



**MOTHER TERESA WOMEN'S UNIVERSITY  
KODAIKANAL - 624101**



**DEPARTMENT OF COMMERCE**

**B.Com. with Computer Applications**

**Curriculum Framework, Syllabus, and Regulations**

**(Based on TANSCHS Syllabus under Choice Based Credit  
System -CBCS)**



**(For the candidates to be admitted from the Academic Year 2023-24)**

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**Mother Teresa Women's University, Kodaikanal**  
**Department of Commerce**  
**Choice Based Credit System (CBCS)**  
**(2023-2024 onwards)**  
**Bachelor of Commerce with Computer Applications**

**A. About the**

**The Revised** syllabus for the B.Com with Computer Applications Programme is recommended from the academic year 2023– 2024 onwards. The regulations scheme of examinations and syllabus for the B.Com Programme with Computer Application is based on UGC/TANSICHE guidelines under the Choice Based Credit System (CBCS). The Bachelor's Degree in B. Com with Computer Application is awarded to the student on the basis of demonstrated achievement of outcomes (expressed in terms of knowledge, understanding, skills, attitudes, and values) and academic criteria expected of graduates at the end of the program. Therefore, the learning outcomes of this particular program are aimed at facilitating the students to acquire these attributes, keeping in view changes in the current socio-economic environment. The Learning Outcomes-based Curriculum Framework (LOCF) of B. Com with Computer Application has been designed keeping in view the graduate attributes, qualification descriptors, program learning outcomes, and course learning outcomes.

**B. Programme Educational Objectives:**

**The B.Com (Computer Applications)** Programme describes accomplishments that graduates are expected to attain within five to seven years after graduation. The Programme has been designed with following objectives:

- PEO1** To provide students with specific knowledge and skills relevant to their disciplines and career.
- PEO2** To make the students acquainted with technical and practical concepts for understanding the real business problems using different programming languages.
- PEO3** To train the students on practical business applications using high level programming languages in real world.
- PEO4** To create awareness about the useful applications of different computer languages that solve real world problems.
- PEO5** To train the students to enhance the knowledge on visual based programming language and object-oriented language in different business applications using various design principles portraying the concepts of computer applications in business activities.

### C. Program Outcomes

On successful completion of the B.Com. (Computer Application) Program, students will be able to

<b>PO 1</b>	<b>Disciplinary knowledge:</b> Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study
<b>PO 2</b>	<b>Communication Skills:</b> Ability to express thoughts and ideas effectively in writing and orally; Communicate 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.
<b>PO 3</b>	<b>Critical Thinking:</b> Capability to apply analytic thought to a 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.
<b>PO 4</b>	<b>Problem-solving: Capacity</b> to extrapolate from what one has learned 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
<b>PO 5</b>	<b>Analytical Reasoning:</b> Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints.
<b>PO 6</b>	<b>Research-related Skills:</b> 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 hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation
<b>PO 7</b>	<b>Cooperation/Team-work:</b> 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 a team
<b>PO 8</b>	<b>Scientific Reasoning:</b> Ability to analyse, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective
<b>PO 9</b>	<b>Reflective thinking:</b> Critical sensibility to lived experiences, with self awareness and reflexivity of both self and society.

<b>PO 10</b>	<b>Information/digital literacy:</b> Capability to use ICT in a 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.
<b>PO 11</b>	<b>Self-directed Learning:</b> Ability to work independently, identify appropriate resources required for a project, and manage a project through to completion.

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<b>PO 12</b>	<b>Multicultural Competence:</b> Possess knowledge of the values and beliefs of multiple cultures and a global perspective; and capability to effectively engage in a multicultural society and interact respectfully with diverse groups.
<b>PO 13</b>	<b>Moral and Ethical Awareness/Reasoning:</b> 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 issues related to one's work, avoid unethical behaviour such as fabrication, falsification or misrepresentation of data or committing plagiarism, not adhering to intellectual property rights; appreciating environmental and sustainability issues; and adopting objective, unbiased and truthful actions in all aspects of work.
<b>PO 14</b>	<b>Leadership Readiness/Qualities:</b> Capability for mapping out the tasks of a team or an organization, and setting direction, formulating an inspiring vision, building a team who can help achieve the vision, motivating and inspiring team members to engage with that vision, and using management skills to guide people to the right destination, in a smooth and efficient way.
<b>PO 15</b>	<b>Lifelong Learning:</b> 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 work place through knowledge/skill development/re-skilling.

#### **D. Programme Specific Outcomes (PSO)**

After the successful completion of B. Com. (Computer Application) Program, the students are expected to

<b>PSO 1</b>	<b>Placement:</b> To prepare the students who will demonstrate respectful engagement with others' ideas, behaviors, and beliefs and apply diverse frames of reference to decisions and actions.
<b>PSO 2</b>	<b>Entrepreneur:</b> To create effective entrepreneurs by enhancing their critical thinking, problem solving, decision making and leadership skill that will facilitate startups and high potential organizations
<b>PSO 3</b>	<b>Research and Development:</b> Design and implement HR systems and practices grounded in research that comply with employment laws, leading the organization towards growth and development.
<b>PSO 4</b>	<b>Contribution to Business World:</b> To produce employable, ethical and innovative professionals to sustain in the dynamic business world.
<b>PSO 5</b>	<b>Contribution to the Society:</b> To contribute to the development of the society by collaborating with stakeholders for mutual benefit

E. \_\_\_\_\_

\_\_\_\_\_ **Candidate should** \_\_\_\_\_ passed the Higher Secondary Examination or CBSE Examination from school with Commerce, Accountancy and Computer

**F. General Guidelines for UG Programme**

**G. Duration:** The programme shall extend through a period of 6 consecutive semesters and the duration of a semester shall normally be 90 days or 450 hours. Examinations shall be conducted at the end of each semester for the respective subjects.

**H. Medium of Instruction:** English

**I. Evaluation:** Evaluation of the candidates shall be through Internal Assessment and External Examination for both Theory and Practical.

**7.1 Evaluation Pattern**

EVALUATION PATTERN	Components for Evaluation	Maximum Marks (both Theory and Practical)	Minimum Marks (both Theory and Practical)
<b>Internal Evaluation</b>	Continuous Internal Assessment Test	<b>25 Marks</b>	<b>10 Marks</b>
	Assignments / Snap Test / Quiz		
	Seminars		
	Attendance and Class Participation		
<b>External Evaluation</b>	End Semester Examination-Theory and Practical	<b>75 Marks</b>	<b>30 Marks</b>
<b>Total</b> <b>* Minimum credits required to pass: 140</b>		<b>100 Marks</b>	<b>40 marks</b>

**7.2 Internal Assessment-CIA**

There shall be three tests conducted by the faculty concerned and the average of the best two can be taken as the Continuous Internal Assessment (CIA) for a maximum of 25 marks. The duration of each test shall be one / one and a half hour.

**7.3 Question Paper Pattern for External Examination for all Course****Papers****Max. Marks: 75****Time: 3 Hrs.**

S.No.	Part	Type	Marks
1	A	<b>10*1 Marks=10</b> Multiple Choice Questions (MCQs): 2 questions from each Unit	<b>10</b>
2	B	<b>5*4=20</b> Two questions from each Unit with Internal Choice (either / or)	<b>20</b>
3	C	<b>3*15=45</b> Open Choice: Any three questions out of 5 : one question from each unit	<b>45</b>
<b>Total Marks</b>			<b>75</b>

**7.4. Methods of Assessment**

METHODS OF ASSESSMENT	
<b>Remembering (K1)</b>	<ul style="list-style-type: none"> <li>The lowest level of questions require students to recall information from the course content</li> <li>Knowledge questions usually require students to identify information in the textbook.</li> </ul>
<b>Understanding (K2)</b>	<ul style="list-style-type: none"> <li>Understanding off acts and ideas by comprehending organizing, comparing, translating, interpolating and interpreting in their own words.</li> <li>The questions go beyond simple recall and require students to combine data together</li> </ul>
<b>Application (K3)</b>	<ul style="list-style-type: none"> <li>Students have to solve problems by using/applying a concept learned in the classroom.</li> <li>Students must use their knowledge to determine a exact response.</li> </ul>
<b>Analyze (K4)</b>	<ul style="list-style-type: none"> <li>Analyzing the question is one that asks the students to break down something in to its component parts.</li> <li>Analyzing requires students to identify reasons causes or motives and reach conclusions or generalizations.</li> </ul>



<b>Evaluate (K5)</b>	<ul style="list-style-type: none"> <li>• Evaluation requires an individual to make judgment on something.</li> <li>• Questions to be asked to judge the value of an idea, a character, a work of art, or a solution to a problem.</li> <li>• Students are engaged in decision-making and problem-solving.</li> <li>• Evaluation questions do not have single right answers.</li> </ul>
<b>Create (K6)</b>	<ul style="list-style-type: none"> <li>• The questions of this category challenge students to get engaged in creative and original thinking.</li> <li>• Developing original ideas and problem solving skills</li> </ul>

## J. Project

### 8.1 Project Report

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

There is a

for Project

### 8.2 Project Evaluation

Viva Voce Examination Work. The Guide and an External Examiner shall evaluate and conduct the Viva Voce Examination. The Project Work carries 100 marks (Internal: 25 Marks; External (Viva): 75 Marks).

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

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

**L.**

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

**M. Maternity**

**The student avails maternity leave may be considered to appear for the examination with the approval of Staff i/c, Head of the Department, Controller of Examination, and the Registrar.**

**N. Any Other Information**

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

**O. Faculty Course File Structure**

<b>a.</b>	Academic Schedule	<b>q.</b>	Laboratory Experiments related to the Courses
<b>b.</b>	Students Name List	<b>r.</b>	Internal Question Paper
<b>c.</b>	Time Table	<b>s.</b>	External Question Paper
<b>d.</b>	Syllabus	<b>t.</b>	Sample Home Assignment Answer Sheets
<b>e.</b>	Lesson Plan	<b>u.</b>	Three best, three middle level and three average Answer sheets
<b>f.</b>	Staff Work load	<b>v.</b>	Result Analysis (CO wise and whole class)
<b>g.</b>	Course Design(content, CO Statement(COs), Delivery method, mapping of COs with Programme Outcomes(POs), Assessment Pattern in terms of Revised Bloom's Taxonomy).	<b>w.</b>	Question Bank for Higher studies Preparation(GATE/Placement)
<b>h.</b>	Sample CO Assessment Tools	<b>x.</b>	List of mentees and their academic achievements
<b>i.</b>	Faculty Course Assessment Report(FCAR)		
<b>j.</b>	Course Evaluation Sheet		
<b>k.</b>	Teaching Materials(PPT,OHP etc)		
<b>l.</b>	Lecture Notes		
<b>m.</b>	Home Assignment Questions		
<b>n.</b>	Tutorial Sheets		
<b>o.</b>	Remedial Class Record, if any		
<b>p.</b>	Projects related to the Course		

**P. Common Template for UG Programmes as per TANSCH (Credit Distribution)**

Sem I	C r e d i t	H	Sem II	C r e d i t	H	Sem III	C r e d i t	H	Sem IV	C r e d i t	H	Sem V	C r e d i t	H	Sem VI	C r e d i t	H
Part 1. Language – Tamil	3	6	Part..1. Language – Tamil	3	6	Part..1. Language – Tamil	3	6	Part..1. Language – Tamil	3	6	5.1 Core Course –\CC IX	4	5	6.1 Core Course – CC XIII	4	6
Part.2 English	3	6	Part..2 English	3	6	Part..2 English	3	6	Part..2 English	3	6	5.2 Core Course – CC X	4	5	6.2 Core Course – CC XIV	4	6
1.3 Core Course – CCI	5	5	2..3 Core Course – CC III	5	5	3.3 Core Course – CC V	5	5	4.3 Core Course –CC VII Core Industry Module	5	5	5. 3.Core Course CC -XI	4	5	6.3 Core Course –CC XV	4	6
1.4 Core Course – CCII	5	5	2.4 Core Course – CC IV	5	5	3.4 Core Course – CC VI	5	5	4.4 Core Course –CC VIII	5	5	5. 4.Core Course –/ Project with viva- voce CC -XII	4	5	6.4 Elective - VII Generic/ Discipline Specific	3	5
1.5 Elective I Generic/ Discipline Specific	3	4	2.5 Elective II Generic/ Discipline Specific	3	4	3.5 Elective III Generic/ Discipline Specific	3	4	4.5 Elective IV Generic/ Discipline Specific	3	3	5.5 Elective V Generic/ Discipline Specific	3	4	6.5 Elective VIII Generic/ Discipline Specific	3	5

1.6 Skill Enhancement Course SEC-1	2	2	2.6 Skill Enhancement Course SEC-2	2	2	3.6 Skill Enhancement Course SEC-4, (Entrepreneurial Skill)	1	1	4.6 Skill Enhancement Course SEC-6	2	2	5.6 Elective VI Generic/ Discipline Specific	3	4	6.6 Extension Activity	1	-
1.7 Skill Enhancement - (Foundation Course)	2	2	2.7 Skill Enhancement Course – SEC-3	2	2	3.7 Skill Enhancement Course SEC-5	2	2	4.7 Skill Enhancement Course SEC-7	2	2	5.7 Value Education	2	2	6.7 Professional Competency Skill	2	2
						3.8 E.V.S.	-	1	4.8 E.V.S	2	1	5.8 Summer Internship /Industrial Training	2				
	<b>23</b>	<b>30</b>		<b>23</b>	<b>30</b>		<b>22</b>	<b>30</b>		<b>25</b>	<b>30</b>		<b>26</b>	<b>30</b>		<b>21</b>	<b>30</b>
<b>Total – 140 Credits</b>																	

Course Code	Course Tittle	Credit s	Hours		CIA	EIA	Total
			L	P			
FIRST SEMESTER							
U23TAL11	Language 1-Tamil/Other	3	6	-	25	75	100
U23ENL11	Language 2-English	3	6	-	25	75	100
U23CCT101	Core Theory – 1: Financial Accounting 1	5	5	-	25	75	100
U23CCT102	Core Theory – 2: Principles of Management	5	5	-	25	75	100
U23CCE1A U23CCE1B	Subject Based Elective I: 1A-Programming in C and Lab / 1B-Python Programming and Lab	3	2	2	25	75	100
U23CCS11	Skill Enhancement Course SEC–1 (Subject based): Fundamentals of Information Technology	2	2	-	25	75	100
U23CCF11	Foundation Course - Fundamentals of Commerce	2	2	-	25	75	100
	TOTAL	23	30		-	-	700
SECOND SEMESTER							
U23TAL12	Language1-Tamil/other	3	6	-	25	75	100
U23ENL22	Language2–English	3	6	-	25	75	100
U23CCT203	Core Theory – 3: Financial Accounting - II	5	5	-	25	75	100
U23CCT204	Core Theory – 4: Business Law	5	5	-	25	75	100
U23CCE22A U23CCE22B	Subject Based Elective - II: A. Elective II-Office Automation and Lab / B. Programming in C++ and Lab	3	2	2	25	75	100
U23CCS22	Skill Enhancement Course SEC–2: Soft Skills (Common Syllabus) - Interpersonal Development	2	2	-	25	75	100
U23CCNM21	Naan Mudhalvan Course - 1	2	2	-	25	75	100
	TOTAL	23	30		-	-	700
THIRD SEMESTER							
U23TAL13	Language1-Tamil/other	3	6	-	25	75	100
U23ENL23	Language2-English	3	6	-	25	75	100
U23CCT305	Core Thoery – 5: Corporate Accounting - I	5	5	-	25	75	100
U23CCT306	Core Theory – 6: Company Law	5	5	-	25	75	100
U23CCE33A U23CCE33B	Subject Based Elective III: A. Programming in JAVA Lab / B. Web Technology (PHP) Lab	3	2	2	25	75	100

U23CCS33	Skill Enhancement Course SEC–3 (Entrepreneurial Skill) Business Plan Preparation	1	2	-	25	75	100
U23CCNM32	Naan Mudhalvan Course - 2	2	2	-	25	75	100
	<b>TOTAL</b>	<b>22</b>	<b>30</b>	-	-		<b>700</b>
<b>FOURTH SEMESTER</b>							
U23TAL14	Language1-Tamil/other	3	6	-	25	75	100
U23ENL24	Language2-English	3	6	-	25	75	100
U23CCT407	Core Theory – 7: Corporate Accounting II	5	4	-	25	75	100
U23CCT408	Core Theory – 8: Principles of Marketing	5	4	-	25	75	100
U23CCE44A/ U23CCE44B	Subject Based Elective IV – <b>A. Relational Database Management System</b> <b>B. Introduction to Data Science</b>	3	4	-	25	75	100
U23CCS44	<b>Skill Enhancement Course SEC–4 Commerce Practical</b>	2	2	-	25	75	100
U23CCNM43	<b>Naan Mudhalvan</b>	2	2	-	25	75	100
U23CC4EVS	Environmental Studies	2	2	-	25	75	100
	<b>TOTAL</b>	<b>25</b>	<b>30</b>	-	-		<b>800</b>
<b>FIFTH SEMESTER</b>							
U23CCT509	Core Theory-9: Cost Accounting -I	4	5	-	25	75	100
U23CCT510	Core Theory-10: Banking Law and Practice	4	5	-	25	75	100
U23CCT511	Core Theory – 11: Income Tax Law and Practice1	4	5	-	25	75	100
U23CCT512	Core Theory – 12: Project with Viva	4	5	-	25	75	100
U23CCE55A/ U23CCE55B	Discipline Specific Elective V: A. Financial Management / B. Indirect Taxation	3	3	-	25	75	100
U23CCE56A/ U23CCE56B	Discipline Specific Elective VI Software Engineering (UML Lab) / Object oriented Analysis and Design (UML Lab)	3	2	1	25	75	100
U23CCVE1	Value Education	2	2	-	25	75	100
U23CC5INT	Summer Internship/Industrial Training	2	-	-	25	75	100
U23CCNM54	<b>Naan Mudhalvan Course - 4</b>	2	2	-	25	75	100
	<b>TOTAL</b>	<b>28</b>	<b>30</b>	-	-		<b>900</b>

	<b>SIXTH SEMESTER</b>						
U23CCT613	Core Theory – 13: Cost Accounting II	4	6	-	25	75	100
U23CCT614	Core Theory – 14: Management Accounting	4	6	-	25	75	100
U23CCT615	Core Theory – 15: Income Tax Law and Practice II	4	6	-	25	75	100
U23CCE67A/ U23CCE67B	Discipline Specific Elective VII – A. Entrepreneurial Development / B. Artificial Intelligence in Business	3	5	-	25	75	100
U23CCE68A/ U23CCE68B	Discipline Specific Elective VIII: <b>A. R Language /</b> <b>B. Practical Tally</b>	3	2	3	25	75	100
U23CCEAS61	Extension Activity	1	-	-	25	75	100
U23CCNM65	<b>Naan Mudhalvan Course - 5</b>	2	2	-	25	75	100
	<b>TOTAL</b>	<b>21</b>	<b>30</b>	-	-	<b>700</b>	
	<b>GRAND TOTAL</b>	<b>142</b>	<b>180</b>	-	-	<b>4500</b>	

**16. Syllabus in Detail****B.COM. WITH COMPUTER APPLICATIONS****First Year****Core-I****Semester I**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CCT101</b>	<b>FINANCIAL ACCOUNTING-I</b>	<b>CORE-I</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>5</b>	<b>25</b>	<b>75</b>	<b>100</b>

Learning Objectives	
1	To understand the basic accounting concepts and standards.
2	To know the basis for calculating business profits.
3	To familiarize with the accounting treatment of depreciation.
4	To learn the methods of calculating profit for single entry system.
5	To gain knowledge on the accounting treatment of insurance claims.
<b>Prerequisites: Should have studied Accountancy in XII Std</b>	
COURSE CONTENTS	
<b>UNIT-I</b>	<b>(15 Hrs)</b>
<b>Fundamentals of Financial Accounting</b>	
Financial Accounting – Meaning, Definition, Objectives, Basic Accounting Concepts and Conventions - Journal, Ledger Accounts– Subsidiary Books — Trial Balance - Classification of Errors – Rectification of Errors – Preparation of Suspense Account – Bank Reconciliation Statement - Need and Preparation	
<b>UNIT-II</b>	<b>(15 Hrs)</b>
<b>Final Accounts</b>	
Final Accounts of Sole Trading Concern- Capital and Revenue Expenditure and Receipts – Preparation of Trading, Profit and Loss Account and Balance Sheet with Adjustments.	
<b>UNIT-III</b>	<b>(15 Hrs)</b>
<b>Depreciation and Bills of Exchange</b>	
Depreciation - Meaning – Objectives – Accounting Treatments - Types - Straight Line Method – Diminishing Balance method – Conversion method.	
Units of Production Method – Cost Model vs Revaluation	



**Bills of Exchange** – Definition – Specimens – Discounting of Bills – Endorsement of Bill – Collection –  
Noting – Renewal – Retirement of Bill under rebate

**UNIT-IV (15 Hrs)**

**Accounting from Incomplete Records – Single Entry System**

Incomplete Records -Meaning and Features - Limitations - Difference between Incomplete Records and Double Entry System - Methods of Calculation of Profit - Statement of Affairs Method – Preparation of final statements by Conversion method.

