE V– INTRODUCTION TO ORACLE AND SQ FILE

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECCV52	4	0	0	V	3	4	50	50	100

Learning Objectives	
LO1	To enhance the knowledge and understanding of Database analysis and design.
LO2	To Enhance the knowledge of the processes of Database Development and Administration using SQL and PL/SQ
LO3	To understand the implantation of keys
LO4	To create the database and tables and setting the keys
LO5	To imply the functions

Perquisites

Units	Contents	No of hours
I	Introduction to File – Flat File – Advantage and disadvantage of Flat File – Introduction to Database - Types of database structure: Hierarchical Data Base – Relational Data Base – Object Relational Data Base.	12
II	Introduction to Relational Database –Relational Database terms: Records – Fields – Tables – Advantage and disadvantage of Relational Database	12
III	Keys: Primary Key– Foreign Key–Candidate Key–Composite Key- Super Key – Implementation of those keys on tables.	12
IV	Introduction to Oracle: Creating database – Creating tables – Setting Primary Key and Foreign Keys on tables – Introduction to SQL queries: CREATE, ALTER, DROP, RENAME, TRUNCATE, SELECT statements – Retrieving data – Restricting and Sorting data.	12
V	Function – Single Row Function –Group Function – Reporting Aggregated data – Displaying data from multiple tables – Sub Queries.	12
	Total	**60**

Course Outcomes	
CO1	List out the merits and demerits of files
CO2	Paraphrase the relational database and its usage
CO3	Analyze the various keys on tables
CO4	Apply the concept creating database and tables
CO5	Enumerate the various functions and displaying data from multiple tables

Text books	
1	Steven Feuerstein, Oracle and SQ file, O-Reilly Publication,2002
2	Jason Prince, Oracle Database 12c SQL
3	Sanjay Mishra, Alan Beaulieru, Mastering Oracle SQL

Reference Books	
1	Joel Murach, Oracle SQL and PLSQL for developers

2	Alice Rischert, Oracle SQL workbook
NOTE: Latest Edition of Textbooks May beUsed	
WebResources	
1	https://www.google.co.in/books/edition/Oracle_SQL_Plus/rIg6LtArAPcC?hl=en&gbpv=1&dq=oracle%20and%20sql%20file&pg=PP1&printsec=frontcover
2	https://www.google.co.in/books/edition/Mastering_Oracle_SQL/Rl2_4LhDjZkC?hl=en&gbpv=1&dq=oracle%20and%20sql%20file&pg=PP1&printsec=frontcover
3	https://www.scribd.com/doc/4367886/Oracle-SQL-Syllabus

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PSO1**	**PSO2**	**PSO3**
CO1	3	2	3	2	3	2	3	3	3	2	2
CO2	3	2	2	2	2	2	2	2	3	2	3
CO3	3	3	3	2	3	2	3	3	3	2	2
CO4	3	2	2	2	2	2	2	2	3	2	2
CO5	3	3	3	2	3	2	3	3	3	2	3
TOTAL	15	12	13	10	13	10	13	13	15	10	12
AVERAGE	3	2.2	2.6	2	2.6	2	2.6	2.6	3	2	2.4

ELECTIVE VI – RESEARCH METHODOLOGY

<table>
<tr><th rowspan="2">Subject Code</th><th rowspan="2">L</th><th rowspan="2">T</th><th rowspan="2">P</th><th rowspan="2">S</th><th rowspan="2">Credits</th><th rowspan="2">Inst. Hours</th><th colspan="3">Marks</th></tr>
<tr><th>CIA</th><th>External</th><th>Total</th></tr>
<tr><td>26UECV53</td><td>4</td><td>0</td><td>0</td><td>V</td><td>3</td><td>4</td><td>50</td><td>50</td><td>100</td></tr>
</table>

Learning Objectives	
LO1	To introduce the fundamental concepts and types of research.
LO2	To develop understanding of research design and sampling techniques.
LO3	To provide knowledge about data collection methods and questionnaire construction.
LO4	To familiarize students with data preparation, interpretation, and analysis.
LO5	To develop skills in research report writing with emphasis on plagiarism and academic integrity.

Prerequisites

Unit	Contents	No. of Hours
I	Introduction to Research–Types of Research – Significance of Research– Research methods vs. Methodology – Research – Research process – Criteria of Good Research	**12**
II	Research Design–Meaning of Research design – need for research design– features of a good design– different research designs. Pilot Study and Pre-testing.	**12**
III	Design of sample surveys– sample design – sample survey Vs census survey – Types of sampling designs – Non probability sampling – probability sampling - Sampling Errors and Non-Sampling Errors – Complex random sampling design.	**12**
IV	Data Collection and preparation– Collection of Primary Data – Methods of Collecting Primary Data - Guidelines for Constructing Questionnaire / Schedule - Difference between Questionnaire and schedule - Collection of secondary data – Data Preparation process.	**12**
V	Interpretation and report writing – Meaning of interpretation – techniques of interpretation – precautions in interpretation – significance of report writing – different steps in writing report – layout of the research report – mechanics of writing a research report – precautions for writing research report. Plagiarism and Academic Integrity	**12**
	TOTAL	**60**

Course Outcomes	
CO1	Explain different types of research and the research process.
CO2	Design appropriate research studies and sampling plans.
CO3	Apply suitable methods for collecting and preparing research data.
CO4	Interpret research findings logically and systematically.
CO5	Prepare structured research reports following ethical and academic standards.

Textbooks	
1	C.R.Kothari, GauRavGarg, “Research Methodology methods and techniques”, New International Publishers.
2	P. Ravilochanan, “Research Methodology”, Margham Publications. P.Saravanavel, “Research Methodology”, Kidap Publications.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	2	2	2	2	2	2	2	2	2
CO2	3	2	2	3	3	2	2	2	2	2	2
CO3	3	2	2	2	2	2	2	2	2	2	2
CO4	3	2	2	2	2	2	2	2	2	2	2
CO5	3	2	2	3	2	2	2	2	2	2	2
TOTAL	15	10	10	12	11	10	10	10	10	10	10
AVERAGE	3	2	2	2.4	2.2	2	2	2	2	2	2

ELECTIVE VI - MANAGEMENT INFORMATION SYSTEMS

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECCV54	4	0	0	V	3	4	50	50	100

Learning Objectives

LO1	To understand the management information system
LO2	To explore the system concepts and to identify the characteristics of system
LO3	To analyse the transaction processing system
LO4	To apply the database management systems and architecture networks
LO5	To estimate the functional management information systems

Prerequisite:

Unit	Contents	No. of Hours
I	Management information system: meaning – features–requisites of an effective MIS–MIS Model–components–subsystems of an MIS–role and importance –corporate planning for MIS–growth of MIS in an organization– centralization vs decentralization of MIS. Support – Limitations of MIS.	12
II	System concepts – elements of system – characteristics of a system – types of system – categories of information system – system development life cycle – system enhancement.	12
III	Information systems in business and management: Transaction processing system: Information repeating and executive information system.	12
IV	Database management systems–conceptual presentation–client server architectures networks.	12
V	Functional management information system: Financial – accounting – marketing – production – Human resource – business process outsourcing.	12
	TOTAL	**60**

Course Outcomes

CO1	Paraphrase the characteristics of Management information system
CO2	Describe the elements and characteristics of system
CO3	Enumerate the application of information system in business
CO4	Explain the database management system
CO5	Elaborate the functional management information system in financial, accounting, marketing and production.

Text books

1	GordonB.DavisAndMaggretheH. Olson, Management Information Systems, Mc Graw Hill International Edition-Second Edition,1998
2	Rober G.Mudrick, Joel E. Ross and James R.ClAGGET , Information Systems for Modern Management,33RdEdition,1992, Prentice Hall of India (P)Ltd.,Eastern Economy Edition.

3	Jerome Kanter ManagementInformationSystems,3Edition, 1990. Prentice Hall of India Ltd. , Eastern Economy Edition
Reference Books	
1	James A.O' Brien, Management information systems, Mc GrawHill,2002
2	Bagchi Nirmalya, Management Informations ystems, Vikas Publications,2010
3	Indrajit Chattarjee, Management information systems, PHI Learning, 2010
NOTE: Latest Edition of Text books May be Used	
Web Resources	
1	https://www.google.co.in/books/edition/Management_Information_Systems/RTZDDAAAQBAJ?hl=en&gbpv=1&dq=management%20information%20system&pg=PR4&printsec=frontcover
2	https://www.google.co.in/books/edition/MANAGEMENT_INFORMATION_SYSTEMS/DOi2meoOKWsC?hl=en
3	https://www.google.co.in/books/edition/Management_Information_Systems_Manageria/ZaNDDAAAQBAJ?hl=en&gbpv=1&dq=management%20information%20system&pg=PP1&printsec=frontc over

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	2	3	2	3	3	3	2	2
CO2	3	2	2	3	2	2	2	2	3	2	3
CO3	3	3	3	2	3	2	3	3	3	2	2
CO4	3	2	2	2	2	2	2	2	3	2	2
CO5	3	3	3	3	3	2	3	3	3	2	3
TOTAL	15	13	13	12	13	10	13	13	15	10	12
AVERAGE	3	2.6	2.6	2.4	2.6	2	2.6	2.6	3	2	2.4

ABILITY ENHANCEMENT COURSE – I: EMPOWERED VOCATIONAL ENGLISH

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UAEC51	2	0	0	V	2	2	50	50	100

Learning Objectives

LO1	To build self- assurance in students by mastering interpersonal, team- management, and leadership abilities.
LO2	To equip aspiring learners with skills that transform them into effective young managers.
LO3	To sharpen communication proficiency for professional and workplace contexts.
LO4	To foster strategic thinking and problem- solving through advanced writing & presentation techniques.
LO5	To develop etiquette and corporate- ready competencies for modern business environments

Prerequisites:

Unit	Contents	No. of Hours
I	Communication Skills, Current English Usage, Aptitude and Attitude, Team Building and Leadership, Psychological Tests, Effective Resume Writing	6
II	Précis Writing, Essay Writing, Goal Setting, Conflict Management, Appearing for an Interview, Myths regarding Group Discussion	6
III	Debates, Presentation for Small and Large Groups, Prioritization, Time Management, Stress Interview, Prerequisites of a Group Discussion	6
IV	Marketing and Business Presentations, Report Writing, Cross- Cultural Communication, Lateral Thinking, Qualities of a Candidate for an Interview, Generating Ideas for Discussion	6
V	Telephone Etiquette, Email Etiquette, Concepts of Leadership, Insights from Great Leaders, Mock Interview, Mock Group Discussion	6
	TOTAL	**30**

Course Outcomes

CO1	Students will demonstrate strong interpersonal and leadership skills in team settings.
CO2	Learners will apply effective communication strategies in current English usage.
CO3	Graduates will craft professional résumés and master interview- ready writing styles.
CO4	Participants will manage conflicts, set goals, and deliver impactful presentations.
CO5	Individuals will exhibit polished telephone & email etiquette alongside refined leadership insights

Text Books

1	Covey, Stephen R. _The 7 Habits of Highly Effective People: Powerful Lessons in Personal Change_. Simon & Schuster, 1989.
2	Khera, Shiv. _You Can Win: A Step by Step Tool for Top Achievers_. Macmillan, 1998.