**UNIT-V (15 Hrs)**

**Royalty and Insurance Claims**

Meaning – Minimum Rent – Short Working – Recoupment of Short Working – Lessor and Lessee–Sublease–Accounting Treatment.

**Insurance Claims** –Calculation of Claim Amount-Average clause (Loss of Stock only)

**Note:** Question paper will cover 20% Theory and 80% Problem

**COURSE OUTCOMES**

**Students will be able to**

CO No	CO Statement	Knowledge Level
CO1	Remember the concept of rectification of errors and Bank reconciliation Statements	K1
CO2	Apply the knowledge in preparing detailed accounts of sole trading concerns	K3
CO3	Analyse the various methods of providing depreciation	K4
CO4	Evaluate the methods of calculation of profit	K5
CO5	Determine the royalty accounting treatment and claims from insurance companies in case of loss of stock.	K3

**Book for Study**

1	S. P. Jain and K. L. Narang Financial Accounting- I, Kalyani Publishers, New Delhi.
2	S.N. Maheshwari, Financial Accounting, Vikas Publications, Noida.
3	Shukla Grewal and Gupta, “Advanced Accounts”, volume 1, S.Chand and Sons, New Delhi.
4	Radhaswamy and R.L. Gupta: Advanced Accounting, Sultan Chand, New Delhi.
5	R.L. Gupta and V.K. Gupta, “Financial Accounting”, Sultan Chand, New Delhi.

**Books for Reference**

1	Dr. Arulanandan and Raman: Advanced Accountancy, Himalaya Publications, Mumbai.
2	Tulsian , Advanced Accounting, Tata McGraw Hills, Noida.
3	Charumathi and Vinayagam, Financial Accounting, S.Chand and Sons, New Delhi.
4	Goyal and Tiwari, Financial Accounting, Taxmann Publications, New Delhi.
5	Robert N Anthony, David Hawkins, Kenneth A. Merchant, Accounting: Text and Cases. McGraw-Hill Education, Noida.

**NOTE: Latest Edition of Text books may be used****Web References**

1	<a href="https://www.slideshare.net/mcsharma1/accounting-for-depreciation-1">https://www.slideshare.net/mcsharma1/accounting-for-depreciation-1</a>
2	<a href="https://www.slideshare.net/ramusakha/basics-of-financial-accounting">https://www.slideshare.net/ramusakha/basics-of-financial-accounting</a>
3	<a href="https://www.accountingtools.com/articles/what-is-a-single-entry-system.html">https://www.accountingtools.com/articles/what-is-a-single-entry-system.html</a>

**Mapping With Programme Outcomes  
and Programme Specific Outcomes**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
<b>CO1</b>	3	2	3	3	2	3	2	2	3	2	2
<b>CO2</b>	3	2	3	3	3	2	2	2	3	2	2
<b>CO3</b>	3	2	3	3	3	2	2	2	3	2	2
<b>CO4</b>	3	2	3	3	2	2	2	2	3	2	2
<b>CO5</b>	3	2	3	3	3	2	2	2	3	2	2

**3 – Strong, 2- Medium, 1- Low**

**B.COM.WITH COMPUTER APPLICATIONS****First Year****Core – II****Semester I**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCT102	PRINCIPLES OF MANAGEMENT	CORE-II	5	-	-	-	5	5	25	75	100

Learning Objectives	
1	To understand the basic management concepts and functions
2	To know the various techniques of planning and decision making
3	To familiarize with the concepts of organisation structure
4	To gain knowledge about the various components of staffing
5	To enable the students in understanding the control techniques of management
<b>Prerequisites: Should have studied Commerce in XII Std</b>	
COURSE CONTENTS	
<b>UNIT- I</b>	<b>(15 Hrs)</b>
<b>Introduction to Management</b>	
Meaning- Definitions – Nature and Scope - Levels of Management – Importance - Management Vs. Administration – 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.	
<b>UNIT- II</b>	<b>(15 Hrs)</b>
<b>Planning</b>	
Planning – Meaning – Definitions – Nature – Scope and Functions – Importance and Elements of Planning – Types – Planning Process - Tools and Techniques of Planning – Management by Objective (MBO). Decision Making: Meaning – Characteristics – Types - Steps in Decision Making – Forecasting.	
<b>UNIT- III</b>	<b>(15 Hrs)</b>
<b>Organizing</b>	
Meaning - Definitions - Nature and Scope – Characteristics – Importance – Types - Formal and Informal Organization – Organization Chart – Organization Structure: Meaning and Types - Departmentalization– Authority and Responsibility – Centralization and Decentralization – Span of Management.	

**UNIT- IV****(15 Hrs)****Staffing**

Introduction - Concept of Staffing- Staffing Process – Recruitment – Sources of Recruitment – Modern Recruitment Methods - Selection Procedure – Test- Interview– Training: Need - Types– Promotion – Management Games – Performance Appraisal - Meaning and Methods – 360 degree Performance Appraisal – Work from Home - Managing Work from Home [WFH].

**UNIT -V****(15 Hrs)****Directing**

Motivation –Meaning - Theories – Communication – Types - Barriers to Communications – Measures to Overcome the Barriers. Leadership – Nature - Types and Theories of Leadership – Styles of Leadership - Qualities of a Good Leader – Successful Women Leaders – Challenges faced by women in workforce - Supervision.

**Co-ordination and Control**

Co-ordination – Meaning - Techniques of Co-ordination.

Control - Characteristics - Importance – Stages in the Control Process - Requisites of Effective Control and Controlling Techniques – Management by Exception [MBE].

**Note:** Question paper will cover 100% Theory

**COURSE OUTCOMES**

Students will be able to

CO No	CO Statement	Knowledge Level
CO1	Demonstrate the importance of principles of management.	K2
CO2	Paraphrase the importance of planning and decision making in an organization.	K2
CO3	Comprehend the concept of various authorizes and responsibilities of an organization.	K2
CO4	Enumerate the various methods of Performance appraisal	K1
CO5	Demonstrate the notion of directing, co-coordination and control in the management.	K2

**Books for Study**

1	Gupta.C.B, -Principles of Management-L.M. Prasad, S.Chand& Sons Co. Ltd, New Delhi.
2	Dinkar Pagare, Principles of Management, Sultan Chand & Sons Publications, New Delhi.
3	P.C.Tripathi& P.N Reddy, Principles of Management. Tata McGraw, Hill, Noida.
4	L.M. Prasad, Principles of Management, S.Chand&Sons Co. Ltd, New Delhi.
5	R.K. Sharma, Shashi K. Gupta, Rahul Sharma, Business Management, Kalyani Publications, New Delhi.

**Books for Reference**

1	K Sundhar, Principles Of Management, Vijay Nichole Imprints Limited, Chennai
2	Harold Koontz, Heinz Weirich, Essentials of Management, McGraw Hill, Sultan Chand and Sons, New Delhi.
3	Griffiffin, Management principles and applications, Cengage learning, India.
4	H.Mintzberg - The Nature of Managerial Work, Harper & Row, New York.
5	Eccles, R. G. & Nohria, N. Beyond the Hype: Rediscovering the Essence of Management. Boston The Harvard Business School Press, India.

**NOTE: Latest Edition of Text books May be Used****Web References**

1	<a href="http://www.universityofcalicut.info/syl/management">http://www.universityofcalicut.info/syl/management</a>
2	<a href="https://www.managementstudyguide.com/manpower-planning.htm">https://www.managementstudyguide.com/manpower-planning.htm</a>
3	<a href="https://www.businessmanagementideas.com/notes/management-notes/coordination/coordination/21392">https://www.businessmanagementideas.com/notes/management-notes/coordination/coordination/21392</a>

**MAPPING WITH PROGRAMME OUTCOMES AND PROGRAMME-SPECIFIC OUTCOMES**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
<b>CO1</b>	3	2	2	3	3	2	2	2	3	2	3
<b>CO2</b>	3	2	3	3	2	2	2	2	3	2	2
<b>CO3</b>	3	2	2	3	2	2	2	1	3	2	2
<b>CO4</b>	3	2	2	3	2	2	2	2	3	2	2
<b>CO5</b>	3	2	3	3	2	2	2	1	3	2	2

**3 – Strong, 2- Medium, 1- Low**

**B.COM.WITH COMPUTER APPLICATION****First Year****Elective-I****Semester-I**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCE1A	PROGRAMMING IN C AND LAB	ELECTIVE-IA-PRACTICAL	2	-	2	-	3	4	25	75	100
	Learning Objectives										
1	Describe the core syntax and semantics of C programming language.										
2	Discover the need for working with the strings and functions.										
3	Illustrate the process of structuring the data using matrix, structure.										
Prerequisites: Should have studied Commerce in XII Std											

<b>COURSE CONTENTS</b>	
<b>UNIT-I</b>	<b>(12Hrs)</b>
Introduction to C Language: C Language Introduction-Features of C Language-Benefits of C over other languages-Compilation of C Program-First Program in C Pre-processor in C Pre-processor directives	
<b>UNIT-II</b>	<b>(12Hrs)</b>
Variables, Data Types & Operators: Variables and Keywords in C-Scope rules in C-Data Types in C-Operators & Its Types-Typecasting in C	
<b>UNIT-III</b>	<b>(12Hrs)</b>
Control Flow Statements: Decision Making Statements-Switch Statement in C-C Loops & Control Structure Practice problems-Continue Statement, Break Statement Array & String Handling in C: Arrays in C-Strings in C	
<b>UNIT-IV</b>	<b>(12Hrs)</b>
Multidimensional Arrays in C-String functions in C- Practice problems Functions in C: Function Prototype-Parameter Passing Techniques in C-Storage Classes in C-Recursion Concept -Functions in C Practice problems	
<b>UNIT-V</b>	<b>(12Hrs)</b>
Pointers, Structures, and Unions: Pointers in C-Structures- Union - Enumeration (or enum) in C- Pointer vs Array in C – C application programs (Sorting, Matrix manipulations, student's mark list preparation)	

**Note: Question paper will cover 100% Practical**

**COURSE OUTCOMES****Students will be able to**

CO No	CO Statement	Knowledge Level
CO1	Apply the concept of Control Structures to solve any given problem.	K3
CO2	Apply the concept of single and multi-dimensional arrays to solve problems related to searching, sorting and matrix operations.	K3
CO3	Apply the concept of Strings for writing programs related to character array.	K3
CO4	Write programs using concept of user defined and recursive functions.	K1
CO5	Apply concept of structures to write programs.	K3

**Books for Study**

1	E. Balaguruswamy, "Programming in ANSI C", 8th Edition, 2019, McGraw Hill Education, ISBN:978-93-5316-513-0.
2	Pradip Dey, Manas Ghosh, "Programming in C", 2nd Edition, 2018, Oxford University Press, ISBN: 978-01-9949-147-6.
3	Kernighan B.W and Dennis M. Ritchie, "The C Programming Language", 2nd Edition, 2015, Pearson Education India, ISBN: 978-93-3254-944-9.

**Books for Reference**

1	Yashavant P. Kanetkar, "Let Us C", 16th Edition, 2019, BPB Publications, ISBN: 978-93-8728-449-4.
2	Jacqueline A Jones and Keith Harrow, "Problem Solving with C", Pearson Education. ISBN: 978-93-325-3800-9.
3	Dr. Guruprasad Nagraj, "C Programming for Problem Solving", Himalaya Publishing House. ISBN-978-93-5299-361-1.

**NOTE: Latest Edition of Text books May be Used****Web References**

1	<a href="http://elearning.vtu.ac.in/econtent/courses/video/BS/14CPL16.html">http://elearning.vtu.ac.in/econtent/courses/video/BS/14CPL16.html</a>
2	<a href="https://nptel.ac.in/courses/106/105/106105171/">https://nptel.ac.in/courses/106/105/106105171/</a>

### Mapping With Programme Outcomes and Programme Specific Outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
<b>CO1</b>	3	2	2	3	3	2	2	2	3	2	3
<b>CO2</b>	3	2	3	3	2	2	2	2	3	2	2
<b>CO3</b>	3	2	2	3	2	2	2	1	3	2	2
<b>CO4</b>	3	2	2	3	2	2	2	2	3	2	2
<b>CO5</b>	3	2	3	3	2	2	2	1	3	2	2

**3 – Strong, 2- Medium, 1- Low**

<b>C Programming Lab</b>
<p><b>Learning Objectives:</b> (for teachers: what they have to do in the class/lab/field)</p> <ul style="list-style-type: none"> <li>Understand problem statements and identify appropriate solutions.</li> <li>Demonstrate the use of IDE and C Compiler.</li> <li>Develop programs using C Programming Language.</li> </ul>
<p><b>CO Statement:</b> (for students: To know what they are going to learn)</p> <p><b>CO1:</b> Apply the concept of Control Structures to solve any given problem.</p> <p><b>CO2:</b> Apply the concept of single and multi-dimensional arrays to solve problems related to searching, sorting and matrix operations.</p> <p><b>CO3:</b> Apply the concept of Strings for writing programs related to character array.</p> <p><b>CO4:</b> Write programs using concept of user defined and recursive functions.</p> <p><b>CO5:</b> Apply concept of structures to write programs.</p>



### List of Programs

1. Write a C program to find roots of a Quadratic equation.
2. Write a C program to find the total no. of digits and the sum of individual digits of a positive integer.
3. Write a C program to generate the Fibonacci sequence of first N numbers.
4. Write a C program to sum the series  $S=1 - x + (x^2/2!) - (x^3/3!) + (x^n/n!)$
5. Write a C program to arrange the elements of an integer array using Bubble Sort algorithm.
6. Write a C program to input two matrices and perform matrix multiplication on them
7. Write a C program to check whether the given string is palindrome or not without using Library functions.
8. Write a C program to count the number of lines, words and characters in a given text.
9. Write a C program to generate Prime numbers in a given range using user defined function.
10. Write a C program to find factorial of a given number using recursive function.
11. Write a C program to maintain a record of n student details using an array of structures with four fields - Roll number, Name, Marks and Grade. Calculate the Grade according to the following conditions.

Marks Grade

>=80 A

>=60 B

>=50 C

>=40 D

<40 E

Print the details of the student, given the student Roll number as input.

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC –CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill

**Books for Study:**

E. Balaguruswamy, "Programming in ANSI C", 8th Edition, 2019, McGraw Hill Education, ISBN:978-93-5316-513-0.

**Books for Reference:**

1. Pradip Dey, Manas Ghosh, "Programming in C", 2nd Edition, 2018, Oxford University Press, ISBN: 978-01-9949-147-6.
2. Kernighan B.W and Dennis M. Ritchie, "The C Programming Language", 2nd Edition, 2015, Pearson Education India, ISBN: 978-93-3254-944-9.
3. Yashavant P. Kanetkar, "Let Us C", 16th Edition, 2019, BPB Publications, ISBN: 978-93 - 8728-449-4.
4. Jacqueline A Jones and Keith Harrow, "Problem Solving with C", Pearson Education. ISBN: 978-93-325-3800-9.
5. Dr. Guruprasad Nagraj, "C Programming for Problem Solving", Himalaya Publishing House ISBN-978-93-5299-361-1.

**Weblinks and Video Lectures (e-Resources):**

1. <http://elearning.vtu.ac.in/econtent/courses/video/BS/14CPL16.html>
2. <https://nptel.ac.in/courses/106/105/106105171/>

**B.COM.WITH COMPUTER APPLICATION****First Year****Elective-I****Semester-I**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCE1B	PYTHON PROGRAMMING AND LAB	ELECTIVE-IB-PRACTICAL	2	-	2	-	3	4	25	75	100
	Learning Objectives										
1	Describe the core syntax and semantics of Python programming language.										
2	Discover the need for working with the strings and functions.										
3	Illustrate the process of structuring the data using lists, dictionaries, tuples and sets.										
4	Understand the usage of packages and Dictionaries										
Prerequisites: Should have studied Commerce in XII Std											

<b>COURSE CONTENTS</b>	
<b>UNIT-I</b>	<b>(12Hrs)</b>
Introduction: Computer algorithms-Computer Hardware-Computer Software-Python programming language - Literals - Variables and Identifiers - Operators - Expressions and Data types, Input / output	
<b>UNIT-II</b>	<b>(12Hrs)</b>
Control Structures: Boolean Expressions - Selection Control - If Statement- Indentation in Python- Multi- Way Selection -- Iterative Control- While Statement- Infinite loops- Definite vs. Indefinite Loops-Boolean Flag. String, List and Dictionary, Manipulations Building blocks of python programs, Understanding and using ranges.	
<b>UNIT-III</b>	<b>(12Hrs)</b>
Functions: Program Routines- Defining Functions- More on Functions: Calling Value-Returning Functions- Calling Non-Value-Returning Functions- Parameter Passing - Keyword Arguments in Python- Default Arguments in Python-Variable Scope. Recursion: Recursive Functions	
<b>UNIT-IV</b>	<b>(12Hrs)</b>
Objects and their use: Software Objects - Turtle Graphics – Turtle attributes-Modular Design: Modules -Top-Down Design - Python Modules	
<b>UNIT-V</b>	<b>(12Hrs)</b>
Dictionaries and Sets: Dictionary type in Python - Set Data type. Text Files: Opening, reading and writing text files – Exception Handling	

**Note: Question paper will cover 100% Practical**

### **COURSE OUTCOMES**

Students will be able to

<b>CO No</b>	<b>CO Statement</b>	<b>Knowledge Level</b>
<b>CO1</b>	Develop and execute simple Python programs	<b>K3</b>
<b>CO2</b>	Write simple Python programs using conditionals and looping for solving problems	<b>K1</b>
<b>CO3</b>	Decompose a Python program into functions	<b>K3</b>
<b>CO4</b>	Represent compound data using Python lists, tuples, dictionaries etc.	<b>K3</b>

#### **Books for Study**

<b>1</b>	Charles Dierbach, "Introduction to Computer Science using Python - A computational Problem-solving Focus", Wiley India Edition, 2015.
<b>2</b>	Wesley J. Chun, "Core Python Applications Programming", 3rd Edition , Pearson Education, 2016
<b>3</b>	Mark Lutz, "Learning Python Powerful Object Oriented Programming", O'reilly Media 2018, 5th Edition.