<table>
<tr><th colspan="10">Semester-6</th></tr>
<tr><th rowspan="3">Course Code</th><th rowspan="3">Part</th><th rowspan="3">Course Category</th><th rowspan="3">Course Name</th><th rowspan="3">Hours/ Week</th><th colspan="4">Examination</th><th rowspan="3">Credits</th></tr>
<tr><th rowspan="2">Duration in hrs.</th><th colspan="3">Max Marks</th></tr>
<tr><th>CIA</th><th>ESE</th><th>Total</th></tr>
<tr><td>26UCCV61</td><td>III</td><td>Core XIII</td><td>Cost accounting</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UCCV62</td><td>III</td><td>Core XIV</td><td>Management Accounting</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UCCV63</td><td>III</td><td>Core XV</td><td>Income tax law and practice</td><td>5</td><td>3</td><td>50</td><td>50</td><td>100</td><td>4</td></tr>
<tr><td>26UCCVP4</td><td>IV</td><td>Core XVI</td><td>Major Project with Viva-Voce</td><td>5</td><td>-</td><td>50</td><td>50</td><td>100</td><td>5</td></tr>
<tr><td>26UECV61</td><td rowspan="2">III</td><td rowspan="2">EC -VII</td><td>PHP Programming</td><td rowspan="2">4</td><td rowspan="2">3</td><td rowspan="2">50</td><td rowspan="2">50</td><td rowspan="2">100</td><td rowspan="2">3</td></tr>
<tr><td>26UECV62</td><td>Web Design</td></tr>
<tr><td>26UECV63</td><td rowspan="2">III</td><td rowspan="2">EC - VIII</td><td>Cryptography and network security</td><td rowspan="2">4</td><td rowspan="2">3</td><td rowspan="2">50</td><td rowspan="2">50</td><td rowspan="2">100</td><td rowspan="2">3</td></tr>
<tr><td>26UECV64</td><td>Introduction to ERP</td></tr>
<tr><td>26UAEC61</td><td>IV</td><td>AEC -II</td><td>Design Thinking</td><td>2</td><td>3</td><td>50</td><td>50</td><td>100</td><td>2</td></tr>
<tr><td>26U5EV61</td><td>V</td><td>Common</td><td>Extension Activity</td><td>-</td><td>-</td><td>-</td><td>100</td><td>100</td><td>1</td></tr>
<tr><td colspan="4">Total</td><td>30</td><td></td><td></td><td></td><td>800</td><td>26</td></tr>
</table>

Core XIII- Cost Accounting II

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV61	5	0	0	VI	4	5	50	50	100

Learning Objectives

LO1	To understand the standards in Cost Accounting
LO2	To know the concepts of contract costing.
LO3	To be familiar with the concept of process costing.
LO4	To learn about operation costing.
LO5	To gain insights into standard costing.

Perquisites

Unit	Contents	No. of Hours
I	**Cost Accounting Standards** An Introduction to CAS–Purpose of CAS–Advantages of CAS– Difference between CAS and FAR Regulations–Different Degrees of CAS Coverage–Cost Accounting Standards-Responsibility Accounting and Divisional Performance Measurement	15
II	**Contract Costing** Definition-FeaturesofContractCosting-CalculationofProfitonContracts – Cost Plus Contract- Contract Costing and Job Costing - A Comparison - Preparation of Contract A/c.	15
III	**Process Costing** Process Costing–Meaning–Features of Process Costing –Application of Process Costing – Fundamental Principles of Process Costing Treatment of Loss and Gain: Normal and Abnormal Loss-Abnormal Gain- Joint Products, By Products – Concept of Equivalent Production Process Accounts - Process Losses and Gains.	15
IV	**Operation Costing** Operation Costing–Meaning–Preparation of Operating Cost Sheet Transport Costing–Power Supply Costing–Hospital Costing–Simple Problems.	15
V	**Standard Costing** Definition – Objectives – Advantages – Standard Cost and Estimated Cost – Installation of Standard Costing–Variance Analysis–Material, Labour, Overhead, and Sales Variances–Calculation of Variances.	15
	TOTAL	**75**

Course Outcomes

CO1	Remember and recall standards in cost accounting
CO2	Apply the knowledge in contract costing
CO3	Analyze and assimilate concepts in process costing
CO4	Understand various bases of classification cost and prepare operating cost statement.
CO5	Setup standards and analyse variances.

Textbooks

1	Jain S.P. and Narang K.L. Cost Accounting. Kalyani Publishers. New Delhi.
2	Khanna B.S., Pandey I.M., Ahuja G.K., and Arora M.N., Practical Costing, S Chand & Co,New Delhi.
3	Dr.S.N. Maheswari, Principles of Cost Accounting, Sultan Chand publications, New Delhi.
4	T.S.Reddy and Y.Hari Prasad Reddy, Cost Accounting, Margham publications, Chennai.
5	S.P.Iyengar,CostAccounting, SultanChandPublications, NewDelhi.
ReferenceBooks	
1	Polimeni,CostAccounting:ConceptsandApplicationsforManagerialDecisionMaking,New York, McGraw–Hill, Noida.
2	JainS.P. andNarangK.L.Cost Accounting, KalyaniPublishers,NewDelhi.
3	V.K.SaxenaandC.D.Vashist,CostAccounting,SultanChandpublications,NewDelhi.
4	MurthyA&GurusamyS,CostAccounting,VijayNicoleImprintsPvt.Ltd.Chennai.
NOTE: Latest Edition of Text books May be Used	
WebResources	
1	https://www.economicsdiscussion.net/cost-accounting/contract-costing/32597
2	https://www.wallstreetmojo.com/process-costing/
3	https://www.accountingnotes.net/cost-accounting/operating-costing/17755

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	2	3	3	3	3	3	2	2
CO2	3	3	3	2	2	3	2	2	3	2	3
CO3	3	3	3	2	3	3	3	3	3	2	2
CO4	3	3	3	2	2	3	2	2	3	2	2
CO5	3	3	3	2	3	3	3	3	3	2	3
TOTAL	15	15	15	10	13	15	13	13	15	10	12
AVERAGE	3	3	3	2	2.6	3	2.6	2.6	3	2	2.4

Core XIV -Management Accounting

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCV62	5	0	0	VI	4	5	50	50	100

Learning Objectives	
LO1	To understand basics management accounting
LO2	To know the aspects of Financial Statement Analysis
LO3	To familiarize with fund flow and cash flow analysis
LO4	To learn about budgetary control
LO5	To gain insights in to marginal costing.

Prerequisite:

Unit	Contents	No. of Hours
I	**Introduction to Management Accounting** Management Accounting–Meaning–Scope–Importance-Limitations-Management Accounting Vs Cost Accounting–Management Accounting Vs Financial Accounting.	15
II	**Financial Statement Analysis** Analysis and Interpretation of Financial Statements – Nature and Significance–Types of Financial Analysis – Tools of Analysis –Comparative Statements – Common Size Statement – Trend Analysis. Ratio Analysis: Meaning – Advantages – Limitations – Types of Ratios – Liquidity Ratios – Profitability Ratios -Turnover Ratios – Capital Structure Ratios – Leverage Ratios - Preparation of Financial Statements from Ratios.	15
III	**Fund Flow Analysis & Cash Flow Analysis** Introduction, Meaning of Funds Flow Statement-Ascertainment of Flow of Funds-Technique of Preparing Funds Flow Statement- Schedule of Changes in Working Capital-Adjusted Profit and Loss Account - Preparation of Funds Flow Statement. **Cash Flow Statements:** Meaning–Advantages–Limitations–Preparation of Cash Flow Statement as per AS 3 – Types of Cash Flows - Operating, Financing and Investing Cash Flows.	15
IV	**Budgetary Control** Budgetary Control: Meaning– Preparation of Various Budgets–CashBudget -Flexible Budget–Production Budget–Sales Budget.	15
V	**Marginal Costing:** Meaning - Features – Fixed Cost, Variable Cost and Semi Variable Cost- Contribution- Marginal Cost Equation- P/V Ratio - Break Even Point – Margin of Safety– Cost- Volume Profits Analysis- Break Even Point – Decision Making: Selection of a Product Mix–Make or Buy Decision–Discontinuance of a product line – Change or Status quo – Limiting Factors – Exploring New Markets.	15
	TOTAL	**75**

Course Outcomes	
CO1	Remember and recall basics in management accounting

CO2	Apply the knowledge of preparation of Financial Statements
CO3	Analyze the concepts relating to fund flow and cash flow
CO4	Evaluate techniques of budgetary control
CO5	Formulate criteria for decision making using principles of marginal costing.
Textbooks	
1	JainS.P.&NarangK.L.(2018)CostandManagementAccounting, kalyanipublications,
2	Dr.S.N.Maheswari,CostandManagementAccounting,Sultanchandsonspublications,NewDelhi.
3	SharmaandShashiK. Gupta,ManagementAccounting,KalyaniPublishers,Chennai.
4	JenitraLMervin,DasltonLCecil,ManagementAccounting, LerantecPress, Chennai.
5	T.S.Reddy&Y. HariPrasadReddy, ManagementAccounting, Marghampublications,Chennai.
ReferenceBooks	
1	Chadwick–TheEssenceofManagementAccounting,FinancialTimesPublications,England.
2	CharlesT.HorngrenandGaryN.Sundem–IntroductiontoManagementAccounting,Pearson, Chennai.
3	MurthyAandGurusamyS,Management Accounting-Theory&Practice,VijayNicoleImprints Pvt.Ltd.Chennai.
4	Hansen-Mowen,CostManagementAccountingandControl,SouthWesternCollege, India.
5	N.P.Srinivasan,ManagementAccounting,NewAgepublishers,Chennai.
NOTE: Latest Edition of Text books May be Used	
WebResources	
1	https://www.accountingnotes.net/companies/fund-flow-analysis/fund-flow-analysis-accounting/13300
2	https://accountingshare.com/budgetary-control/
3	https://www.investopedia.com/terms/m/marginalcostofproduction.asp

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	3	2	3	3	3	2	2
CO2	3	2	2	2	3	2	2	2	3	2	3
CO3	3	2	3	2	3	2	3	3	3	2	2
CO4	3	2	2	2	3	2	2	2	3	2	2
CO5	3	3	3	2	3	2	3	3	3	2	3
TOTAL	15	11	13	10	15	10	13	13	15	10	12
AVERAGE	3	2.1	2.6	2	2	2	2.6	2.6	3	2	2.4

CORE XV-INCOME TAX LAW AND PRACTICE II

<table>
<tr><th rowspan="2">Subject Code</th><th rowspan="2">L</th><th rowspan="2">T</th><th rowspan="2">P</th><th rowspan="2">S</th><th rowspan="2">Credits</th><th rowspan="2">Inst. Hours</th><th colspan="3">Marks</th></tr>
<tr><th>CIA</th><th>External</th><th>Total</th></tr>
<tr><td>26UCCV63</td><td>5</td><td>0</td><td>0</td><td>VI</td><td>4</td><td>5</td><td>50</td><td>50</td><td>100</td></tr>
<tr><td colspan="10">Learning Objectives</td></tr>
<tr><td>LO1</td><td colspan="9">To understand provisions relating to capital gains</td></tr>
<tr><td>LO2</td><td colspan="9">To know the provisions for computation of income from other sources.</td></tr>
<tr><td>LO3</td><td colspan="9">To familiarize law relating to setoff and carry forward of losses and deductions from Gross Total Income.</td></tr>
<tr><td>LO4</td><td colspan="9">To learn about assessment of individuals</td></tr>
<tr><td>LO5</td><td colspan="9">To gain knowledge about assessment procedures.</td></tr>
<tr><td colspan="10">Prerequisite:</td></tr>
<tr><th>Unit</th><th colspan="8">Contents</th><th>No. of Hours</th></tr>
<tr><td>I</td><td colspan="8">Capital Gains
Capital Gains– Kinds of Capital Assets –Computation of Capital Gains –Exemption</td><td>15</td></tr>
<tr><td>II</td><td colspan="8">Income From Other Sources
Income from Other Sources – Income Chargeable to Tax under the Head Income from Other Sources – Procedures for Computing Income from Other Sources – Deductions Allowed – Deduction not Allowed – Problems on Computation of Income from Other Sources.</td><td>15</td></tr>
<tr><td>III</td><td colspan="8">Set Off and Carry Forward of Losses and Deductions From Gross Total Income Provisions for Set-off and Carry Forward of Losses (Simple Problems). Deductions from Gross Total incomes</td><td>15</td></tr>
<tr><td>IV</td><td colspan="8">Assessment of Individuals
Assessment: Meaning and Types, Computation of Total Income and Tax Liability ofan Individuals (simple problems in case of Income from salaries, HP and Profits and Gains – computed income may be given).</td><td>15</td></tr>
<tr><td>V</td><td colspan="8">Income Tax Authorities
Administration of Income Tax Act – Income Tax Authorities – Powers of CBDT – Powers of Income – Tax Officers -Procedures for Assessment – Filing ofReturn – Due Dates of Filing – Voluntary Filling – Return of Loss – Related Return – Defective Return – Signing of Return – Permanent Account Number (PAN)</td><td>15</td></tr>
<tr><td></td><td colspan="8">TOTAL</td><td>75</td></tr>
<tr><td colspan="10">Course Outcomes</td></tr>
<tr><td>CO1</td><td colspan="9">Remember and recall provisions on capital gains</td></tr>
<tr><td>CO2</td><td colspan="9">Apply the knowledge about income from other sources</td></tr>
<tr><td>CO3</td><td colspan="9">Analyze the set off and carry forward of losses provisions</td></tr>
<tr><td>CO4</td><td colspan="9">Learn about assessment of individuals</td></tr>
<tr><td>CO5</td><td colspan="9">Apply procedures learnt about assessment procedures.</td></tr>
<tr><td colspan="10">Text books</td></tr>
</table>