#### **Books for Reference**

<b>1</b>	Timothy A. Budd, "Exploring Python", Tata MCGraw Hill Education Private Limited 2011, 1 st Edition.
<b>2</b>	John Zelle, "Python Programming: An Introduction to Computer Science", Second edition, Course Technology Cengage Learning Publications, 2013, ISBN 978-1590282410
<b>3</b>	Michel Dawson, "Python Programming for Absolute Beginners" , Third Edition, Course Technology Cengage Learning Publications, 2013, ISBN 978-1435455009

**NOTE: Latest Edition of Text books May be Used**

#### **Web References**

<b>1</b>	<a href="https://onlinecourses.swayam2.ac.in/cec22_cs20/preview">https://onlinecourses.swayam2.ac.in/cec22_cs20/preview</a>
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## Mapping with Programme Outcomes and Programme Specific Outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
<b>CO1</b>	3	2	2	3	3	2	2	2	3	2	3
<b>CO2</b>	3	2	3	3	2	2	2	2	3	2	2
<b>CO3</b>	3	2	2	3	2	2	2	1	3	2	2
<b>CO4</b>	3	2	2	3	2	2	2	2	3	2	2
<b>CO5</b>	3	2	3	3	2	2	2	1	3	2	2

## 3 – Strong, 2- Medium, 1- Low

Python Programming Lab
<b>Learning Objectives:</b> (for teachers: what they have to do in the class/lab/field) <ul style="list-style-type: none"> <li>Acquire programming skills in core Python.</li> <li>Acquire Object-oriented programming skills in Python.</li> <li>Develop the skill of designing graphical-user interfaces (GUI) in Python.</li> <li>Develop the ability to write database applications in Python.</li> <li>Acquire Python programming skills to move into specific branches</li> </ul>
<b>CO Statement:</b> (for students: To know what they are going to learn) <b>CO1:</b> To understand the problem solving approaches <b>CO2:</b> To learn the basic programming constructs in Python <b>CO3:</b> To practice various computing strategies for Python-based solutions to real world problems <b>CO4:</b> To use Python data structures - lists, tuples, dictionaries.
<b>List of Programs</b> <ol style="list-style-type: none"> <li>Program to convert the given temperature from Fahrenheit to Celsius and vice versa depending upon user's choice.</li> <li>Write a Python program to construct the following pattern, using a nested loop <pre> * ** *** **** ***** ***** **** *** ** *</pre> </li> </ol>

<p>3. Program to calculate total marks, percentage and grade of a student. Marks obtained in each of the five subjects are to be input by user. Assign grades according to the following criteria:</p> <p>Grade A: Percentage <math>\geq 80</math>                      Grade B: Percentage <math>\geq 70</math> and <math>&lt; 80</math>  Grade C: Percentage <math>\geq 60</math> and <math>&lt; 70</math>      Grade D: Percentage <math>\geq 40</math> and <math>&lt; 60</math>  Grade E: Percentage <math>&lt; 40</math></p> <p>4. Program, to find the area of rectangle, square, circle and triangle by accepting suitable input parameters from user.</p> <p>5. Write a Python script that prints prime numbers less than 20.</p> <p>6. Program to find factorial of the given number using recursive function.</p> <p>7. Write a Python program to count the number of even and odd numbers from array of N numbers.</p> <p>8. Write a Python class to reverse a string word by word.</p> <p>9. Read a file content and copy only the contents at odd lines into a new file.</p> <p>10. Create a Turtle graphics window with specific size.</p>	
Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC –CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill

**Learning Resources:**

- Recommended Texts**

1. Charles Dierbach, "Introduction to Computer Science using Python - A computational Problem-solving Focus", Wiley India Edition, 2015.
2. Wesley J. Chun, "Core Python Applications Programming", 3rd Edition, Pearson Education, 2016

- Books for Reference**

1. Mark Lutz, "Learning Python Powerful Object Oriented Programming", O'reilly Media 2018, 5th Edition.
2. Timothy A. Budd, "Exploring Python", Tata McGraw Hill Education Private Limited 2011, 1st Edition.
3. John Zelle, "Python Programming: An Introduction to Computer Science", Second edition, Course Technology Cengage Learning Publications, 2013, ISBN 978-1590282410
4. Michel Dawson, "Python Programming for Absolute Beginners", Third Edition, Course Technology Cengage Learning Publications, 2013, ISBN 978-1435455009

**B.COM WITH COMPUTER APPLICATION**

First Year

Skill Enhancement Course

Semester I

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCS11	FUNDAMENTALS OF INFORMATION TECHNOLOGY	SEC-I	2	-	-	-	2	2	25	75	100

**Learning Objectives**

- 1 Understand basic concepts and terminology of information technology.
- 2 Have a basic understanding of personal computers and their operation
- 3 Be able to identify data storage and its usage
- 4 Get great knowledge of software and its functionalities
- 5 Understand about operating system and their uses

**COURSE CONTENTS****UNIT-I (6Hrs)****Introduction to Computers:**

Introduction, Definition, Characteristics of computer, Evolution of Computer, Block Diagram Of a computer, Generations of Computer, Classification Of Computers, Applications of Computer, Capabilities and limitations of computer

**UNIT-II (6Hrs)****Basic Computer Organization:**

Role of I/O devices in a computer system. Input Units: Keyboard, Terminals and its types. Pointing Devices, Scanners and its types, Voice Recognition Systems, Vision Input System, Touch Screen, Output Units: Monitors and its types. Printers: Impact Printers and its types. Non Impact Printers and its types, Plotters, types of plotters, Sound cards, Speakers.

**UNIT-III (6Hrs)****Storage Fundamentals:**

Primary Vs Secondary Storage, Data storage & retrieval methods. Primary Storage: RAMROM, PROM, EPROM, EEPROM. Secondary Storage: Magnetic Tapes, Magnetic Disks. Cartridge tape, hard disks, Floppy disks Optical Disks, Compact Disks, Zip Drive, Flash Drives

**UNIT-IV (6Hrs)****Software:**

Software and its needs, Types of S/W. System Software: Operating System, Utility Programs Programming Language: Machine Language, Assembly Language, High Level

Language their advantages & disadvantages. Application S/W and its types: Word Processing, Spread Sheets Presentation, Graphics, DBMS s/w

**UNIT-V****(6Hrs)****Operating System:**

Functions, Measuring System Performance, Assemblers, Compilers and Interpreters. Batch Processing, Multi programming, Multi Tasking, Multiprocessing, Time Sharing, DOS, Windows, Unix/Linux.

**Note: Question paper will cover 100% Theory**

**COURSE OUTCOMES**

On completion of this course, students will be able to

CO No	CO Statement	Knowledge Level
CO1	Apply the basics of computer, Construct the structure of the required things in computer, learn how to use it.	K3
CO2	Develop organizational structure using for the devices present currently under input or output unit.	K3
CO3	Explain the concept of storing data in computer using two header namely RAM and ROM with different types of ROM with advancement in storage basis.	K5
CO4	Execute with different software, Write program in the software and applications of software.	K3
CO5	Apply Operating system in information technology which really acts as a interpreter between software and hardware.	K3

**Books for Study**

1	Anoop Mathew, S. Kavitha Murugesan (2009), "Fundamental of Information Technology", Majestic Books.
2	Alexis Leon, Mathews Leon, "Fundamental of Information Technology", 2 <sup>nd</sup> Edition.
3	S. K Bansal, "Fundamental of Information Technology".

**Books for Reference**

1	Bhardwaj Sushil Puneet Kumar, "Fundamental of Information Technology"
2	GG WILKINSON, "Fundamentals of Information Technology", Wiley-Blackwell
3	A Ravichandran, "Fundamentals of Information Technology", Khanna Book Publishing

**NOTE: Latest Edition of Text books May be Used**

**Web References**

1	<a href="https://testbook.com/learn/computer-fundamentals">https://testbook.com/learn/computer-fundamentals</a>
2	<a href="https://www.tutorialsmate.com/2020/04/computer-fundamentals-tutorial.html">https://www.tutorialsmate.com/2020/04/computer-fundamentals-tutorial.html</a>
3	<a href="https://www.javatpoint.com/computer-fundamentals-tutorial">https://www.javatpoint.com/computer-fundamentals-tutorial</a>
4	<a href="https://www.tutorialspoint.com/computer_fundamentals/index.htm">https://www.tutorialspoint.com/computer_fundamentals/index.htm</a>
5	<a href="https://www.nios.ac.in/media/documents/sec229new/Lesson1.pdf">https://www.nios.ac.in/media/documents/sec229new/Lesson1.pdf</a>



**Mapping With Programme Outcomes  
and Programme Specific Outcomes**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
<b>CO1</b>	3	2	2	3	3	2	2	2	3	3	3
<b>CO2</b>	3	2	3	3	2	2	2	2	3	3	3
<b>CO3</b>	3	2	3	3	2	2	2	1	3	3	3
<b>CO4</b>	3	3	2	3	2	2	2	2	3	3	3
<b>CO5</b>	2	2	3	3	2	2	2	1	3	3	2

**S-Strong-3    M-Medium-2 L-Low-1**

**B.COM WITH COMPUTER APPLICATION****First Year****Foundation Course****Semester I**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CCF11</b>	<b>FUNDAMENTALS OF COMMERCE</b>	<b>FOUNDATION COURSE</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>2</b>	<b>25</b>	<b>75</b>	<b>100</b>

**LEARNING OUTCOMES**

<b>1</b>	To Understand the nature and purpose of Commerce
<b>2</b>	To Analyse the nature and Classification of Business
<b>3</b>	To know the various form of Business Organisation
<b>4</b>	To understand the services of Banking Sector
<b>5</b>	To understand the various modes of E-Business

**COURSE CONTENTS****UNIT- I****(6Hrs)****Nature, Scope and Purpose of Commerce:**

Human wants and their satisfaction, Specialization and exchange – Division of labour – Need for Commerce – Localization – Classification of productive activities – Branches of Commerce

**UNIT - II****(6Hrs)****Nature and Purpose of Business:**

Business: Concept- characteristics - objectives – classification of business – Industry: Types – primary- secondary- tertiary – Trade: types - internal, external, wholesale and retail and auxiliaries to trade – Transportation – Warehousing- Communication - Advertising - Business risks – Social Responsibility of Business.

**UNIT- III****(6Hrs)****Forms of Business Organization:**

Sole Proprietorship - Partnership - Hindu Undivided Family Business - Cooperative Societies – Company - Private and public company – Meaning- features, merits and limitations - Starting a business – Sources of Business Finance.

**UNIT- IV****(6Hrs)****Business Services-Banking:**

Types of bank accounts - savings, current, recurring, fixed deposit and multiple option deposit account - Banking services with particular reference to issue of bank draft ,banker's cheque (pay order), RTGS (Real Time Gross Settlement), NEFT (National Electronic Funds Transfer), Bank overdraft, Cash credits and E- banking

**UNIT -V****(6Hrs)****Emerging Modes of Business:**

E-business – Scope and benefits, resources required for successful e-business implementation, Typed of E-business, online transactions, payment mechanism, security and safety of business transactions.

**Note: Question paper will cover 100% Theory**

**COURSE OUTCOMES**

Students will be able to

CO No	CO Statement	Knowledge Level
CO1	Understand the nature and purpose of Commerce	K2
CO2	Analyse the nature and Classification of Business	K3
CO3	Know the various form of Business Organisation	K1
CO4	Understand the services of Banking Sector	K2
CO5	Understand the various modes of E-Business	K3
<b>Books for Study</b>		
1	Fundamentals of Commerce, V.K.Puri and Vijay Kapur, Applied Publishers Pvt. Limited, Mumbai.	
<b>Books for Reference</b>		
1	Books on fundamentals of Commerce and Banking including E-commerce	
<b>NOTE: Latest Edition of Text books May be Used</b>		
<b>Web References</b>		
1	<a href="https://www.bgateway.com/resources/e-commerce-and-selling-online-the-fundamentals">https://www.bgateway.com/resources/e-commerce-and-selling-online-the-fundamentals</a>	
2	<a href="https://www.informationpk.com/principle-of-commerce-notes-for-i-com-part-i-1st-year/">https://www.informationpk.com/principle-of-commerce-notes-for-i-com-part-i-1st-year/</a>	

**Mapping With Programme Outcomes and Programme Specific Outcomes**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
<b>CO1</b>	3	2	2	2	2	2	2	2	1	2	2
<b>CO2</b>	3	2	3	3	2	2	2	2	2	2	2
<b>CO3</b>	3	2	3	3	2	2	2	2	2	2	2
<b>CO4</b>	3	2	2	3	2	2	2	2	2	2	2
<b>CO5</b>	3	2	3	3	2	2	2	2	2	2	2

**3 – Strong,****2- Medium,****1- Low**

**B.COM WITH COMPUTER APPLICATION****First Year****Core – III****Semester II**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCT203	FINANCIAL ACCOUNTING-II	CORE III	5	-	-	-	5	5	25	75	100

**Learning Objectives**

1	To prepare different kinds of accounts such Higher purchase and Installments System.
2	To understand the allocation of expenses under departmental accounts.
3	To gain an understanding about partnership accounts relating to Admission and retirement.
4	To provide knowledge to the learners regarding Partnership Accounts relating.
5	To know the requirements of international accounting standards.

**Prerequisites:** Should have studied Accountancy in XII Std.**COURSE CONTENTS**

<b>UNIT-I</b>	<b>(15 hrs)</b>
Hire Purchase and Instalment System Hire Purchase System – Accounting Treatment – Calculation of Interest - Default and Repossession - Hire Purchase Trading Account - Instalment System -Calculation of Profit	
<b>UNIT-II</b>	<b>(15 hrs)</b>
Branch and Departmental Accounts Branch – Dependent Branches: Accounting Aspects - Debtors system -Stock and Debtors system – Distinction between Wholesale Profit and Retail Profit –Independent Branches (Foreign Branches excluded) - Departmental Accounts: Basis of Allocation of Expenses – Inter- Departmental Transfer at Cost or Selling Price.	
<b>UNIT-III</b>	<b>(15 hrs)</b>
Partnership Accounts – I Partnership Accounts: –Admission of a Partner – Treatment of Goodwill - Calculation of Hidden Goodwill –Retirement of a Partner – Death of a Partner.	

**UNIT-IV****(15 hrs)**

Partnership Accounts – II Dissolution of Partnership - Methods – Settlement of Accounts Regarding Losses and Assets – Realization account – Treatment of Goodwill – Preparation of Balance Sheet - One or more Partners insolvent – All Partners insolvent – Application of Garner Vs Murray Theory – Accounting Treatment – Piecemeal Distribution – Surplus Capital Method – Maximum Loss Method

**UNIT-V****(15 hrs)**

Accounting Standards for financial reporting (Theory only) Objectives and Uses of Financial Statements for Users-Role of Accounting Standards - Development of Accounting Standards in India Role of IFRS- IFRS Adoption vs Convergence Implementation Plan in India- Ind AS- An Introduction - Difference between Ind AS and IFRS

**Note: Question paper will cover 20% Theory and 80% Problems**

**COURSE OUTCOMES**

Students will be able to

CO No	CO Statement	Knowledge Level
CO1	To evaluate the Hire purchase accounts and Instalment systems	K5
CO2	To prepare Branch accounts and Departmental Accounts	K6
CO3	To understand the accounting treatment for admission and retirement in Partnership	K2
CO4	To know Settlement of accounts at the time of dissolution of a firm	K1
CO5	To elaborate the role of IFRS	K2

**Books for Study**

1	Radhaswamy and R.L. Gupta: Advanced Accounting, Sultan Chand, New Delhi.
2	M.C. Shukla T.S. Grewal & S.C. Gupta, Advance Accounts, S Chand Publishing, New Delhi.
3	R.L. Gupta and V.K. Gupta, "Financial Accounting", Sultan Chand, New Delhi.
4	S P Jain and K. L. Narang: Financial Accounting- I, Kalyani Publishers, New Delhi.
5	T.S. Reddy & A. Murthy, Financial Accounting, Margam Publishers, Chennai

**Books for Reference**

1	Dr. S.N. Maheswari: Financial Accounting, Vikas Publications, Noida.
2	Dr. Venkataraman & others (7 lecturers): Financial Accounting, VBH, Chennai.
3	Dr. Arulanandan and Raman: Advanced Accountancy, Himalaya publications, Mumbai.