1	V.P.Gaur,Narang,PujaGaurandRajeevPuri-IncomeTaxLawandPractice,KalyaniPublishers, NewDelhi.
2	T.S.ReddyandHariprasadReddy,IncomeTaxLawandPractice,MarghamPublications, Chennai.
3	DinkarPagare,Income TaxLawandPractice,Sultan&ChandSons, NewDelhi.
4	MehrotraH.C,Dr.GoyalS.P,IncomeTaxLawandAccounts, SahityaBhavanPublications,Agra.
5	T.Srinivasan–IncomeTax&Practice–VijayNicoleImprintsPrivateLimited ,Chennai.
Reference Books	
1	HariharanN, IncomeTaxLaw&Practice,VijayNicoleImprints Pvt.Ltd.Chennai.
2	BhagwatiPrasad, IncomeTaxLawandPractice, VishwaPrakasan,New Delhi.
3	VinodK.Singhania, StudentsGuidetoIncomeTax., U.K.BharghavaTaxman,NewDelhi.
4	Dr.VinodKSinghania,Dr.MonicaSinghania,Taxmann'sStudents'GuidetoIncomeTax,New Delhi.
5	MittalPreethiRaniandBansalAnshika, Income Tax Law and Practice, Sultan&ChandSons, New Delhi.
NOTE: Latest Edition of Text books May be Used	
WebResources	
1	https://www.investopedia.com/terms/c/capitalgain.asp
2	https://www.incometaxmanagement.com/Direct-Taxes/AY-2021-22/assessment/1-assessment-of-an-individual.html
3	https://www.incometax.gov.in/iec/foportal/

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PSO1**	**PSO2**	**PSO3**
CO1	3	2	3	2	3	2	3	3	3	2	2
CO2	3	2	2	2	2	2	2	2	3	2	3
CO3	3	3	3	2	3	2	3	3	3	2	2
CO4	3	2	2	2	2	2	2	2	3	2	2
CO5	3	3	3	2	3	2	3	3	3	2	3
TOTAL	15	12	13	10	13	10	13	13	15	10	12
AVERAGE	3	2.2	2.6	2	2.6	2	2.6	2.6	3	2	2.2

PART III – MAJOR CORE -XVI

MAJOR PROJECT WITH VIVA VOCE

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UCCRP6	5	0	0	VI	5	5	50	50	100

Objectives

- To impart knowledge and develop understanding of research methodology and its applications
- To study the methods of data collection and its interpretation to develop analytical skills in generalization of things and concepts Guidelines for group project
- The topic should be subject related.
- Each group should consist of a maximum number of students
- The project report should have minimum 50 pages.
- Each group must have a guide/project supervisor.
- The project should necessarily contain title, statement of the problem, brief and representative review of literature, and objectives of the study, research methodology (sampling, collection of data and tools of analysis), scope / rationale / limitations of proposed study, contents (chapters) and bibliography.
- The project report must have the following- Cover page, declaration by the guide and candidate, preface and acknowledgement, table of contents, main body (chapters), research instruments (questionnaire), appendix and annexure (if needed), bibliography.
- Evaluation will be based on the project report, presentation and viva voce.

ELECTIVE-VII - PHP PROGRAMMING

<table>
<tr><th rowspan="2">Subject Code</th><th rowspan="2">L</th><th rowspan="2">T</th><th rowspan="2">P</th><th rowspan="2">S</th><th rowspan="2">Credits</th><th rowspan="2">Inst. Hours</th><th colspan="3">Marks</th></tr>
<tr><th>CIA</th><th>External</th><th>Total</th></tr>
<tr><td>26UECV61</td><td>4</td><td>0</td><td>0</td><td>VI</td><td>3</td><td>4</td><td>50</td><td>50</td><td>100</td></tr>
</table>

Learning Objectives	
LO1	To understand the PHP programming
LO2	To apply the controlling program flow
LO3	To analyze the PHP arrays
LO4	To imply the concept of using functions
LO5	To work with database and SQL

Prerequisites

Unit	Contents	No. of Hours
I	Introducing PHP – Basic development Concepts – Creating first PHP Scripts – Using Variable and Operators – Storing Data in variable – Understanding Data types – Setting and Checking variables Data types – Using Constants – Manipulating Variables with Operators.	**12**
II	Controlling Program Flow: Writing Simple Conditional Statements - Writing More Complex Conditional Statements – Repeating Action with Loops – Working with String and Numeric Functions.	**12**
III	Working with Arrays: Storing Data in Arrays – Processing Arrays with Loops and Iterations – Using Arrays with Forms - Working with Array Functions – Working with Dates and Times.	**12**
IV	Using Functions and Classes: Creating User-Defined Functions - Creating Classes – Using Advanced OOP Concepts. Working with Files and Directories: Reading Files-Writing Files Processing Directories.	**12**
V	Working with Database and SQL: Introducing Database and SQL-Using MySQL-Adding and modifying Data-Handling Errors – Using SQLite Extension and PDO Extension.	**12**
	TOTAL	**60**

Course Outcomes	
CO1	Illustrate the PHP Programming
CO2	Apply the Controlling program flow
CO3	Analyze the working with Arrays
CO4	Describe the functions and classes in PHP Programming
CO5	Implication of adding and modifying data in database and SQL.