4	Tulsian , Advanced Accounting, Tata MC. Graw hills, India.
5	Charumathi and Vinayagam, Financial Accounting, S.Chand and sons, NewDelhi
<b>NOTE: Latest Edition of Text books May be Used</b>	
<b>Web References</b>	
1	<a href="https://www.slideshare.net/mcsharma1/accounting-for-depreciation-1">https://www.slideshare.net/mcsharma1/accounting-for-depreciation-1</a>
2	<a href="https://www.slideshare.net/ramusakha/basics-of-financial-accounting">https://www.slideshare.net/ramusakha/basics-of-financial-accounting</a>
3	<a href="https://www.accountingtools.com/articles/what-is-a-single-entry-system.html">https://www.accountingtools.com/articles/what-is-a-single-entry-system.html</a>

### Mapping With Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
<b>CO1</b>	3	2	3	3	2	3	2	2	3	2	2
<b>CO2</b>	3	2	3	3	3	2	2	2	3	2	2
<b>CO3</b>	3	2	2	3	3	2	2	2	3	2	2
<b>CO4</b>	3	2	3	3	2	2	2	2	3	2	2
<b>CO5</b>	3	3	3	3	3	3	3	3	3	3	3

3 – Strong,

2- Medium,

1- Low

**B.COM.WITH COMPUTER APPLICATION****First Year****Core – IV****Semester II**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks	
									CIA	External
U23CCT204	BUSINESS LAW	CORE IV	5	-	-	-	5	5	25	75

**Learning Objectives**

1	To know the nature and objectives of Mercantile law and the essentials of valid contract
2	To gain knowledge on performance contracts
3	To be acquainted with the rules of Indemnity and Guarantee
4	To make aware of the essentials of Bailment and pledge
5	To understand the provisions relating to sale of goods

**Prerequisites: Should have studied Accountancy in XII Std**

COURSE CONTENTS	
<b>UNIT-I</b>	<b>(15 hrs)</b>
<b>Elements of Contract</b>	
<b>Indian Contract Act 1872:</b> 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 Contract	
<b>UNIT-II</b>	<b>(15 hrs)</b>
<b>Performance of Contract</b>	
Meaning of Performance, Offer to Perform, Devolution of Joint liabilities & Rights, Time and Place of Performance, Reciprocal Promises, Assignment of Contracts - Remedies for Breach of contract - Termination and Discharge of Contract - Quasi Contract	
<b>UNIT-III</b>	<b>(15 hrs)</b>
<b>Contract of Indemnity and Guarantee</b>	
Contract of Indemnity and Contract of Guarantee - Extent of Surety's Liability, Kinds of Guarantee, Rights of Surety, Discharge of Surety	
<b>UNIT-IV</b>	<b>(15 hrs)</b>
<b>Bailment and Pledge</b> – Bailment – Concept – Essentials - Classification of Bailments, Duties and Rights of Bailor and Bailee – Law of Pledge – Meaning – Essentials of Valid Pledge, Pledge and Lien, Rights of Pawner and Pawnee.	



**UNIT-V****(15 hrs)****Sale of Goods Act 1930:**

Definition of Contract of Sale – Formation - Essentials of Contract of Sale - Conditions and Warranties - Transfer of Property – Contracts involving Sea Routes - Sale by Non-owners - Rights and duties of buyer - Rights of an Unpaid Seller

**Note: Question paper will cover 100% Theory**

**COURSE OUTCOMES**

Students will be able to

CO No	CO Statement	Knowledge Level
<b>CO1</b>	Explain the Objectives and significance of Mercantile law	<b>K2</b>
<b>CO2</b>	Understand the clauses and exceptions of Indian Contract Act.	<b>K2</b>
<b>CO3</b>	Outline the contract of indemnity and guarantee	<b>K2</b>
<b>CO4</b>	Familiar with the provision relating to Bailment and Pledge	<b>K1</b>
<b>CO5</b>	Explain the various provisions of Sale of Goods Act 1930	<b>K2</b>

**Books for Study**

1	N.D. Kapoor , Business Laws- Sultan Chand and Sons, New Delhi.
2	R.S.N. Pillai – Business Law, S.Chand, New Delhi.
3	M C Kuchhal& Vivek Kuchhal, Business law, S Chand Publishing, New Delhi
4	M.V. Dhandapani, Business Laws, Sultan Chand and Sons, New Delhi.
5	Shusma Aurora, Business Law, Taxmann, New Delhi.

**Books for Reference**

1	Preethi Agarwal, Business Law, CA foundation study material, Chennai.
2	Business Law by Saravanel, Sumathi, Anu, Himalaya Publications, Mumbai.
3	Kavya and Vidhyasagar, Business Law, Nithya Publication, New Delhi.
4	D.Geet, Business Law Nirali Prakashan Publication, Pune.
5	M.R. Sreenivasan , Business Laws, Margham Publications, Chennai.

**NOTE: Latest Edition of Text books May be Used**

**Web References**

1	<a href="http://www.cramerz.com">www.cramerz.com</a> <a href="http://www.digitalbusinesslawgroup.com">www.digitalbusinesslawgroup.com</a>
2	<a href="http://swcu.libguides.com/buslaw">http://swcu.libguides.com/buslaw</a>
3	<a href="http://libguides.slu.edu/businesslaw">http://libguides.slu.edu/businesslaw</a>

**Mapping With Programme Outcomes and Programme-Specific Outcomes**

	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PSO1</b>	<b>PSO2</b>	<b>PSO3</b>
<b>CO1</b>	3	2	2	3	2	2	2	2	2	2	2
<b>CO2</b>	3	2	3	3	2	2	2	2	2	2	2
<b>CO3</b>	3	2	2	3	2	2	2	2	2	2	2
<b>CO4</b>	3	2	3	3	2	2	2	2	2	2	2
<b>CO5</b>	3	2	3	3	2	2	2	2	2	2	2

**3 – Strong, 2- Medium, 1- Low**

**B.COM WITH COMPUTER APPLICATIONS****First Year****Elective-II****Semester-II**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCE22A	OFFICE AUTOMATION AND LAB	ELECTIVE -2A	2	-	2	-	3	4	25	75	100
Learning Objectives											
1	The major objective in introducing the Computer Skills course is to impart training for students in Microsoft Office which has different components like MS Word, MS Excel andPower point.										
2	The course is highly practice oriented rather than regular class room teaching.										
3	To acquire knowledge on editor, spread sheet and presentation software.										
Prerequisites: Should have studied Commerce in XII Std											

<b>COURSE CONTENTS</b>	
<b>UNIT-I</b>	<b>(12Hrs)</b>
Introductory concepts: Hardware and Software - Memory unit – CPU-Input Devices: Key board, Mouse and Scanner. Output devices: Monitor, Printer. Introduction to Operating systems - Introduction to Programming Languages.	
<b>UNIT-II</b>	<b>(12Hrs)</b>
Word Processing: File menu operations - Editing text – tools, formatting, bullets and numbering - Spell Checker - Document formatting – Paragraph alignment, indentation, headers and footers, printing – Preview, options, merge.	
<b>UNIT-III</b>	<b>(12Hrs)</b>
Spreadsheets: Excel – opening, entering text and data, formatting, navigating; Formulas – entering, handling and copying	
<b>UNIT-IV</b>	<b>(12Hrs)</b>
Charts – creating, formatting and printing, analysis tables, preparation of financial statements, introduction to data analytic.	
<b>UNIT-V</b>	<b>(12Hrs)</b>
Power point: Introduction to Power point - Features – Understanding slide typecasting & viewing slides – creating slide shows. Applying special object – including objects & pictures – Slidetransition – Animation effects, audio inclusion, timers.	

**Note: Question paper will cover 100% Practical**

**COURSE OUTCOMES****Students will be able to**

CO No	CO Statement	Knowledge Level
CO1	Understand the basics of computer systems and its components.	K2
CO2	Understand and apply the basic concepts of a word processing package.	K2
CO3	Understand and apply the basic concepts of electronic spreadsheet software.	K2
CO4	Understand and apply the basic concepts of database management system.	K2
CO5	Understand and create a presentation using PowerPoint tool.	K2

**Books for Study**

1	Peter Norton, "Introduction to Computers" –Tata McGraw-Hill.
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**Books for Reference**

1	Jennifer Ackerman Kettel, Guy Hat-Davis, Curt Simmons, "Microsoft 2003",Tata McGraw- Hill.
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**NOTE: Latest Edition of Text books May be Used****Web References**

1	Web content from NDL / SWAYAM or open source Web References
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**Office Automation Lab****Learning Objectives:** (for teachers: what they have to do in the class/lab/field)

Office tools course would enable the students in crafting professional word documents, excelspread sheets, power point presentations using the Microsoft suite of office tools.

To familiarize the students in preparation of documents and presentations with officeautomation tools.

**CO Statement:** (for students: To know what they are going to learn)**CO1:** to perform documentation**CO2:** to perform accounting operations**CO3:** to perform presentation skills

**List of Programs****Word**

**Word Orientation :** The instructor needs to give an overview of Microsoft word & Importance of MS Word as word Processor, Details of the four tasks and features that would be covered Using word – Accessing, overview of toolbars, saving files, Using help and resources, rulers, format painter.

**Task 1 : Using word** to create project certificate. Features to be covered:- Formatting Fonts inword, Drop Cap in word, Applying Text effects, Using Character Spacing, Borders and Colors, Inserting Header and Footer, Using Date and Time option in Word.

**Task 2 : Creating project** abstract Features to be covered:-Formatting Styles, Inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, Hyperlink,Symbols, Spell Check , Track Changes.

**Task 3 : Creating a Newsletter :** Features to be covered:- Table of Content, Newspaper columns, Images from files and clip art, Drawing toolbar and Word Art, Formatting Images, Text boxes and Paragraphs

**Excel**

**Excel Orientation :**The instructor needs to tell the importance of MS Excel as a Spreadsheettool, give the details of the four tasks and features that would be covered Excel – Accessing, overview of toolbars, saving excel files, Using help and resources { Comdex Information Technology course tool kit Vikas }

**Task1: Creating a Scheduler** - Features to be covered: Gridlines, Format Cells, Summation,auto fill, Formatting Text

**Task 2 : Calculations** - Features to be covered:- Cell Referencing, Formulae in excel – average, standard deviation, Charts, Renaming and Inserting worksheets, Hyper linking,Count function, LOOKUP/VLOOKUP

**Task 3 : Performance Analysis** - Features to be covered:- Split cells, freeze panes, groupand outline, Sorting, Boolean and logical operators, Conditional formatting

**MS Power Point**

**Task1 :**Students will be working on basic power point utilities and tools which help them create basic power point presentation. Topic covered includes :- PPT Orientation, SlideLayouts, Inserting Text, Word Art, Formatting Text, Bullets and Numbering, Auto Shapes, Lines and Arrows

**Task 2 :**This session helps students in making their presentations interactive. Topics covered includes: Hyperlinks, Inserting –Images, Clip Art, Audio, Video, Objects, Tables and Charts

**Task 3 :**Concentrating on the in and out of Microsoft power point. Helps them learn best practices in designing and preparing power point presentation. Topics covered includes :- Master Layouts (slide, template, and notes), Types of views (basic, presentation, slide slotter, notes etc), Inserting – Background, textures, Design Templates, Hidden slides.Auto content wizard, Slide Transition, Custom Animation, Auto Rehearsing

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC –CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferable Skill
1. Comdex Information Technology course tool kit Vikas Gupta, WILEY Dreamtech,2005 2.The Complete Computer upgrade and repair book,3rd edition Cheryl A Schmidt, WILEY Dreamtech . Introduction to Information Technology, ITL Education Solutions limited, Pearson Education. 4. PC Hardware and A + Handbook – Kate J. Chas PHI (Microsoft)	

### Mapping with Programme Outcomes and Programme Specific Outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
<b>CO1</b>	3	2	2	3	3	2	2	2	3	2	3
<b>CO2</b>	3	2	3	3	2	2	2	2	3	2	2
<b>CO3</b>	3	2	2	3	2	2	2	1	3	2	2
<b>CO4</b>	3	2	2	3	2	2	2	2	3	2	2
<b>CO5</b>	3	2	3	3	2	2	2	1	3	2	2

**3 – Strong, 2- Medium, 1- Low**

**B.COM WITH COMPUTER APPLICATION****First Year****Elective-II****Semester II**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CCE22B</b>	<b>PROGRAMMING IN C++ AND LAB</b>	<b>ELECTIVE- 2B</b>	<b>2</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>3</b>	<b>4</b>	<b>25</b>	<b>75</b>	<b>100</b>

**Learning Objectives**

<b>1</b>	To engender an appreciation for the need and characteristics of Object-orientation.
<b>2</b>	To impart knowledge of the C++ language grammar in order to design and implement programming solutions to simple problems by applying Object-oriented thinking.

**Prerequisites: Should have studied Commerce in XII Std****COURSE CONTENTS**

<b>UNIT-I</b>	<b>(12Hrs)</b>
Object Oriented Programming Concepts: Complexity in software - The need for object-orientation – Abstraction – Encapsulation – Modularity – Hierarchy. Basic Elements of C++: Classes – Objects – Data members and member functions – private and public access specifiers - Static members - Constructors – Singleton class - Destructors	
<b>UNIT-II</b>	<b>(12Hrs)</b>
Friend Functions and Friend Classes - Array of objects – Pointer to objects - this pointer – References – Dynamic memory allocation - Namespaces. Function Overloading: Overloading a function - Default arguments – Overloading Constructors. Operator Overloading: Overloading an operator as a member function – Overloading an operator as a friend function	
<b>UNIT-III</b>	<b>(12Hrs)</b>
Overloading the operators [], (), -> and comma operators – Conversion Functions. Inheritance: Types of inheritance – protected access specifier – Virtual Base Class – Base class and derived class constructors. Run-time Polymorphism: Virtual Functions	
<b>UNIT-IV</b>	<b>(12Hrs)</b>
Function overriding - Pure virtual function – Abstract base class. Templates: Function templates – Overloading a function template – Class templates.	
<b>UNIT-V</b>	<b>(12Hrs)</b>
Exception Handling: Exceptions – try, catch, throw – Rethrowing an exception – Restricting exceptions - Handling exceptions in derived classes - terminate(), abort(), unexpected(), set_terminate(). I/O Streams: Formatted I/O with ios class functions - Manipulators – Creating own manipulator – Overloading << and >> operators.	

**Note: Question paper will cover 100% Practical**

**COURSE OUTCOMES****Students will be able to**

CO No	CO Statement	Knowledge Level
<b>CO1</b>	Explain the various basic concepts of Object-orientation.	<b>K2</b>
<b>CO2</b>	Write programs to implement static binding	<b>K1</b>
<b>CO3</b>	Write programs to implement inheritance and dynamic binding	<b>K1</b>
<b>CO4</b>	Write programs to implement templates and exception handling and learn howto use STL class library.	<b>K1</b>
<b>CO5</b>	Write programs implementing File and Stream I/O.	<b>K1</b>

**Books for Study**

1	Herbert Schildt, <i>C++ - The Complete Reference</i> , Third Edition, TMH, 1999.
2	Grady Booch, <i>Object Oriented Analysis and Design</i> , Pearson Education, 2008.(For Unit I)

**Books for Reference**

1	Bjarne Stroustrup, <i>The C++ Programming Language</i> , Addison Wesley, 2000.
2	J. P. Cohoon and J. W. Davidson, <i>C++ Program Design – An Introduction to Programming and Object-Oriented Design</i> , Second Edition, McGraw Hill, 1999.
3	C. J. Lippman, <i>C++ Primer</i> , Third Edition, Addison Wesley, 2000.

**NOTE: Latest Edition of Text books May be Used****Web References**

1	<a href="https://cplusplus.com/">https://cplusplus.com/</a>
2	<a href="https://www.geeksforgeeks.org/c-plus-plus/">https://www.geeksforgeeks.org/c-plus-plus/</a>

**Mapping with Programme Outcomes and Programme Specific Outcomes**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
<b>CO1</b>	3	2	2	3	3	2	2	2	3	2	3
<b>CO2</b>	3	2	3	3	2	2	2	2	3	2	2
<b>CO3</b>	3	2	2	3	2	2	2	1	3	2	2
<b>CO4</b>	3	2	2	3	2	2	2	2	3	2	2
<b>CO5</b>	3	2	3	3	2	2	2	1	3	2	2

**3 – Strong, 2- Medium, 1- Low**



**FIRST YEAR – SEMESTER - II**

<b>Object Oriented Programming with C++</b>
<p>Learning Objectives: (for teachers: what they have to do in the class/lab/field)</p> <ul style="list-style-type: none"> <li>• Design classes for the given problems.</li> <li>• Write programs in C++.</li> <li>• Code, debug and execute a C++ program to solve the given problems using an IDE.</li> </ul>
<p>CO Statement: (for students: To know what they are going to learn)</p> <p>CO1: Design and create classes. Implement Stream I/O as appropriate.</p> <p>CO2: Design appropriate data members and member functions.</p> <p>CO3: Implement functions, friend functions, static members, constructors and compile-time polymorphism.</p> <p>CO4: Implement inheritance, run-time polymorphism and destructors.</p> <p>CO5: Implement templates and exceptions. Use STL class library. Implement File I/O.</p>

**List of Programs**

**C. 1. Write a class to represent a complex number which has member functions to do the following**

- a. Set and show the value of the complex number
- b. Add, subtract and multiply two complex number
- c. Multiplying the complex number with a scalar value

**D.**

**E. 2. Write a Point class that represents a 2-d point in a plane.**

**F.**

**G. 3. Write member functions to**

- a. Set and show the value of a point.
- b. Find the distance between two points.
- c. Check whether two points are equal or not.

4. **Design and implement a class to represent a Solid object.**
  - a. **Apart from data members to represent dimensions, use a data member to specify the type of solid.**
  - b. **Use functions to calculate volume and surface area for different solids.**

**H.**

5. **Design a class representing time in hh:mm:ss. Write functions to**
  - a. **Set and show the time**
  - b. **Find the difference between two time objects**
  - c. **Adding a given duration to a time**
  - d. **Conversion of the time object to seconds**

**I.**

6. **Design a 3x3 matrix class and demonstrate the following:**
  - a. **Addition and multiplication of two matrices using operator overloading**
  - b. **Maintaining a count of the number of matrix object created**

**J.**

7. **Design a class called cString to represent a string data type. Create a data member in the class to represent a string using an array of size 100. Write the following functionality as member functions**

<ol style="list-style-type: none"> <li>a. Copy Constructor</li> <li>b. Concatenate two strings</li> <li>c. Find the length of the string</li> <li>d. Reversing a string</li> <li>e. Comparing two strings</li> </ol>	
8.	Design a class called cString to represent a string data type. Create a data member in the class to represent a string whose size is dynamically allocated. Write the following as member functions:
<ol style="list-style-type: none"> <li>a. Copy Constructor</li> <li>b. Destructor</li> <li>c. Concatenate two strings</li> <li>d. Find the length of the string</li> <li>e. Reversing a string</li> <li>f. Comparing two strings</li> </ol>	

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC –CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill

**Books for Study**

1. Herbert Schildt, *C++ - The Complete Reference*, Third Edition, TMH, 1999.
2. Grady Booch, *Object Oriented Analysis and Design*, Pearson Education, 2008.  
(For Unit I)

**Books for Reference**

1. Bjarne Stroustrup, *The C++ Programming Language*, Addison Wesley, 2000.
2. J. P. Cohoon and J. W. Davidson, *C++ Program Design – An Introduction to Programming and Object-Oriented Design*, Second Edition, McGraw Hill, 1999.

C. J. Lippman, *C++ Primer*, Third Edition, Addison Wesley, 2000.

**B.COM WITH COMPUTER APPLICATION****First Year****Skill Enhancement Course-II****Semester II**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCS22	<b>SOFT SKILL - INTERPERSONAL DEVELOPMENT</b>	<b>SEC 2</b>	2	-	-	-	2	2	25	75	100

**LEARNING OBJECTIVES**

1. To enable the learners to make self-discovery
2. To enhance the learners' overall personality
3. To instill the learners with positive attitudes to life
4. To enable the learners to efficiently manage their Time in learning and working environments

**Prerequisites** Communicative skills acquired in Higher Secondary**COURSE CONTENTS****Unit-I Soft Skills-Introduction****(6Hrs)**

What are soft skills? - Importance of Soft Skills-Difference between Hard Skills and Soft Skills-Kinds of Soft Skills Self-Discovery-SWOC Analysis-Advantages of SWOC analysis

**Unit-II-Attitude****(6Hrs)**

What is Attitude? -Formation of attitudes-Positive and Negative attitudes -Power of positive attitude- Obstacles in Developing Positive Attitudes- Overcoming Negative Attitude and its Impacts- Developing Positive Attitude

**Unit III-Time Management****(6Hrs)**

Value of Time-Sense of Time management- Reasons for procrastination- Overcoming procrastination- Tips for Time Management-Deciding upon Priorities- Effective Scheduling

**Unit-IV-Communication Skills****(6Hrs)**

Listening-Listening and Hearing- Active and Passive Listening Speaking-Verb and Non-verbal Communications Reading- Skimming, Scanning, Intensive, and Extensive Reading Writing-Formal and Informal Letters-Drafting Mails and Memos

**Unit V- Interview Skills Preparing Resume/CV****(6Hrs)**

Preparing Resume/CV-Covering Letter Interview Etiquette, Dress Code, Dos, and Don'ts

**Note: Question paper will cover 100% Theory**

## COURSE OUTCOMES

Students will be able to

CO. No	CO Statement	Knowledge Level
CO1	Enhance ability to communicate effectively with others,.	K6
CO2	Enhance Relationship Management	K6
CO3	gain a better understanding of own emotions, behaviors, strengths, and weaknesses	K2
CO4	Know how to motivate and inspire others, provide constructive feedback, and foster a positive team environment.	K1
CO5	develop a greater appreciation for different perspectives, cultures, and backgrounds, leading to increased empathy and cultural sensitivity.	K6

**Books for Study**

1. Alex, K. *Soft Skills*. S Chand & Co Ltd., Chennai: 2009.
2. Butterfield, Jeff et.al. *Soft Skills for Everyone*. Cengage India, New Delhi: 2022.
3. Hariharan, S., N. Sundararajan, S.P. Shanmugapriya. *Soft Skills*. Gauvray Books, Chennai:2020
4. Sharma, Prashant. *Soft Skills: Personality Development for Success*. BPB Publications, Bengaluru: 2019.

**Books for Reference**

1. Almonte, Richard. *A Practical Guide to Soft Skills: Communication, Psychology, and Ethics for Your Professional Life*. Routledge, Oxford:2021.
2. Bardhan, Peeta Bobby & Dr. Krishaveer Abhishek Challa. *A Complete Textbook on Soft Skills*. Kanishka Publisher, Chennai:2020.
3. Mitra, Barun K. *Personality Development and Soft Skills* (Second Edition). Oxford UVP., New Delhi:2016.
4. BAOU. *Business Communication & Soft Skills*. <https://baou.edu.in/assets/pdf/BBAATR-304.pdf>
5. GoSkills. *Learn Soft Skills*. <https://www.goskills.com> National Council of Educational Research and Training. <https://ncert.nic.in/textbook/pdf/kect108.pdf>
6. SIRC of ICAI. *Soft Skills and Personality Development*. <https://www.sirc-icai.org/images/cabf/Soft Skills & Personality Development.pdf>

**NOTE: Latest Edition of Text books May be Used****Web References**

1. <https://www.khanacademy.org/college-careers-more>

**Mapping with Programme Outcomes and Programme Specific Outcomes**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	2	3	2	2	3	2	2	2	3	2	3
<b>CO2</b>	2	3	2	3	2	2	2	2	3	2	2
<b>CO3</b>	2	3	2	2	2	2	2	1	3	2	2
<b>CO4</b>	2	3	2	2	2	2	2	2	3	2	2
<b>CO5</b>	2	3	3	3	2	2	2	1	3	2	2

**3 – Strong, 2- Medium, 1- Low**

**B.COM ,Computer Applications****First Year****Semester II**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCNM21	NAAN MUDHALVAN	.	2	-	-	-	2	2	25	75	100

## SEMESTER III

B.Com , Computer Applications  
Core V

First Year

Semester III

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCT305	CORPORATE ACCOUNTING 1	Core V	5	-	-	-	5	5	25	75	100

## LEARNING OBJECTIVES

1	To understand about the pro-rata allotment
2	To know the provisions of companies, Act under Redemption of Preference shares and debentures
3	To learn the form and contents of financial statements as per Schedule III of Companies Act 2013
4	To examine the factors affecting goodwill of a company
5	To identify the Significance of International financial reporting standard (IFRS)

Prerequisites: Should have studied Commerce in XII Std

## COURSE CONTENTS

<b>Unit 1</b> <b>Issue of Shares</b> Issue of Shares - Forfeiture - Reissue – Pro-rata Allotment – Right Issue – Bonus Issue - Underwriting of Shares and Debentures – Underwriting Commission - Types of Underwriting.	<b>(15Hrs)</b>
<b>Unit 2</b> <b>Redemption of Preference Shares &amp; Debentures</b> Redemption of Preference Shares–Provisions of Companies Act– Capital Redemption Reserve – Minimum Fresh Issue – Redemption at Premium. 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.	<b>(15Hrs)</b>
<b>Unit 3</b> <b>Final Accounts</b> 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. Profit Prior to Incorporation.	<b>(15Hrs)</b>
<b>Unit 4</b> <b>Valuation of Goodwill &amp; Shares</b> Valuation of Goodwill and Shares - Factors Affecting Goodwill - Methods of Valuation - Acquisition of Business.	<b>(15Hrs)</b>



**Unit 5****(15Hrs)****Indian Accounting Standards**

International Financial Reporting Standard (IFRS)–Meaning and its Applicability in India - Indian Accounting Standards – Meaning – Objectives – Significance – Accounting Standards in India – Procedures for Formulation of Standards – Ind AS – 1 Presentation of Financial Statement, Ind AS – 2 Valuation of Inventories, Ind AS – 7 Cash Flow Statement, Ind AS – 8 Accounting Policies, Changes in Accounting Estimate and Errors, Ind AS 12 Income Tax Ind AS – 16, Property Equipment Ind AS – 103, Business Combinations Ind AS 110, Consolidated Financial Statement.

**Note: Question Paper shall cover 20% Theory and 80% Problem**

**COURSE OUTCOMES**

**At the end of the course students would be able to**

CO.No	CO Statement	Knowledge Level
1	To understand the provisions for underwriting commission	<b>K2</b>
2	To examine the provisions of issue and redemption of preferences shares and debentures	<b>K3</b>
3	To illustrate part, I and part II forms	<b>K3</b>
4	To value shares and goodwill	<b>K5</b>
5	To analyse IND AS 7, 12,16	<b>K4</b>

**K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create

**Books for Study**

1.	S.P. Jain and N.L. Narang, Advanced Accounting Vol I, Kalyani Publication, New Delhi.
2	R.L. Gupta and M. Radha swamy, Advanced Accounts Vol I, Sultan Chand, New Delhi.
3.	Broman, Corporate Accounting, Taxmann, New Delhi.
4.	Shukla, Grewal and Gupta- Advanced Accounts VolII,S.Chand, New Delhi.
5.	M.C.Shukla, Advanced accounting Vol I, S.Chand, New Delhi.

**Books for References**

<b>1</b>	T.S. Reddy, A. Murthy – Corporate Accounting- Margham Publication, Chennai.
<b>2</b>	D.S.Rawat & Nozer Shroff,Students Guide To Accounting Standards ,Taxmann, New Delhi
<b>3</b>	Prof. Mukeshbramhbutt, Devi,Corporate Accounting I, AhilyaPublication, Madhya Pradesh
<b>4</b>	Anil Kumar, Rajesh kumar, Corporate accounting I, HimalayaPublishing house, Mumbai.
<b>5</b>	Prasanth Athma, Corporate Accounting I, Himalaya Publishinghouse, Mumbai.

**NOTE: Latest Edition of Text books May be Used**

**Web References**

<b>1</b>	<a href="https://open.lib.umn.edu/financialaccounting/">https://open.lib.umn.edu/financialaccounting/</a>
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**Mapping with Programme Outcomes and Programme Specific Outcomes**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
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<b>CO2</b>	2	3	2	3	2	2	2	2	3	2	2
<b>CO3</b>	2	3	2	2	2	2	2	1	3	2	2
<b>CO4</b>	2	3	2	2	2	2	2	2	3	2	2
<b>CO5</b>	2	3	3	3	2	2	2	1	3	2	2

**3 – Strong, 2- Medium, 1- Low**

**B.COM ,Computer Applications**  
**Second Year Core VI**

**Semester III**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCT306	COMPANY LAW	Core VI	5	-	-	-	5	5	25	75	100

**LEARNING OBJECTIVES**

1	To know Company Law 1956 and Companies Act 2013
2	To have an understanding on the formation of a company
3	To understand the requisites of meeting and resolution
4	To gain knowledge on the procedure to appoint and remove Directors
5	To familiarize with the various modes of winding up

**COURSE CONTENTS**

**Unit -I (15Hrs)**

**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.

**Unit- II (15Hrs)**

**Formation of Company**

Formation of a Company – Promoter – Fundamental Documents – Memorandum of Association – Contents – Alteration – Legal Effects – Articles of Association - Certificate of Incorporation – Prospectus – Contents - Kinds – Liabilities – Share Capital – Kinds – Issue – Alteration – Dividend – Debentures.

**Unit -III (15Hrs)**

**Meeting**

Meeting and Resolution – Types – Requisites – Voting & Poll – Resolution – Ordinary, Special Audit & Auditors – Qualification, Disqualification, Appointment and Removal of an Auditor.

**Unit -IV (15Hrs)**

**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.

**Unit- V****(15Hrs)****Winding up**

Meaning – Modes – Compulsory Winding Up – Voluntary Winding Up – Consequences of Winding Up Order – Powers of Tribunal – Petition for Winding Up – Company Liquidator.

**Note: Question Paper shall cover 100% Theory**

**COURSE OUTCOMES**

**At the end of the course students would be able to**

CO. NO	CO Statement	Knowledge level
CO1	Understand the classification of companies under the act	<b>K1</b>
CO2	Examine the contents of the Memorandum of Association & Articles of Association	<b>K2</b>
CO3	Know the qualification and disqualification of Auditors	<b>K4</b>
CO4	Understand the workings of National Company Law Appellate Tribunal (NCLAT)	<b>K1</b>
CO5	Analyse the modes of winding up	<b>K4</b>

**K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create

**Books for Study**

- 1.N.D. Kapoor, Business Laws, Sultan Chand and Sons, Chennai
- 2.R.S.N. Pillai – Business Law, S.Chand, New Delhi.
- 3.M.V. Dhandapani, Business Laws Sultan Chand and Sons, Chennai
- 4.Shusma Aurora, Business Law,Taxmann, New Delhi
- 5.M.C.Kuchal, Business Law, VikasPublication, Noida

**Books for References**

- 1.Gaffoor & Thothadri, Company Law, Vijay Nichole Imprints Limited, Chennai
2. M.R. Sreenivasan, Business Laws, Margham Publications, Chennai
3. KavyaAndVidhyasagar, Business Law, Nithya Publication, Bhopal
- 4..S.D.Geet, Business Law Nirali Prakashan Publication, Pune
- 5.PreethiAgarwal, Business Law, CA foundation study material

**NOTE: Latest Edition of Text books May be Used**

**AAA. Web References**

- 1.<https://www.mca.gov.in/content/mca/global/en/acts-rules/companies-act/companies-act-2013.html>
- 2.<https://vakilsearch.com/blog/explain-procedure-formation-company/>
- 3.<https://www.investopedia.com/terms/w/windingup.asp>

### Mapping with Programme Outcomes and Programme Specific Outcomes

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	3	2	2	3	3	2	2	2	3	2	3
<b>CO2</b>	3	2	3	3	2	2	2	2	3	2	2
<b>CO3</b>	3	2	2	3	2	2	2	3	3	2	2
<b>CO4</b>	3	2	2	3	2	2	2	2	3	2	2
<b>CO5</b>	3	2	3	3	2	2	2	3	3	2	2

**3 – Strong, 2- Medium, 1- Low**

Second Year

**B.COM ,Computer Applications  
SKILL BASED COURSE**

Semester III

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCE33A	PROGRAMMING IN JAVA AND LAB	SBE III	2	-	2	-	3	4	25	75	100

**LEARNING OBJECTIVES**

1	To provide fundamental knowledge of object-oriented programming.
2	To equip the student with programming knowledge in Core Java from the basics up
3	To enable the students to use AWT controls, Event Handling and Swing for GUI.

**COURSE CONTENTS**

<b>Unit 1</b>	<b>(12Hrs)</b>
<b>Introduction</b>	
Introduction: Review of Object-Oriented concepts - Java buzzwords (Platform independence, Portability, Threads)- JVM architecture –Java Program structure - –Java main method - Java Console output (System.out) - simple java program - Data types - Variables - type conversion and casting- Java Console input: Buffered input - operators - control statements - Static Data - Static Method - String and String Buffer Classes	
<b>Unit</b>	<b>(12Hrs)</b>
<b>Java user defined Classes</b>	
Java user defined Classes and Objects – Arrays – constructors - Inheritance: Basic concepts - Types of inheritance - Member access rules - Usage of this and Super key word - Method Overloading - Method overriding - Abstract classes - Dynamic method dispatch - Usage of final keyword	
<b>Unit</b>	<b>(12Hrs)</b>
<b>Packages</b>	
Definition - Access Protection - Importing Packages - Interfaces: Definition – Implementation – Extending Interfaces Exception Handling: try – catch - throw - throws -- finally – Built-in exceptions - Creating own Exception classes - garbage collection, finalise.	
<b>Unit 4</b>	<b>(12Hrs)</b>
<b>Multithreaded Programming:</b>	
Thread Class - Runnable interface – Synchronization – Using synchronized methods – Using synchronized statement - Interthread Communication – Deadlock	
<b>Unit</b>	<b>(12Hrs)</b>
<b>Adapter classes</b>	
Inner classes -Java Util Package / Collections Framework: Collection & Iterator Interface- Enumeration- List and Array List- Vector- Comparator	

Note: **Note: Question paper will cover 100%Practical**

**COURSE OUTCOMES**

**At the end of the course students would be able to**

CO.NO	CO STATEMENT	Knowledge Level
CO1	Understand the basic Object-oriented concepts. Implement the basic constructs of Core Java	K2
CO2	Implement inheritance, packages, interfaces and exception handling of Core Java	K3
CO3	Implement multi-threading and I/O Streams of Core Java	K3

**Books for Study**

- |    |   |
|----|---|
| 1. | Herbert Schildt, The Complete Reference, Tata McGraw Hill, New Delhi, 7th Edition, 2010 |
| 2. | Gary Cornell, Core Java 2 Volume I – Fundamentals, Addison Wesley, 1999.                |

**Books for References**

1.	Head First Java, O'Reilly Publications, Y. Daniel Liang, Introduction to Java Programming, 7th Edition, Pearson Education India, 2010.
<b>NOTE: Latest Edition of Text books May be Used</b>	
Web References	
1.	Web References from NDL Library, E-content from open-source libraries

### Mapping with Programme Outcomes and Programme Specific Outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
<b>CO1</b>	3	2	2	3	3	2	2	2	3	3	3
<b>CO2</b>	3	2	2	3	2	2	2	2	3	3	3
<b>CO3</b>	3	2	2	3	2	2	2	2	3	3	3
<b>CO4</b>	3	3	2	3	2	2	2	3	3	3	3
<b>CO5</b>	3	3	3	3	2	2	2	3	3	3	2

Java Programming Lab	Core -S2EC1L
Learning Objectives: (for teachers: what they have to do in the class/lab/field) <ul style="list-style-type: none"> <li>To gain practical expertise in coding Core Java programs</li> <li>To become proficient in the use of AWT, Event Handling and Swing.</li> </ul>	
CO Statement: (for students: To know what they are going to learn) CO1: Code, debug and execute Java programs to solve the given problems CO2: Implement multi-threading and exception-handling CO3: Implement functionality using String and String Buffer classes	



**List of Lab Programs**

BCOM (CA) MTWU SYLLABUS 2024

1. Write a Java program that prompts the user for an integer and then prints out all the prime numbers up to that Integer?
2. Write a Java program to multiply two given matrices.
3. Write a Java program that displays the number of characters, lines and words in a text?
4. Generate random numbers between two given limits using Random class and print messages according to the range of the value generated.
5. Write a program to do String Manipulation using Character Array and perform the

Second Year

**B.COM ,Computer Applications  
SKILL BASED ELECTIVE**

Semester III

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCE33B	WEB TECHNOLOGY (PHP) and LAB	SBE III	2	-	2	-	3	4	25	75	100

**LEARNING OBJECTIVES**

1	To use PHP and MySQL to develop dynamic web sites for user on the Internet
2	To develop web sites ranging from simple online information forms to complex e-commerce sites with MySQL database, building connectivity, and maintenance

**COURSE CONTENTS**

<b>Unit 1</b>	<b>(12Hrs)</b>
<b>Introduction</b>	
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.	
<b>Unit 2</b>	<b>(12Hrs)</b>
<b>Controlling Program Flow</b>	
Writing Simple Conditional Statements - Writing More Complex Conditional Statements – Repeating Action with Loops – Working with String and Numeric Functions.	
<b>Unit 3</b>	<b>(12Hrs)</b>
<b>Working with Arrays</b>	
Storing Data in Arrays – Processing Arrays with Loops and Iterations –Using Arrays with Forms - Working with Array Functions – Working with Dates and Times.	
<b>Unit 4</b>	<b>(12Hrs)</b>
<b>Using Functions and Classes</b>	
Creating User-Defined Functions - Creating Classes – Using Advanced OOP Concepts.	
<b>Unit</b>	<b>(12Hrs)</b>
<b>Working with Database and SQL</b>	
Introducing Database and SQL- Using MySQL-Adding and modifying Data-Handling Errors – Using SQLite Extension and PDO Extension. Introduction XML - Simple XML and DOM Extension.	

**Note: Question Paper will cover 100% Practical**

**COURSE OUTCOMES****At the end of the course students would be able to**

<b>CO.No</b>	<b>CO STATEMENT</b>	<b>Knowledge Level</b>
<b>CO1</b>	Understand the general concepts of PHP scripting language for the development of Internet websites.	<b>K2</b>
<b>CO2</b>	Understand the basic functions of MySQL database program and XML concepts	<b>K2</b>
<b>CO3</b>	Learn the relationship between the client side and the server side scripts.	<b>K2</b>

**Books for Study**

1. VikramVaswani, "PHP A Beginner's Guide", Tata McGraw Hill 2008.

**Books for References**

1. Steven Holzner , "The PHP Complete Reference", Tata McGraw Hill, 2007.
2. Steven Holzer , "Spring into PHP", Tata McGraw Hill 2011, 5thEdition.