Textbooks	
1	VikramVaswani,“PHPABeginner'sGuide”,TataMcGrawHill2008.
2	StevenHolzner ,“ThePHPCompleteReference”, TataMcGrawHill, 2007.

3	StevenHolzer , "SpringintoPHP",TataMcGrawHill2011,5thEdition.
ReferenceBooks	
1	RasmusLerdorf, KevinTatroe,BobKaehms,PHPProgramming,
2	LeonAtkinson"CorePHPProgramming",PrenticeHall,ISBN0130463469.
3	W.JasonGilmore,"BeginningPHP5andMySQL:FromNovicetoProfessional", 2004, Apress,ISBN:1-893115-51-8
NOTE: Latest Edition of Textbooks May be Used	
WebResources	
1	https://www.w3schools.com/php/
2	https://www.phptpoint.com/php-tutorial-pdf/
3	http://www.xmlsoftware.com/

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	3	2	3	3	3	2	2
CO2	3	2	2	2	3	2	2	2	3	2	3
CO3	3	3	3	2	3	2	3	3	3	2	2
CO4	3	2	2	2	3	2	2	2	3	2	2
CO5	3	3	3	2	3	2	3	3	3	2	2
TOTAL	15	12	13	10	15	10	13	13	15	10	11
AVERAGE	3	2.2	2.6	2	3	2	2.6	2.6	3	2	2.1

Elective VII –WEBDESIGN

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECV62	4	0	0	VI	3	4	50	50	100

Learning Objective

LO1	Explaining the concept of Web design and its applications.
LO2	Detailed description for Internet Domains and establishing Connectivity Internet.
LO3	Structuring the HTML tags, Lists, Tables, Frames, Forms and Forms elements
LO4	Emphasizing the DHTML Style Sheets, linking a Style Sheet and Web page designing
LO5	Elaborating the concept of Java Script Document Object Model and Cookies

Prerequisites

Unit	Contents	No. of Hours
I	**Internet:** Basic Concepts–Communicating on Internet –Internet Domains–Internet Server Identities – Establishing Connectivity on the Internet	12
II	Introduction to HTML -Anchor Tag – Hyperlink - Head and Body Section –Heading – Horizontal Ruler –Paragraphs –Tags- Images and Picture–Lists –Tables– Frames - Forms and forms elements.	12
III	DHTML and Style sheets-Defining styles-Elements of style-Linking a style sheet to a html documents - Inline style - External style sheets - Multiple styles- Web page designing.	12
IV	IntroductiontoJavascript-AdvantageofJavaScript-Datatype-Variable–Array-Operator and Expression - Control and looping Constructs - Functions - Dialog Boxes.	12
V	JavaScript Document Object Model-Event Handling-Form Object -Built in Object -User Defined Object-Cookies	12
	TOTAL	**60**

THEORY 20% & PROBLEMS 80%

Course Outcomes

CO1	Demonstrate Internet Basic concepts and Internet Domains
CO2	Impart Lists, Frames and Table to the Forms and Forms Elements
CO3	Elaborate DHTML Style Sheets and Element of the Style
CO4	Representation of JavaScript Data types, Control and Looping and Functions.
CO5	Pointing out Form object, User Defined Object and Cookies

Textbooks

1	Ivan Bayross,"Web Enabled Commercial Application Development using HTML, Java Script, DHTML and PHP", Fourth Edition, 2010, BPB Publicaions
2	Harvey M.Deitel, Paul J.Deitel, Tem R.Nieto, "Internet & World Wide Web–How to program", Third Edition,2002, Prentice Hall
3	Using HTML4, XML&JAVA by Eric Ladd & Jim O'Donell (Platinum Edition) (PHI)

Reference Books	
1	Hirdesh Bharadwaj, Web designing, Paper Back, 2016
2	Brain D Miller, Principles of web design, AllworthPublications,2022
NOTE: Latest Edition of Text books May be Used	
Web Resources	
1	http://books.google.co.in/books?id=BrASwbtAGGUC&pg=PA69&source=gbs_selected_pages&cad=2#v=onepage&q&f=false
2	https://www.google.co.in/books/edition/Principles_of_Web_Design/qFk1EAAAQBAJ?hl=en&gbpv=1&dq=web%20design&pg=PA1977&printsec=frontcover

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	3	2	3	3	3	2	2
CO2	3	2	2	2	2	2	2	2	3	2	3
CO3	3	3	2	2	3	2	3	3	3	2	2
CO4	3	2	2	2	2	2	2	2	2	2	2
CO5	3	3	3	2	3	2	3	3	3	2	3
TOTAL	15	12	12	10	13	10	13	13	14	10	12
AVERAGE	3	2.4	2.4	2	2.6	2	2.6	2.6	2.8	2	2.4

ELECTIVE VIII- CRYPTOGRAPHY & NETWORK SECURITY

<table>
<tr><th rowspan="2">Subject Code</th><th rowspan="2">L</th><th rowspan="2">T</th><th rowspan="2">P</th><th rowspan="2">S</th><th rowspan="2">Credits</th><th rowspan="2">Inst. Hours</th><th colspan="3">Marks</th></tr>
<tr><th>CIA</th><th>External</th><th>Total</th></tr>
<tr><td>26UECV63</td><td>2</td><td>0</td><td>2</td><td>VI</td><td>3</td><td>4</td><td>50</td><td>50</td><td>100</td></tr>
</table>