**NOTE: Latest Edition of Text books May be Used****Web References**

1. <https://www.w3schools.com/php/>
2. <https://www.phptpoint.com/php-tutorial-pdf/>
3. <http://www.xmlsoftware.com/>

**Mapping With Programme Outcomes and  
Programme Specific Outcomes**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	3	2	3	3	2	3	2	2	3	2	2
<b>CO2</b>	3	2	3	3	3	2	2	2	3	2	2
<b>CO3</b>	3	2	3	3	3	2	2	2	3	2	2
<b>CO4</b>	3	2	3	3	2	2	2	2	3	2	2
<b>CO5</b>	3	2	3	3	3	2	2	2	3	2	2

**3 – Strong, 2- Medium, 1- Low**

**WEB TECHNOLOGY LAB****Learning Objectives:** (for teachers: what they have to do in the class/lab/field)

- The objectives of this course are to have a practical understanding about how to write PHP code to solve problems.
- Display and insert data using PHP and MySQL.
- Test, debug, and deploy web pages containing PHP and MySQL.
- It also aims to introduce practical session to develop simple applications using PHP and MySQL.

**CO Statement:** (for students: To know what they are going to learn)

1. On the completion of this laboratory course the students ought to
2. Obtain knowledge and develop application programs using Python.
3. Create dynamic Web applications such as content management, user registration, and ecommerce using PHP and to understand the ability to post and publish a PHP website.
4. Develop a MySQL database and establish connectivity using MySQL.

**List of Lab Programs**

1. Write a PHP program which adds up columns and rows of given table
2. Write a PHP program to compute the sum of first n given prime numbers
3. Write a PHP program to find valid an email address
4. Write a PHP program to convert a number written in words to digit.
5. Write a PHP script to delay the program execution for the given number of seconds.
6. Write a PHP script, which changes the colour of the first character of a word
7. Write a PHP program to find multiplication table of a number.
8. Write a PHP program to calculate Factorial of a number.
9. Write a PHP code to create a student mark sheet table. Insert, delete and modify records.
10. From a XML document (email.xml), write a program to retrieve and print all the e-mail addresses from the document using XML
11. From a XML document (tree.xml), suggest three different ways to retrieve the text value 'John' using the DOM:
12. Write a program that connects to a MySQL database and retrieves the contents of any one of its tables as an XML file. Use the DOM.

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC – CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill



Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCS33	BUSINESS PLAN PREPARATION	SEC-III	2	-	-	-	1	2	25	75	100

## LEARNING OBJECTIVES

1.	To know about the business ideas
2.	To identify the short, medium and long term goals
3.	To create awareness about investment
4.	Students will gained knowledge about the plant layout
5.	Students will acquire knowledge about income expenditure statement.

**Unit 1: Generation of Business Idea****(6Hrs)**

Business Ideas: Existing business , new business – Name of the company – Logo Creation – Slogan – Product Identification and Diversification – Prepare Three Plans – manufacturing and Service Sectors.

**Unit2:Vision-Mission Statement****(6Hrs)**

Vision – Mission Statement of the business- Objectives – Short Term- Medium Term – Long Term goals.

**Unit3:InvestmentAvenues****(6Hrs)**

Investment – Raising Funds – Capital Formation – Budget Preparation

**Unit 4: Plant Layout****(6Hrs)**

Prepare Plant Layout – Two dimension and Three Dimension (Display) – Packaging – Labelling the Product – Pricing.

**Unit 5: Promotion Policy****(6Hrs)**

Income Expenditures Statement – Advertisement – Pamphlet Preparation – SWOT of your own business

**Note: Question Paper shall cover 100% Theory.**

**COURSE OUTCOMES****At the end of the course students would be able to**

CO	CO Statement	Knowledge Level
1	Demonstrate the understanding of the business ideas	<b>K3</b>
2	Assess the vision and mission of the company	<b>K2</b>
3	To create budget preparation	<b>K6</b>
4	Ability to prepare plant layout	<b>K3</b>
5	Evaluate SWOT analysis	<b>K5</b>
<b>K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create</b>		

**Books for Study**

Fundamentals of business organisation- Y.K.Bhushan, Sultan chand

**Books for Reference**

Modern marketing principles and practices- R.S.N. Pillai &amp; Bhagavathi , S.Chand

**NOTE: Latest Edition of Text books May be Used****Web References**1.<https://www.bigcommerce.com/articles/ecommerce/how-to-name-a-business/>2.<https://sproutsocial.com/insights/how-to-design-a-logo/>3.<https://clockify.me/blog/managing-tasks/short-term-planning-and-long-term-planning/>4.<https://www.sec.gov/news/speech/2012-spch120312laahtm>5.<https://www.visualcomponents.com/resources/blog/how-to-plan-design-a-manufacturing-plant-layout-video-examples-included/>6.<https://www.semrush.com/blog/swot-analysis-examples/>7.<https://online.hbs.edu/blog/post/how-to-prepare-an-income-statement>**Mapping With Programme Outcomes and Programme Specific Outcomes**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
<b>CO1</b>	3	3	2	2	2	3	2	2	3	2	2
<b>CO2</b>	3	3	2	2	3	2	2	2	3	2	2

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<b>CO3</b>	3	3	2	2	3	2	2	2	3	2	2
<b>CO4</b>	3	3	2	2	2	2	2	2	3	2	2
<b>CO5</b>	3	3	2	2	3	2	2	2	3	2	2

**3 – Strong, 2- Medium, 1- Low**



Second Year

**B.COM ,Computer Applications  
SKILL ENHANCEMENT COURSE**

Semester III

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCNM32	NAAN MUDHALVAN	.	2	-	-	-	2	2	25	75	100

**SEMESTER IV****B.COM ,Computer Applications****Second Year****Core -VII****Semester IV**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CCT407</b>	<b>CORPORATE ACCOUNTING II</b>	<b>CORE VII</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>5</b>	<b>25</b>	<b>75</b>	<b>100</b>

**LEARNING OBJECTIVES**

- 1.To know the types of amalgamation
- 2.To gain an understanding about reconstruction
- 3.To know Final statements of banking companies
- 4.To understand the legal requirements of financialaccounts
- 5.To have an insight on modes of winding up of acompany

**COURSE CONTENTS****Unit 1: Amalgamation, Absorption & External Reconstruction****(15Hrs)**

Amalgamation, Absorption and External Reconstruction - Purchase Consideration - Lump sum Method, Net Assets Method, Net Payment Method, Intrinsic Value Method - Types of Amalgamation (Excluding Inter-Company Holdings).

**Unit 2: Alteration of Share Capital – & Internal Reconstruction****(15Hrs)**

Alteration of Share Capital – Modes of Alteration - Internal Reconstruction – Conversion of Stock – Increase and Decrease of Capital – Reserve Liability.

**Unit 3: Accounting of Banking Companies****(15Hrs)**

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.

**Unit 4: Consolidated Financial Statements****(15Hrs)**

Introduction-Holding & Subsidiary Company-Legal Requirements Relating to Presentation of Accounts -Preparation of Consolidated Balance Sheet (Excluding Inter-Company Holdings).

**Unit 5: Liquidation of Companies****(15Hrs)**

Meaning-Modes of Winding Up – Preparation of Statement of Affairs and Deficiency Accounts - Order of Payment – Liquidators Remuneration- Liquidator's Final Statement of Accounts.

**Note: Question Paper shall cover 20% Theory & 80% Problems**

### COURSE OUTCOMES

At the end of the course students would be able to

CO. NO	CO Statement	Knowledge Level
1	Understand the accounting treatment of amalgamation, absorption and external reconstruction	<b>K2</b>
2	Apply and alter the share capital and internal reconstruction	<b>K3</b>
3	Do the accounting procedure of non-performing assets	<b>K4</b>
4	Give the consolidated accounts of holding companies	<b>K5</b>
5	Prepare liquidator's final statements	<b>K6</b>
<b>K1</b> - Remember; <b>K2</b> - Understand; <b>K3</b> - Apply; <b>K4</b> - Analyze; <b>K5</b> - Evaluate; <b>K6</b> – Create		

#### Books for Study

1.	S.P. Jain and K.L Narang. Advanced Accountancy, Kalyani Publishers, New Delhi.
2.	Dr. K.S .Raman and Dr. M.A. Arulanandam , Advanced Accountancy, Vol. II, Himalaya Publishing House, Mumbai.
3.	R.L. Gupta and M. Radhaswamy, Advanced Accounts, Sultan Chand, New Delhi.
4.	M.C. Shukla and T.S. Grewal, Advanced Accounts Vol.II, S Chand & Sons, New Delhi.
5.	T.S. Reddy and A.Murthy, Corporate Accounting II, Margham Publishers, Chennai

#### Books for References

1.	B.Raman, Corporate Accounting, Taxmann, New Delhi
2.	M.C.Shukla, Advanced Accounting,S.Chand, New Delhi
3.	Prof. Mukesh Bramhbutt, Devi Ahilya publication, Madhya Pradesh
4.	Anil kumar, Rajesh kumar, Advanced Corporate Accounting, Himalaya Publishing house, Mumbai.
5.	Prasanth Athma, Corporate Accounting, Himalaya Publishing house, Mumbai.

**NOTE: Latest Edition of Text books May be Used**

#### Web References

1.	<a href="https://www.accountingnotes.net/amalgamation/amalgamation-absorption-and-reconstruction-accounting/126">https://www.accountingnotes.net/amalgamation/amalgamation-absorption-and-reconstruction-accounting/126</a>
2.	<a href="https://www.slideshare.net/debchat123/accounts-of-banking-companies">https://www.slideshare.net/debchat123/accounts-of-banking-companies</a>
3.	<a href="https://www.accountingnotes.net/liquidation/liquidation-of-companies-accounting/12862">https://www.accountingnotes.net/liquidation/liquidation-of-companies-accounting/12862</a>

**Mapping With Programme Outcomes and Programme Specific Outcomes**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	2	2	3	3	2	3	2	2	3	2	2
<b>CO2</b>	2	2	3	3	3	2	2	2	3	2	2
<b>CO3</b>	2	2	3	3	3	2	2	2	3	2	2
<b>CO4</b>	2	2	3	3	2	2	2	2	3	2	2
<b>CO5</b>	2	2	3	3	3	2	2	2	3	2	2

**3 – Strong, 2- Medium, 1- Low**

Second Year

B.COM ,Computer Applications  
CORE PAPER -VIII

Semester IV

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCT408	PRINCIPLES OF MARKETING	CORE VIII	4	-	-	-	5	5	25	75	100

**LEARNING OBJECTIVES**

- 1.To know the concept and functions of marketing
- 2.To understand the importance of market segmentation
- 3.To examine the stages of new product development
- 4.To gain knowledge on the various advertising medias
- 5.To analyse the global market environment

**COURSE CONTENTS****Unit 1: Introduction to Marketing****(15Hrs)**

Meaning–Definition and Functions of Marketing– Evolution of Marketing Concepts– Marketing Orientation–Innovations in Modern Marketing. Marketing Management: Definitions–Functions – Role and Importance of Marketing - Classification of Markets - Niche Marketing - Characteristics of Niche Marketing – Local Marketing – Green Marketing.

**Unit 2: Market Segmentation****(15Hrs)**

Concept – Benefits –Types– Geographic – Demographic – Psychographic – Behavioural - Marketing Mix – Definition – 4 P's of Marketing Mix - Introduction to Consumer Behaviour –Purchase Decision – Post Purchase Behaviour – Consumer Buying Decision Process – Motives & Needs, Freud's Theory of Motivation.

**Unit 3: Product & Price****(15Hrs)**

Definition – Product Mix – Introduction to Stages of New Product Development – Product Life Cycle – Sales Forecasting – Methods –Criteria for a Good Forecasting – Pricing–Objectives – Factors Influencing Pricing – Kinds of Pricing – Resale Price Maintenance.

**Unit 4: Promotions and Distributions****(15Hrs)**

Communication Mix – Communication Process –Advertising–Media–Kinds of–Advertising Media- Sales Promotion – Personal Selling–Classification of Salesmanship - Channel Members–Types–Channel of Distribution for Consumer Goods – Channels of Distribution for Industrial Goods.

**Unit 5: Competitive Analysis and Strategies**

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**(15Hrs)**

Balancing Customer and Competitor Orientations–Global Market Environment–Social Responsibility and Marketing Ethics, Citizen and Publications to Regulate Marketing –Recent Trends in Marketing– A Basic Understanding of E–Marketing–E–Tailing–Consumerism– Market Research–MIS and Marketing Regulation.

**Note: Question Paper shall cover 100% Theory**

**COURSE OUTCOME**

**At the end of the course students would be able to**

CO. NO	CO Statement	Knowledge Level
1	Develop an understanding on the role and importance of marketing	<b>K6</b>
2	Apply the 4 p's of marketing in their venture	<b>K3</b>
3	Identify the factors determining pricing	<b>K1</b>
4	Use the different Channels of distribution of industrial goods	<b>K2</b>
5	Understand the concept of E-marketing and E-Tailing	<b>K2</b>

**Books for Study**

- 1.Philip Kotler, Principles of Marketing: A South AsianPerspective, Pearson Education. New Delhi
- 2.Dr.C.B.Gupta&Dr. N. Rajan Nair, Marketing Management,Sultan Chand & Sons, New Delhi.
- 3.Dr. Amit Kumar, Principles Of Marketing,Shashibhawan Publishing House, Chennai
- 4.Dr. N. Rajan Nair, Marketing, Sultan Chand & Sons. New Delhi
- 5.Neeru Kapoor Principles Of Marketing, PHI Learning, NewDelhi

**K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create

**Books for Reference**

- 1.Prof Kavita Sharma, Dr Swati Agarwal, Principles of MarketingBook, Taxmann, new delhi
- 2.Dr. J. Jayasankar, Marketing Management, MarghamPublications, SChennai.
- 3.Assael, H. Consumer Behaviour and Marketing Action, USA:PWS Kent
- 4.Hoyer, W.D. And Macinnis, D.J., Consumer Behaviour, USA:Houghton Mifflin Company
- 5.Baker M,Marketing Management And Strategy, MacmillanBusiness, Bloombury Publishing, India

**NOTE: Latest Edition of Text books May be Used**

**Web References**

1. <https://www.aha.io/roadmapping/guide/marketing/introduction>
2. <https://www.investopedia.com/terms/m/marketsegmentation.asp>

### Mapping With Programme Outcomes and Programme Specific Outcomes

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	3	2	2	2	3	3	3	2	3	2	2
<b>CO2</b>	2	2	3	2	3	3	3	2	3	2	2
<b>CO3</b>	2	2	3	2	3	3	3	2	3	2	2
<b>CO4</b>	2	2	2	3	3	3	2	2	3	2	2
<b>CO5</b>	2	2	3	3	3	3	2	2	3	2	2

**3 – Strong, 2- Medium, 1- Low**

Second Year

**B.COM ,Computer Applications**  
**SUBJECT BASED ELECTIVE IV**

Semester IV

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCE44A	RELATIONAL DATABASE MANAGEMENT SYSTEM	SBE IV	4	-	-	-	3	4	25	75	100

**LEARNING OBJECTIVES**

- 1.To gain a good understanding of the architecture and functioning of Database Management Systems
- 2.To understand the use of Structured Query Language (SQL) and its syntax.
- 3.To apply Normalization techniques to normalize a database.
- 4To understand the need of transaction processing and learn techniques for controlling the consequences of concurrent data access.

**COURSE CONTENTS****Unit 1: Introduction****(12Hrs)**

Introduction to DBMS– Data and Information - Database – Database Management System – Objectives- Advantages – Components - Architecture. ER Model: Building blocks of ER Diagram

**Unit 2:Relationship Degree****(12Hrs)**

Relationship Degree – Classification – ER diagram to Tables – ISA relationship –constraints Aggregation and Composition – Advantages Structure of Relational Database. Introduction to Relational Database Design - Objectives – Tools –Redundancy and Data Anomaly

**Unit 3: Functional Dependency****(12Hrs)**

Functional Dependency - Normalization – 1NF – 2NF – 3NF –BCNF. Transaction Processing – Database Security.

**Unit 4:SQL****(12Hrs)**

Introduction to SQL: Data Definition Commands – Data Manipulation Commands – SELECT Queries – Additional Data Definition Commands – Additional SELECT Query Keywords – Joining Database Tables. Advanced SQL: Relational SET Operators: UNION – UNION ALL – INTERSECT - MINUS.

**Unit 5: SQL Join Operators****(12Hrs)**

SQL Join Operators: Cross Join – Natural Join – Join USING Clause – JOIN ON Clause – Outer Join. Sub Queries and Correlated Queries: WHERE – IN – HAVING – ANY and ALL – FROM. SQL Functions: Date and Time Function – Numeric Function – String Function – Conversion Function



**Note: Question Paper shall cover 100% Theory**

### **COURSE OUTCOMES**

**At the end of the course students would be able to**

<b>CO</b>	<b>CO Statement</b>	<b>Knowledge Level</b>
<b>CO1</b>	Describe basic concepts of database system	<b>K1</b>
<b>CO2</b>	Design a Data model and Schemas in RDBMS	<b>K2</b>
<b>CO3</b>	Competent in use of SQL	<b>K2</b>
<b>CO4</b>	Analyse functional dependencies for designing robust Database	<b>K4</b>

#### **Books for Study**

1. S. Sumathi, S. Esakkirajan, "Fundamentals of Relational Database Management System", Springer International Edition 2007.

#### **Books for Reference**

1. Abraham Silberchatz, Henry F. Korth, S. Sudarshan, "Database System Concepts", McGrawHill 2019, 7th Edition.
2. Alexis Leon & Mathews Leon, "Fundamentals of DBMS", Vijay Nicole Publications 2014, 2<sup>nd</sup> Edition.

**NOTE: Latest Edition of Text books May be Used**

#### **Web References**

1. <https://nptel.ac.in/courses/106106093/>
2. <https://nptel.ac.in/courses/106106095/>
3. NPTEL & MOOC courses titled Relational Database Management Systems

### **Mapping With Programme Outcomes and Programme Specific Outcomes**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	3	3	3	3	3	3	3	2	3	2	2
<b>CO2</b>	3	3	3	3	3	3	3	2	3	2	2
<b>CO3</b>	3	3	3	3	3	3	3	2	3	2	2
<b>CO4</b>	3	3	3	3	3	3	2	2	3	2	2
<b>CO5</b>	3	3	3	3	3	3	2	2	3	2	2

**3 – Strong, 2- Medium, 1- Low**

Second Year

**B.COM ,Computer Applications**  
**SUBJECT BASED ELECTIVE IV**

Semester IV

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCE44B	INTRODUCTION TO DATA SCIENCE	SBE IV	4	-	-	-	3	4	25	75	100

**LEARNING OBJECTIVES**

1	To introduce the concepts, techniques and tools in DataScience
2	To understand the various facets of data science practice,including data collection and I Integration, exploratory data analysis, predictive modelling, descriptive modelling and effective communication.

**COURSE CONTENTS**

<b>Unit 1: Introduction</b> (12Hrs) Benefits and uses – Facets of data – Data science process – Big data ecosystem and data science
<b>Unit 2: The Data science process</b> (12Hrs) Overview – research goals - retrieving data - transformation – Exploratory Data Analysis – Model building - Data Visualization
<b>Unit 3:Algorithms</b> (12Hrs) Machine learning algorithms – Modelling process – Types – Supervised – Unsupervised - Semi- supervised
<b>Unit 4: Introduction to Hadoop</b> (12Hrs) Hadoop framework – Spark – replacing MapReduce– NoSQL – ACID – CAP – BASE – types
<b>Unit 5: Case Study</b> (12Hrs) Prediction of Disease - Setting research goals - Data retrieval – preparation - exploration - Disease profiling - presentation and automation

**Note: Question Paper shall cover 100% Theory**

**COURSE OUTCOMES**

At the end of the course students would be able to

CO	CO STATEMENT	Knowledge Level
CO1	To describe what Data Science is, what Statistical Inference means, identify probability distributions, fit a model to data and use tools for basic analysis and communication	K1
CO2	To describe what Data Science is, what Statistical Inference means, identify probability distributions, fit a model to data and use tools for basic analysis and communication	K1
CO3	To describe what Data Science is, what Statistical Inference means, identify probability distributions, fit a model to data and use tools for basic analysis and Communication	K1

**Books for Study**

- 1.Davy Cielen, Arno D. B. Meysman, Mohamed Ali, “IntroducingData Science”, manning publications 2016
- 2.Roger Peng, “The Art of Data Science”, lulu.com 2016.
- 3.MurtazaHaider, “Getting Started with Data Science – Making Sense ofData with Analytics”, IBM press, E-book.

**Books for References**

- 1.Davy Cielen, Arno D.B. Meysman, Mohamed Ali,“Introducing Data Science: Big Data, Machine Learning, and More, Using Python Tools”,Dreamtech Press 2016.
- 2.Annalyn Ng, Kenneth Soo, “Numsense! Data Science for theLayman: No Math Added”, 2015,1st Edition.
- 3.Cathy O'Neil, Rachel Schutt, “Doing Data Science Straight Talkfrom the Frontline”, O'Reilly Media 2013.
- 4.Lillian Pierson, “Data Science for Dummies”, 2015 II Edition

**Note : Last Edition of Text Book May be Use**

**Web References**

- 1.[https://www.jmc.edu/econtent/pg/8262\\_DATASCIENCE%20WITH%20BIGD ATA.pdf](https://www.jmc.edu/econtent/pg/8262_DATASCIENCE%20WITH%20BIGD%20ATA.pdf)
- 2.<https://www.javatpoint.com/types-of-machine-learning>
- 3.<https://www.geeksforgeeks.org/hadoop-an-introduction/>
- 4.<https://www.slideshare.net/varshakumar21/data-science-chapter456>

**Mapping With Programme Outcomes and Programme Specific Outcomes**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	3	2	2	2	3	3	3	2	3	2	2
<b>CO2</b>	3	2	2	2	3	3	3	2	1	2	2
<b>CO3</b>	3	2	2	2	3	3	3	2	3	2	2
<b>CO4</b>	3	2	2	1	3	3	2	2	3	2	2
<b>CO5</b>	3	2	2	2	3	3	2	2	3	2	2

**3 – Strong, 2- Medium, 1- Low**

**B.COM ,Computer Applications**  
**SKILL ENHANCEMENT COURSE VI**

**Second Year** **Semester IV**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks	
									CIA	External
U23CCS44	COMMERCE PRACTICAL	SEC V	2	-	-	-	2	2	25	75

### LEARNING OBJECTIVES

**1.To provide practical knowledge to fill forms like insurance, bank, loan application, membership form, income tax return forms etc.**

**2.To identify the short, medium and long term goals**

**3.To create awareness about commerce subject in practical**

**4.Students will gained knowledge in trasacting with banks andinstitutions**

**5.Students will acquire knowledge about filing various documents**

### COURSE CONTENTS

#### Unit 1: Preparation of Invoice

**(6Hrs)**

Preparation of invoice, receipts, vouchers, delivery challan, entry pass, gate pass-debit and credit notes. Preparation of Application for shares and allotment - letter of shares Allotment - transfer forms.

#### Unit 2: Preparation of Cheque

**(6Hrs)**

Drawing, endorsing and crossing of cheques- filling up of pay in slips demand draft application and preparation of demand drafts . Making entries in the passbook and filling up of account opening forms for SB account, current account and FDR's. . Drawing and endorsing of bills of exchange and promissory notes.

#### Unit 3: Co operative Society

**(6Hrs)**

Filling up of application forms for admission in cooperative societies. .Filling up of loan application forms and deposit challan. .Filling up of Jewel loan application form, Procedure for releasing of jewelery in jewel loans and repayment

#### Unit 4:Preparation of Agenda and Minutes of Meeting

**(6Hrs)**

Preparation of agenda and minutes of meetings-both general body and board of directors. (students are asked to write agenda and minutes of their own and should not use printed format)Using Bin card and inventories. .Using Cost Sheets.

**Unit 5: Application to LIC Policy****(6Hrs)**

Filling up of an application form for LIC policy, filling up of the premium form- filling up the challan for remittance of premium. .Preparation of an advertisement copy, collection of advertisement in dailies and journals, critically evaluating the advertisement copy. .Filling up income -tax returns and application for permanent account number.

**Note: Question Paper shall cover 100% Practical**

**COURSE OUTCOMES**

**At the end of the course students would be able to**

CO. NO	CO Statement	Knowledge Level
1	Students can independently start up their own Business	<b>K3</b>
2	Students can get thorough knowledge of finance and commerce. and finance with the <b>practical</b> exposure helps the students to stand in organization in the field of finance and <b>commerce</b>	<b>K2</b>
3	Acquire practical knowledge on writing cheques	<b>K4</b>
4	Acquire the skills required for preparation of agenda and minutes of meeting	<b>K4</b>
5	Demonstration on taking LIC Policy	<b>K3</b>
<b>K1</b> - Remember; <b>K2</b> - Understand; <b>K3</b> - Apply; <b>K4</b> - Analyze; <b>K5</b> - Evaluate; <b>K6</b> – Create		

**Books for Reference**

1.N Chaoudhary " Banking Law"Central Law Publication Dr. O P Gupta "Company Law" SPBD Publishing House

2Hargovind Dayal "Fundamentals of Insurance" 1st Edition, Notion Press

**Books for Study**

1.Poonam Gandhi " Business Studies" V k Global Publication Pvt Limited

2.N D Kapoor " Company Law and Secretarial Practice" Sulthan Chand and Sons

**NOTE: Latest Edition of Text books May be Use**

**Web References**

**1** <https://clickup.com/blog/meeting-agenda/>

**2** <https://www.refrens.com/free-online-invoice-generator>

**3** <https://extension.umn.edu/leadership-development/planning-effective-meeting-agenda>

**Mapping With Programme Outcomes and Programme Specific Outcomes**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	1	2	3	2	3	3	3	2	3	2	2
<b>CO2</b>	3	2	2	3	3	3	3	2	1	2	2
<b>CO3</b>	1	2	3	3	3	2	2	2	3	2	2
<b>CO4</b>	3	2	2	1	3	3	2	2	3	2	2
<b>CO5</b>	3	2	2	2	3	3	2	2	3	2	2

**3 – Strong, 2- Medium, 1- Low**

Second Year

**B.COM ,Computer Applications**  
**SKILL ENHANSEMENT COURSE V**

Semester IV

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCNM43	NAAN MUDHALVAN	.	2	-	-	-	2	2	25	75	100



Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CC4EVS</b>	<b>ENVIRONMENTAL STUDIES</b>	<b>EVS</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>25</b>	<b>75</b>	<b>100</b>

**LEARNING OBJECTIVES**

- 1.Helps to understand the concept and relevance of Environmental policies and practices**
- 2.Ability to take initiative in conserving the environment**
- 3.Students will develop the habit of conserving the naturalresources**
- 4.Student will understand the importance of Environmentmoment**
- 5.Better understanding the relevance of Environmentethics**

**COURSE CONTENTS**

<b>Unit 1: Environmental Policies and Practices (6Hrs)</b> Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture
<b>Unit 2: Environmental Laws (6Hrs)</b> Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and Control of Pollution) Act; Wildlife (Protection) Act; Forest Conservation Act.
<b>Unit 3: Human Communities and Environment (6Hrs)</b> Human population growth: Impacts on environment, human health and welfare.- Resettlement and rehabilitation of project affected persons
<b>Unit 4: Disaster Management and Environmental Moment (6Hrs)</b> Disaster management: Floods, Earthquake, Cyclones and Landslides. Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan..
<b>Unit 5: Environmental Ethics (6Hrs)</b> Role of Indian and other religions and cultures in environmental conservation. Environmental communication and public awareness.
<b>Note: Question Paper shall cover 100% Theory</b>

**COURSE OUTCOMES**

At the end of the course students would be able to

CO. NO	CO Statement	Knowledge Level
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1	Identifying and understanding the importance of environmental protection	<b>K2</b>
2	Practicing to conserve natural resources	<b>K3</b>
3	Identify the different types of pollution and ways to control them	<b>K3</b>
4	Application of skills to improve natural habitat	<b>K4</b>
5	Improve the status of mind and happiness through nature	<b>K5</b>
<b>K1</b> - Remember; <b>K2</b> - Understand; <b>K3</b> - Apply; <b>K4</b> - Analyze; <b>K5</b> - Evaluate; <b>K6</b> – Create		

**Books for Study**

1. Bharucha, E. (2015). Textbook of Environmental Studies.
2. Gleeson, B. and Low, N. (eds.) (1999). Global Ethics and Environment,
3. London, Routledge.

**Books for Reference**

1. Nandini, N., Sunitha N., & Sucharita Tandon. (2019).
2. Environmental Studies (AECC).
3. Rajit Sengupta and Kiran Pandey. (2021). State of India's Environment 2021: In Figures. Centre Science and Environment

**NOTE: Latest Edition of Text books May be Use****Web References**

1. [https://gcwgandhinagar.com/econtent/document/15876172160EVSA\\_ECC01\\_Climate%20change.pdf](https://gcwgandhinagar.com/econtent/document/15876172160EVSA_ECC01_Climate%20change.pdf)
2. <http://eagri.org/eagri50/ENVS302/pdf/lec15.pdf>
3. <https://www.studocu.com/in/document/banaras-hindu-university/environment-and-management/human-population-growth-impacts-on-environment-human-health-and-welfare/25698053>
4. <http://www.aagasc.edu.in/Unit%207%20EVS.pdf>
5. [https://gcwgandhinagar.com/econtent/document/15876176100EVSA\\_ECC01\\_Environmental%20movements.pdf](https://gcwgandhinagar.com/econtent/document/15876176100EVSA_ECC01_Environmental%20movements.pdf)
6. <https://www.sccc.edu/sites/default/files/Role%20of%20religion%20in%20Environment-Unit%20VII-AECC-EVS-Harvinder%20Singh.pdf>

**Mapping With Programme Outcomes and Programme Specific Outcomes**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	2	3	3	1	3	3	3	2	3	2	2
<b>CO2</b>	2	3	2	3	3	3	3	2	2	2	2
<b>CO3</b>	1	2	3	3	3	2	2	2	3	2	2
<b>CO4</b>	3	2	2	3	2	3	2	2	3	2	2
<b>CO5</b>	3	3	2	2	3	3	2	1	3	2	2

**3 – Strong, 2- Medium, 1- Low**

**SEMESTER V**  
**B.COM ,Computer Applications**

Third Year

CORE IX

Semester V

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCT509	COST ACCOUNTING I	CORE IX	5	-	-	-	4	5	25	75	100

**Learning Objectives**

1	To understand the various concepts of cost accounting.
2	To prepare and reconcile Cost accounts.
3	To gain knowledge regarding valuation methods of material.
4	To familiarize with the different methods of calculating labour cost.
5	To know the apportionment of Overheads

**COURSE CONTENT**

**Unit 1 Introduction of Cost Accounting**

(15Hrs)

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.

**Unit 2 Cost Sheet and Methods of Costing**

(15Hrs)

Preparation of Cost Sheet - Tenders & Quotations - Reconciliation of Cost and Financial Accounts – Unit Costing-Job Costing.

**Unit 3 Material Costing**

(15Hrs)

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

**Unit4 Labour Costing**

(15Hrs)

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.

**Unit 5 Overheads Costing**

(15Hrs)

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.

**Note: Question Paper shall cover 20% Theory & 80% Problem**

**Course Outcome**

At the end of the course students would be able to

CO No	CO Statement	Knowledge Level
1	Remember and recall the various concepts of cost accounting	<b>K1</b>
2	Demonstrate the preparation and reconciliation of cost sheet.	<b>K2</b>
3	Analyse the various valuation methods of issue of materials.	<b>K4</b>
4	Examine the different methods of calculating labour cost.	<b>K3</b>
5	Critically evaluate the apportionment of Overheads.	<b>K5</b>
<b>K1</b> - Remember; <b>K2</b> - Understand; <b>K3</b> - Apply; <b>K4</b> - Analyze; <b>K5</b> - Evaluate; <b>K6</b> – Create		

**Books for Study**

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, Cost Accounting, Sultan Chand Publications, New Delhi

**NOTE: Latest Edition of Text books May be Used**

**Books for Reference**

1	Polimeni, Cost Accounting: Concepts and Applications for Managerial Decision Making, 1991, McGraw–Hill, New York.
2	Jain S.P. and Narang K.L. Cost Accounting, Latest Edition.2013, Kalyani Publishers, New Delhi,
3	V.K.Saxena and C.D.Vashist, Cost Accounting, Sultan Chand publications, New Delhi
4	Murthy A &Gurusamy S, Cost Accounting, Vijay Nicole Imprints Pvt. Ltd. Chennai
5	Prasad.N.K and Prasad.V.K, Cost Accounting, Book Syndicate, Kolkata

**NOTE: Latest Edition of Text books May be Used**

**Web References**

- 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>

**Mapping with Programme Outcomes And Programme Specific Outcomes**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	2	3	3	1	3	3	3	2	3	2	2
<b>CO2</b>	2	3	1	2	2	2	3	2	2	3	2
<b>CO3</b>	1	2	3	3	3	2	2	2	3	2	2
<b>CO4</b>	3	2	2	3	2	3	2	2	3	2	2
<b>CO5</b>	3	3	3	3	3	3	3	3	3	3	3

**3 – Strong, 2- Medium, 1- Low**

**B.COM ,Computer Applications**  
**Third Year** **Core X** **Semester V**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCT510	BANKING LAW AND PRACTICE	CORE X	5	-	-	-	4	5	25	75	100

### Learning Objectives

1	To help the students understand various provision of Banking Regulation Act 1949
2	To trace the evolution of central bank concept and prevalent central banking system
3	To throw light on operations of Banks
4	To understand how Commercial Banks operates
5	To explore practical banking

### COURSE CONTENT

#### Unit1:Introduction to Banking

(15Hrs)

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.

#### Unit2:RBI

(15Hrs)

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

#### Unit3:BankAccount

(15Hrs)

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- securities of lending-Factors influencing bank lending – Negotiable Instruments –Meaning – Characteristics-Types. Crossing –Definition –Objectives-Crossing and negotiability-Consequences of Crossing.

**Unit4:Endorsement****(15Hrs)**

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-Dishonoring 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 section 131-Collecting bankers' duty.

**Unit5:E-Banking****(15Hrs)**

Meaning-Services-e-banking and financial services- 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- Chakravarthy committee 1985- Narasimham Committee I &II Prudential norms capital adequacy norms- classification of assets & provisions.

**Note: Question Paper shall cover 100% Theory**

**Course Outcome**

**At the end of the course students would be able to**

CO No	CO Statement	Knowledge Level
CO1	Aware of various provision of Banking Regulation Act 1949 applicable to banking companies including cooperative banks	K1
CO2	Analyse the evolution of Central Banking concept and prevalent Central Banking system in India and their roles and function	K4
CO3	Gain knowledge about the Central Bank in India, its formation, nationalizing its organization structure, role of bank to government	K2
CO4	Evaluate the role of capital fund of commercial banks, objectives and process of Asset Securitization etc	K5
CO5	Define the practical banking systems relationship of bankers and customers, crossing of cheques, endorsement etc.	K4
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create		



**Books for Study**

1	Gurusamy S, Banking Theory: Law and Practice, Vijay Nicole Publication, Chennai
2	Muraleedharan, Modern Banking: Theory and Practice, Prentice Hall 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, New Delhi

**NOTE: Latest Edition of Text books May be Used****Books for Reference**

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 Text books May be Used****Web References**

1. <https://www.rbi.org.in/>
2. <https://businessjargons.com/e-banking.html>
3. <https://www.wallstreetmojo.com/endorsement/>

**Mapping with Programme Outcomes And Programme-Specific Outcomes**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
CO1	3	3	3	3	1	3	3	2	3	2	2
CO2	3	3	3	2	2	2	3	2	2	3	2
CO3	3	2	3	3	3	2	2	2	3	2	1
CO4	3	2	2	3	2	3	2	2	3	2	2
CO5	3	3	3	3	1	3	3	3	3	3	3

**3 – Strong, 2- Medium, 1- Low**

**B.COM ,Computer Applications**  
**Third Year CORE XI**

**Semester V**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCT511	INCOME TAX LAW AND PRACTICE I	CORE XI	5	-	-	-	4	5	25	75	100
Learning Objectives											
1	To understand the basic concepts & definitions under the Income Tax Act,1961.										
2	To compute the residential status of an assessee and the incidence of tax.										
3	To compute income under the head salaries										
4	To learn the concepts of Annual value, associated deductions and the calculation of income from House property.										
5	To compute the income from Business & Profession considering its basic principles & specific dis allowances.										
COURSE CONTENT											
UNIT 1: Introduction to Income Tax (15Hrs) 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 Section 10.											
UNIT 2: Residential Status (15Hrs) 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.											
UNIT 3: Income from Salary (15Hrs) Computation of Salary Income – Features of Salary – Allowances – Types of Allowances - Perquisites – Kinds of Perquisites –Types of Provident Fund - Gratuity – Pension – Commutation of Pension – Deduction of Salary - Profits in Lieu of Salary.											
UNIT 4: Income from House Property (15Hrs) Income from House Property –Basis of Charge – Annual Value –Gross Annual Value, Net Annual Value of Let-out Property, Self– Occupied Property–Amenities–Deductions.											
UNIT 5: Profits and Gains from Business or Profession (15Hrs) Income from Business or Profession – Allowable Expenses – Not Allowable Expenses - General Deductions – Provisions Relating to Depreciation – Deemed Business Profits - 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.											