<table>
<tr><td colspan="3">Learning Objectives</td></tr>
<tr><td>LO1</td><td colspan="2">To understand on the security Trends</td></tr>
<tr><td>LO2</td><td colspan="2">To apply the mathematical symmetric key cryptography</td></tr>
<tr><td>LO3</td><td colspan="2">To analyze the mathematics of a symmetric key cryptography</td></tr>
<tr><td>LO4</td><td colspan="2">Toimplytheauthenticationrequirements</td></tr>
<tr><td>LO5</td><td colspan="2">Tounderstand election mailsurveyandfirewall</td></tr>
<tr><td colspan="3">Prerequisites:</td></tr>
<tr><th>Unit</th><th>Contents</th><th>No. of Hours</th></tr>
<tr><td>I</td><td>Security trends – Legal, Ethical and Professional Aspects of Security, Need for Security at Multiple levels, Security Policies – Model of network security – Security attacks, services and mechanisms – OSI security architecture – Classical encryption techniques: substitution techniques, transposition techniques, steganography-Foundations of modern cryptography: perfect security–information theory–product cryptosystem–cryptanalysis.</td><td>12</td></tr>
<tr><td>II</td><td>Mathematics of Symmetric Key Cryptography: Algebraic structures – Modular arithmetic-Euclid"s algorithm- Congruence and matrices -Groups, Rings, Fields-Finite fields- SYMMETRIC KEY CIPHERS: SDES – Block cipher Principles ofDES – Strength of DES – Differential and linear cryptanalysis – Block cipher design principles–Block cipher mode of operation–Evaluation criteria for AES – Advanced Encryption Standard–RC4–Key Distribution.</td><td>12</td></tr>
<tr><td>III</td><td>Mathematics of Asymmetric Key Cryptography: Primes – Primality Testing – Factorization – Euler ‘s totient function, Fermat ‘s and Euler ‘s Theorem – Chinese Remainder Theorem – Exponentiation and logarithm – ASYMMETRIC KEY CIPHERS: RSA cryptosystem–Key distribution–Key management–Diffie Hellman key exchange -ElGamal cryptosystem – Elliptic curve arithmetic-Elliptic curve cryptography.</td><td>12</td></tr>
<tr><td>IV</td><td>Authentication requirement – Authentication function – MAC– Hash function – SecurityofhashfunctionandMAC–SHA–Digitalsignatureandauthentication protocols – DSS- Entity Authentication: Biometrics, Passwords, Challenge Response protocols- Authentication applications – Kerberos, X.509</td><td>12</td></tr>
<tr><td>V</td><td>Electronic Mail security – PGP, S/MIME–IP security–Web security–SYSTEM SECURITY: Intruders – Malicious software – viruses – Firewalls.</td><td>12</td></tr>
<tr><td></td><td>TOTAL</td><td>60</td></tr>
<tr><td colspan="3">THEORY20%&PROBLEMS80%</td></tr>
<tr><td colspan="3">Course Outcomes</td></tr>
<tr><td>CO1</td><td colspan="2">Rememberthesecuritytrends incryptographyandnetwork security</td></tr>
</table>

CO2	Enumeratethealgebrastructures
CO3	Applyand analyzethekeydistributionofmathematicalofasymmetricalkey
CO4	Implicationofauthenticationrequirementandfunctions
CO5	Describetheelectronicmailsecurityandwebsecuritysystem
Textbooks	
1	William Stallings, "Cryptography and Network Security–Principles and Practices", Prentice Hall of India, Third Edition, 2003.
2	Atul Kahate, "Cryptography and Network Security", Tata Mc Graw-Hill,2003.
3	Bruce Schneier, "Applied Cryptography", John Wiley&SonsInc,2001.
ReferenceBooks	
1	Charles B. Pfleeger, Shari Lawrence Pfleeger, "Security in Computing", Third Edition, Pearson Education, 2003
2	William Stallings, Cryptography and Network security, Hardcover,2016
NOTE: Latest Edition of Text books May be Used	
WebResources	
1	https://www.google.co.in/books/edition/Cryptography_and_Network_Security/v8nCCwAAQBAJ?hl=en&gl=in&kptab=editions&sa=X&ved=2ahUKEwiDnLTgxoP8AhXbpVYBHd18CggQmBZ6BAgBEAc
2	https://www.google.co.in/books/edition/Cryptography_And_Network_Security_4_E/qKcrce0x_2YC?hl=en&gbpv=1&dq=cryptography%20and%20network%20security&pg=PP1&printsec=frontcover
3	https://www.google.co.in/books/edition/Introduction_to_Cryptography_and_Network/JGPDxwEACAAJ?hl=en

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	2	3	2	3	2	3	2	2
CO2	3	2	3	2	2	2	2	2	3	2	3
CO3	3	3	3	2	3	2	3	2	3	2	2
CO4	3	2	3	2	2	2	2	2	3	2	2
CO5	3	3	3	2	3	2	3	2	3	2	3
TOTAL	15	12	15	10	13	10	13	10	15	10	12
AVERAGE	3	2.4	3	2	2.6	2	2.6	2	3	2	2.4

ELECTIVE VIII - Introduction to ERP

Subject code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UECV64	2	0	2	VI	3	4	50	50	100

Learning Objectives	
LO1	To understand the ERP and its risks and benefits
LO2	To be aware of ERP solutions and functional modules
LO3	To analyze the ERP implementation
LO4	To apply the post implementation and maintenance of ERP
LO5	To examine of emerging trends in ERP

Prerequisites: Should have studied Commerce in XII Std

Unit	Contents	No. of Hours
I	Introduction: Overview ofenterprise systems ñ Evolution - Risks and benefits - Fundamental technology - Issues to be consider in planning design and implementation of cross functional integrated ERP systems	12
II	ERP Solutions and Functional Modules: Overview of ERP software solutions- small, medium and large enterprise vendor solutions, BPR and best business practices - Business process Management, Functional modules	12
III	ERP Implementation: Planning Evaluation and selection of ERP systems - Implementation life cycle - ERP implementation, Methodology and Frame work- Training ñ Data Migration - People Organization in implementation- Consultants, Vendors and Employees.	12
IV	Post Implementation: Maintenance of ERP – Organizational and Industrial impact ; Success and Failure factors of ERP Implementation.	12
V	Emerging Trends on ERP: Extended ERP systems and ERP add-ons -CRM, SCM, Business analytics - Futuretrends in ERP systems-web enabled, Wireless technologies, cloud computing.	12
	TOTAL	**60**

THEORY 20%&PROBLEMS80%

Course Outcomes	
CO1	Illustrate the Pros and cons of ERP
CO2	Describe the different modules of ERP
CO3	Enumerate the implementation of ERP
CO4	Analyze the success and failure factors of ERP implementation
CO5	Discuss the cloud Computing

Textbooks	
1	Alexis Leon, ERP demystified, second Edition Tata McGraw-Hill,200
2	Sinha P. Magal and Jeffery Word, Essentials of Business Process and Information System, WileyIndia,2012
3	Jagan Nathan Vaman, ERP in Practice, Tata Mc Graw-Hill,2008

ReferenceBooks	
1	Alexis Leon, Enterprise Resource Planning, Second edition, TataMcGraw-Hill,2008
2	Mahadeo Jaiswal and Ganesh Vanapalli, ERP MacmillanIndia,2009
3	Vinod Kumar Gragand N.K. Venkatakrishnan, ERP-Concepts and Practice, PHI,2006
NOTE: Latest Edition of Text books May be Used	
WebResources	
1	https://www.google.co.in/books/edition/Enterprise_Resource_Planning/Z0M8BAAAQBAJ?hl=en&gbpv=1&dq=Introduction%20to%20ERP&pg=PP1&printsec=frontcover
2	https://www.google.co.in/books/edition/Enterprise_Resource_Planning_Systems/7fzMFG-tCmkC?hl=en&gbpv=1&dq=Introduction%20to%20ERP&pg=PP1&printsec=frontcover
3	https://www.google.co.in/books/edition/Enterprise_Resource_Planning/oTS-aoVMsykC?hl=en&gbpv=1&pg=PP1&printsec=frontcover

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	3	3	3	2	3	3	3	2	2
CO2	3	2	3	3	2	2	2	2	3	2	3
CO3	3	3	3	3	3	2	3	3	3	2	2
CO4	3	2	3	3	2	2	2	2	3	2	2
CO5	3	3	3	3	3	2	3	3	3	2	3
TOTAL	15	12	15	15	13	10	13	13	15	10	12
AVERAGE	3	2.4	3	3	2.6	2	2.6	2.6	3	2	2.4

THIRD YEAR – SIXTH SEMESTER

ABILITY ENHANCEMENT COURSE - DESIGN THINKING

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
26UAEC61	2	0	0	VI	2	2	50	50	100

Learning Objectives	
LO1	To recall and describe the key concepts, stages, and principles of Design Thinking.
LO2	To explain the importance of empathy, ideation, and prototyping in solving user- entered problems.
LO3	To apply Design Thinking methods such as brainstorming, empathy mapping, and SCAMPER to real-world problems.
LO4	To analyze user needs and problem statements using observation and structured frameworks.
LO5	To design innovative solutions and develop prototypes based on insights gained through the Design Thinking process.

Prerequisites: Should have studied Commerce in XII Std

Unit	Contents	No. of Hours
I	**Introduction to Design Thinking** Introduction to Design Thinking, Essential Design Thinking Skills, Core Principles of Design Thinking, Foundations of Design Thinking, Building an Effective Design Thinking Team, Discussion of Problems from IT sector.	6
II	**Design Thinking Phases** Stages of Design Thinking, Role of observation in understanding product and process challenges, Preparation of AEIOU and other canvases with defined problem statement, Exploring Design Thinking innovations, Understanding the Role of Design Thinking in Product and Process Innovation, Double Diamond model and its applications	6
III	**Design Thinking Techniques** Understanding, listening and Empathizing Techniques, Exploring observation methods, Utilizing a structured, open-ended approach for effective communication, Ideation Labs, Brainstorming techniques for idea generation, Applying innovation to foster creativity, Application of SCAMPER technique to support Problem Statement	6
IV	**Prototyping Methods** Methods and Tools for Design Thinking Practice; Empathize: Ask five why questions, Empathy map, storytelling, critical items diagram, mind map, journey map; Ideate: Brainstorming, 2x2 matrix, Need-Approach-Benefit-Competition (NABC) Methods; Prototype: Exploration map, Minimum Viable Product (MVP), Feasibility Testing, Viability Testing, A/B Testing, Sustainability Verification, Collect Feedback, Iterate and Improve, PDC canvas versioning	6
V	**Case Studies** Quick-Commerce Applications – Food and Grocery Delivery (eg. Swiggy, Instacart), Uber, OLA, Rapido, E-Commerce Applications – Online Shopping (eg. Amazon), Online Publishing (eg. Canva), Online Ticket Booking (eg.Book My Show), Fintech apps (eg. Google Pay, Razorpay etc.)	6
	TOTAL	**30**

Course Outcomes	
CO1	Understand the fundamental principles and importance of Design Thinking in fostering innovation, ethics and its relevance.

CO2	Apply systematic problem identification, problem framing, articulation, and problem-solving approaches in the context of Design Thinking
CO3	Analyze and evaluate different tools and methodologies used in Design Thinking, such as observation, ethnographic research and mind mapping to gain insights into users' needs
CO4	Develop and refine product concepts by preparing product development canvases (PDC) that consider product experience, functions, features, and sustainable development of the components
CO5	Create a final working prototype for projects with limitations, documenting the functionality and features, viability, sustainability, scalability, cost and resource utilization for the product
Open-source software and websites	
1	Google Workspace: Docs, Sheets and Slides
2	Google Jamboard
3	Mind-mapping tools: Wise mapping, Free plane, Semantic
Reference Books	
1	Soni, Pavan. Design Your Thinking: The Mindsets, Toolsets and Skill Sets for Creative Problem-solving. Penguin Random House India Private Limited, 2020
2	Tim Brown, Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation, HarperCollins e-books (2009)
3	Liedtka, Jeanne, Randy Salzman, and Daisy Azer. Design thinking for the greater good: Innovation in the social sector. Columbia University Press, 2019
Suggested MOOC Courses	
1	B. K. Chakravarthy, Design Technology and Innovation, SWAYAM NPTEL (Online)
2	B. K. Chakravarthy, Innovation by Design, SWAYAM NPTEL (Online)
3	Nina Sabnani, Understanding Design, SWAYAM NPTEL (Online)

CO/PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	**3**	**2**	**2**	**2**	**2**	**3**
CO2	**3**	**2**	**2**	**2**	**3**	**2**
CO3	**3**	**3**	**3**	**3**	**2**	**2**
CO4	**3**	**2**	**2**	**2**	**2**	**3**
CO5	**3**	**3**	**2**	**2**	**3**	**2**
Weightage of course contributed to each PSO	**15**	**12**	**11**	**11**	**12**	**12**