**Note: Question Paper shall cover 20% Theory & 80% Problems**

**COURSE OUTCOMES****At the end of the course students would be able to**

CO No	CO Statement	Knowledge Level
CO1	Demonstrate the understanding of the basic concepts and definitions under the Income Tax Act.	<b>K2</b>
CO2	Assess the residential status of an assessee & the incidence of tax.	<b>K3</b>
CO3	Compute income of an individual under the head salaries.	<b>K4</b>
CO4	Ability to compute income from house property.	<b>K1</b>
CO5	Evaluate income from a business carried on or from the practice of a Profession.	<b>K5</b>
<b>K1</b> - Remember; <b>K2</b> - Understand; <b>K3</b> - Apply; <b>K4</b> - Analyze; <b>K5</b> - Evaluate; <b>K6</b> – Create		

**Books for Study**

1	.P. Gaur, Narang, Puja Gaur and Rajeev Puri - Income Tax Law and Practice, Kalyani Publishers, New Delhi.
2	V 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.

**NOTE: Latest Edition of Text books May be Used****Books for Reference**

1	Hariharan N, Income Tax Law & Practice, Vijay Nicole Imprints Pvt. Ltd. Chennai
2	Bhagwati Prasad, Income Tax Law and Practice, Vishwa Prakashan. New Delhi.
3	Vinod K. Singhania, Students Guide to Income Tax., U.K. Bhargava Taxman.
4	Dr. Vinod K Singhania, Dr. Monica Singhania, Taxmann's Students' Guide to Income Tax, New Delhi.
5	Mittal Preethi Rani and Bansal Anshika, Income Tax Law and Practice, Sultan & Chand Sons, New Delhi.

**NOTE: Latest Edition of Text books May be Used****Web References**

1	<a href="https://cleartax.in/s/residential-status/">https://cleartax.in/s/residential-status/</a>
2	<a href="https://www.legalraasta.com/itr/income-from-salary/">https://www.legalraasta.com/itr/income-from-salary/</a>
3	<a href="https://taxguru.in/income-tax/income-house-properties.html">https://taxguru.in/income-tax/income-house-properties.html</a>

**Mapping with Programme Outcomes and Programme-Specific Outcomes**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	3	3	3	3	3	2	3	2	3	2	2
<b>CO2</b>	3	3	2	2	2	2	3	2	2	3	2
<b>CO3</b>	1	2	2	3	3	2	2	2	3	2	1
<b>CO4</b>	2	2	2	3	2	3	2	2	3	2	2
<b>CO5</b>	3	3	3	3	1	3	3	3	3	3	3

**3 – Strong, 2- Medium, 1- Low**

Third Year

B.COM ,Computer Applications  
CORE XII

Semester V

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCT512	PROJECT WITH VIVA	CORE	5	-	-	-	4	-	25	75	100

**B.COM ,Computer Applications**  
**DISCIPLINE SPECIFIC ELECTIVE -V**

**Third Year** **Semester V**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CCE55A</b>	<b>FINANCIALMANAGEMENT</b>	<b>DSE V</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3</b>	<b>3</b>	<b>25</b>	<b>75</b>	<b>100</b>

**Learning Objectives**

1	To introduce the concept of financial management.
2	To learn the capital structure theories.
3	To gain knowledge about techniques in capital budgeting
4	To learn about dividend payment models.
5	To understand the needs and calculation of working capital in an organization.

**COURSE CONTENT**

<b>Unit1:Introduction</b>	<b>(9Hrs)</b>
Meaning and Objectives of Financial Management – Functions of Financial Management. Finance - Sources of Financing-Role of Financial Manager in Financial Management- Financial Goals-Profit maximization Vs. Wealth Maximization – Components of Financial Management.	
<b>Unit2:Financial Decision</b>	<b>(9Hrs)</b>
Capital Structure – Definition - Meaning- Theories- Factors determining Capital Structure – Various approaches of Capital structure - Cost of Capital – Meaning - Methods - Cost of Equity Capital – Cost of Preference Capital – Cost of Debt – Cost of Retained Earnings – Weighted Average (or) Composite Cost of Capital (WACC) Leverage – Concept – Operating and Financial Leverage on EPS.	
<b>Unit3:Investment Decision</b>	<b>(9Hrs)</b>
Capital Budgeting - Meaning - Process – Cash Flow Estimation- Capital Budgeting Appraisal Methods: Traditional Methods - Payback Period – Accounting Rate of Return (ARR). Discounted Cash-flow Methods: Net Present Value (NPV) – Net Terminal Value - Internal Rate of Return – Profitability Index	
<b>Unit4:Dividend Decision</b>	<b>(9Hrs)</b>
Meaning – Dividend Policies – Factors Affecting Dividend Payment – Provisions on Dividend Payment in Company Law – Dividend Models - Walter’s Model - Gordon’s Model – M&M Model.	

**Unit5:Working Capital Decision****(9Hrs)**

Working Capital - Meaning and Importance – Factors Influencing Working Capital – Determining -Working Capital Operating Cycle - Management of Current Assets: Inventories, Accounts Receivables and Cash.

**Note: Question Paper shall cover 40% Theory & 60% Problems**

**COURSE OUTCOMES**

CO No	CO Statement	Knowledge Level
1	Recall the concepts in financial management.	<b>K1</b>
2	Apply the various capital structure theories.	<b>K3</b>
3	Apply capital budgeting techniques to evaluate investment proposals.	<b>K3</b>
4	Determine dividend pay-outs.	<b>K2</b>
5	Estimate the working capital of an organization.	<b>K5</b>
<b>K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create</b>		

**Books for Study**

1	R.K. Sharma, Shashi K Gupta, Financial Management, Kalyani Publications, New Delhi.
2	M.Y. Khan and P.K.Jain, Financial Management, McGraw Hill Education, Noida.
3	I.M. Pandey, Financial Management, Vikas Publications, Noida.
4	Dr.S.N. Maheshwari, Elements of Financial Management, Sultan Chand & Sons, New Delhi.
5	Dr.Kulkarni and Dr. Sathya Prasad, Financial Management, Himalaya Publishing House, Mumbai.

**NOTE: Latest Edition of Text books May be Used**

**Books for Reference**

1	Prasana Chandra, Financial Management, Tata McGraw Hill, NewDelhi.
2	IM. Pandey, Financial Management, Vikas Publishing, Noida
3	Khan & Jain, Financial Management, Sultan Chand & Sons, New Delhi.
4	A.Murthy, Financial Management, ,Margham Publications, Chennai
5	J. Srinivasan and P. Periyasamy, Financial Management, Vijay Nicole Publishers, Chennai.

**NOTE: Latest Edition of Text books May be Used**

**Web References**

1	<a href="https://efinancemanagement.com/financial-management/types-of-financial-decisions">https://efinancemanagement.com/financial-management/types-of-financial-decisions</a>
2	<a href="https://efinancemanagement.com/dividend-decisions">https://efinancemanagement.com/dividend-decisions</a>
3	<a href="https://www.investopedia.com/terms/w/workingcapital.asp">https://www.investopedia.com/terms/w/workingcapital.asp</a>

### Mapping with Programme Outcomes and Programme Specific Outcomes

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	3	1	3	3	3	2	3	2	3	2	2
<b>CO2</b>	3	3	2	2	2	2	3	2	2	3	2
<b>CO3</b>	3	2	2	3	3	2	2	2	3	2	3
<b>CO4</b>	3	2	2	3	2	3	2	2	3	2	2
<b>CO5</b>	3	3	3	3	3	3	3	3	3	3	3

**3 – Strong, 2- Medium, 1- Low**



**B.COM ,Computer Applications**  
**Third Year                      DISCIPLINE SPECIFIC ELECIIVE -V                      Semester V**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCE55B	INDIRECT TAXATION	DSE V	3	-	-	-	3	3	25	75	100

**Learning Objectives**

1	To get introduced to indirect taxes
2	To have an overview of Indirect taxes
3	To be familiar the CGST and IGST Act
4	To learn procedures under GST
5	To gain knowledge about Customs Duty.

**COURSE CONTENT**

**Unit 1: Introduction to Indirect Tax**

**(9Hrs)**

Concept and Features of Indirect Taxes - Difference between Direct and Indirect Taxes – Special Feature of Indirect Tax Levies – Contribution to Government Revenues – Role of Indirect Taxation – Merits and Demerits of Indirect Taxation – Reforms in Indirect Taxation.

**Unit 2: An Overview of Goods & Service Tax (GST)**

**(9Hrs)**

Introduction of Goods and Service Tax in India–History of GST in India –Constitutional Amendment under Pre–Goods and Service Tax Regime and Transitional Provisions - Goods and Service Tax: Concepts, Meaning, Significance, Dual GST, Features and Benefits. GST Common Portal – Taxes and Duties not Subsumed in GST – Rates of GST in India.

**Unit 3: CGST ACT 2017 & IGST Act**

**(9Hrs)**

Supply – Meaning – Classification – Time of Supply – Valuation – Registration – Voluntary – Compulsory – Input Tax Credit – Eligibility – Reversal – Reverse charge Mechanism – E–Way Bill Returns – IGST Act - Export and Import of Goods and Services– Inter State Vs Intra State Supply – Place of Supply. Role of GSTN in Implementation of GST– Anti Profiteering Rules – Doctrine of Unjust Enrichment– Challenges in Implementation of GST

**Unit 4: Procedures under GST**

**(9Hrs)**

Registration under GST Law, Tax Invoice Credit and Debit Notes, Different GST Returns, Electronic Liability Ledger, Electronic Credit Ledger, Electronic Cash Ledger, Different Assessment under GST, Interest Applicable under GST (Period), Penalty under GST, Various Provisions Regarding E-

way Bill in GST, Mechanism of Tax Deducted at Source (TDS) and Tax Collected at Source (TCS), Audit under GST.

### Unit 5: Customs Duty 1962

(9Hrs)

Custom Duty: Concepts; Territorial Waters - High Seas - Levy of Customs Duty, Types of Custom Duties – Valuation - Baggage Rules & Exemptions.

**Note: Question Paper shall cover 40% Theory & 60% Problems**

### COURSE OUTCOMES

At the end of the course students would be able to

CO No	CO Statement	Knowledge Level
CO1	Acquaintance with Indirect tax laws	K1
CO2	Exposed to the overview of GST.	K3
CO3	Apply provisions of CGST and IGST	K3
CO4	Summarise procedures of GST	K1
CO5	Discuss aspects of Customs Duty in India	K5

**K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create

### Books for Study

1	Vinod K Singhania, Indirect Taxes, Taxman's Publications, New Delhi
2	Dr. H.C. Mehrotra & Prof .V.P Agarwal, Goods and Services Tax (GST), Sahitya Bhawan Publications, Agra.
3	Dr. H.C. Mehrotra & Prof .V.P Agarwal, Goods and Services Tax (GST), Sahitya Bhawan Publications, Agra
4	Rajat Mohan, Goods & Services Tax, Bharat Law Publications House, New Delhi
5	CA. Pushpendra Sisodia, Indirect Tax Laws, Bharat Publications, New Delhi.

**NOTE: Latest Edition of Text books May be Used**

### Books for Reference

1	V.S.Datey, All About GST, Taxmann Publications, New Delhi.
2	T.S. Reddy&Y.Hariprasad Reddy, Business Taxation, Margham Publications, Chennai.
3	Study Material on GST - The Institute of Chartered Accountants of India /The Institute of Cost Accountants of India, Chennai.
4	Guidance material on GST issued by CBIC, Government of India.

**NOTE: Latest Edition of Text books May be Used**

### Web References

1	<a href="https://iimskills.com/goods-and-services-tax/#:~:text=GST-%20an%20acronym%20for%20Goods%20and%20Services%20Tax-,etc.%2C%20to%20stand%20as%20a%20unified%20tax%20regime.">https://iimskills.com/goods-and-services-tax/#:~:text=GST-%20an%20acronym%20for%20Goods%20and%20Services%20Tax-,etc.%2C%20to%20stand%20as%20a%20unified%20tax%20regime.</a>
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2	<a href="https://tax2win.in/guide/gst-procedure">https://tax2win.in/guide/gst-procedure</a>
3	<a href="https://www.cbic.gov.in/htdocs-cbec/customs/cs-act/cs-act-ch9">https://www.cbic.gov.in/htdocs-cbec/customs/cs-act/cs-act-ch9</a>

### Mapping with Programme Outcomes and Programme Specific Outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
<b>CO1</b>	3	3	3	3	3	2	3	2	3	3	2
<b>CO2</b>	3	3	2	2	2	2	3	2	2	3	2
<b>CO3</b>	3	3	2	3	3	2	2	2	3	3	3
<b>CO4</b>	3	3	2	3	2	3	2	2	3	3	2
<b>CO5</b>	3	3	3	3	3	3	3	3	3	3	3

3 – Strong, 2- Medium, 1- Low

Third Year

**B.COM ,Computer Applications  
DISCIPLINE SPECIFIC ELECIIVE -VI**

Semester V

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCE56A	SOFTWARE ENGINEERING AND UML LAB	DSE VI	2	-	1	-	3	3	25	75	100

**Learning Objectives**

1	To introduce the software development life cycles
2	To introduce concepts related to structured and objected oriented analysis & design co
3	To provide an insight into UML and software testing techniques

**COURSE CONTENT**

<b>Unit 1: Introduction</b> Introduction – Evolution – Software Development projects – Emergence of Software Engineering. Software Life cycle models – Waterfall model – Rapid Application Development – Agile Model – Spiral Model	<b>(9Hrs)</b>
<b>Unit 2: Requirement Analysis</b> Requirement Analysis and Specification – Gathering and Analysis – SRS – Formal System Specification	<b>(9Hrs)</b>
<b>Unit 3: Software Design</b> Software Design – Overview – Characteristics – Cohesion & Coupling – Layered design – Approaches Function Oriented Design – Structured Analysis – DFD – Structured Design – Detailed design	<b>(9Hrs)</b>
<b>Unit 4: Object Modeling</b> Object Modeling using UML – OO concepts – UML – Diagrams – Use case, Class, Interaction, Activity, State Chart – Postscript	<b>(9Hrs)</b>
<b>Unit 5: Coding &amp; Testing</b> Coding & Testing – coding – Review – Documentation – Testing – Black-box, White-box, Integration, OO Testing, Smoke testing.	<b>(9Hrs)</b>

**Note: Question Paper shall cover 100% Practical**

**COURSE OUTCOMES**

At the end of the course students would be able to

CO No	CO Statement	Knowledge Level
CO1	The students should be able to specify software requirements, design the software using tools	K3
CO2	To write test cases using different testing techniques.	K1

**Books for Study**

1	Rajib Mall, “Fundamentals of Software Engineering”, PHI 2018, 5th Edition.
2	Roger S. Pressman, “Software Engineering - A Practitioner’s Approach”, McGraw Hill 2010, 7th Edition.

**NOTE: Latest Edition of Text books May be Used****Books for Reference**

1	Pankaj Jalote, “An Integrated Approach to Software Engineering”, Narosa Publishing House 2011, 3rd Edition.
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**NOTE: Latest Edition of Text books May be Used****Web Resources**

1.	NPTEL online course – Software Engineering - <a href="https://nptel.ac.in/courses/106105182/">https://nptel.ac.in/courses/106105182/</a>
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**Mapping with Programme Outcomes and Programme Specific Outcomes**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
CO1	3	3	3	3	3	2	3	2	3	3	2
CO2	3	3	2	2	2	2	3	2	2	3	2
CO3	3	3	2	3	3	2	2	2	3	3	3
CO4	3	3	2	3	2	3	2	2	3	3	2
CO5	3	3	3	3	3	3	3	3	3	3	3

**3 – Strong, 2- Medium, 1- Low**

UML Lab Common for both Electives in semester V	Core - Core -S5EC1/2L
Credits 4	Lecture Hours:5 per week

**Learning Objectives:** (for teachers: what they have to do in the class/lab/field)

- To get familiarized to the usage of UML tool kit.
- To understand the requirements of the software and to map them appropriately to subsequent phases of the software development
- To develop the ability to verify and validate their designs

**Course Outcomes:** (for students: To know what they are going to learn)

CO1: Students must be able to analyse and design the problem at hand.

CO2: Students should be able to use UML tools for the designing the software and test the correctness and soundness of their software through testing tools.

**LIST OF PRACTICALS**

Using UML tools produce analysis and design models for

- Library Management System
- Automatic Teller Machine
- Student Information Management
- Matrimony Service
- Stock Management System

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC – CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC – CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CCE56B</b>	<b>OBJECT ORIENTED ANALYSIS AND DESIGN AND UML LAB</b>	<b>DSE VI</b>	<b>2</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>3</b>	<b>3</b>	<b>25</b>	<b>75</b>	<b>100</b>

**Learning Objectives**

1	To make aware of the software requirements, design the software using tools
2	To be acquainted with the writing of test cases using different testing techniques.

**COURSE CONTENTS**

<b>Unit 1: Object Orientation</b> (9Hrs) Object Orientation – System development – Review of objects - inheritance – Object relationship – Dynamic binding – OOSD life cycle – Process – Analysis – Design – prototyping – Implementation – Testing- Overview of Methodologies
<b>Unit2:Methodology</b> (9Hrs) Rumbaugh methodology, OMT – Booch methodology, Jacobson methodology – patterns – Unified approach – UML – Class diagram – Dynamic modelling.
<b>Unit 3: UML</b> (9Hrs) Introduction - UML – Meta model - Analysis and design - more information. Outline Development Process: Overview of the process-Inception - Elaboration-construction- refactoring patterns transmission-iterative development -use cases.
<b>Unit 4: OO Design</b> (9Hrs) OO Design axioms – Class visibility – refining attributes – Methods –Access layer – OODBMS – Table – class mapping view layer
<b>Unit 5: Interaction diagram</b> (9Hrs) Interaction diagram-package diagram-state diagram-activity diagram-deployment diagram - UML and programming

**Note: Question paper will cover 100% Practical**

**COURSE OUTCOMES**

At the end of the course students would be able to

CO No	CO Statement	Knowledge Level
CO1	The students should be able to specify software requirements, design the software using tools	K3
CO2	To write test cases using different testing techniques.	K1

**Books for Study**

1	Ali Bahrami, "Object Oriented System Development", McGraw-Hill International Edition 2017.
2	Martin Fowler, Kendall Scott, "UML Distilled", Addison Wesley
3	Eriksson, "UML Tool Kit", Addison Wesley

**NOTE: Latest Edition of Text books May be Used****Books for Reference**

1	Booch G., "Object oriented analysis and design", Addison- Wesley Publishig Company 3 rd edition
2	Rambaugh J, Blaha.M. Premeriani, W., Eddy F and Loresen W., "ObjectOrientedModeling and Design", PHI

**NOTE: Latest Edition of Text books May be Used****Web References**

1	<a href="https://www.studocu.com/in/document/university-of-madras/arts-and-science/object-oriented-analysis-and-design/26447498">https://www.studocu.com/in/document/university-of-madras/arts-and-science/object-oriented-analysis-and-design/26447498</a>
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**Mapping with Programme Outcomes and Programme-Specific Outcomes**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
CO1	2	3	3	3	3	2	3	2	3	3	2
CO2	2	3	2	2	2	2	3	2	2	3	2
CO3	2	3	2	3	3	2	2	2	3	3	3
CO4	3	3	2	3	2	3	2	2	3	3	2
CO5	3	3	3	3	3	3	3	3	3	3	3

**3 – Strong, 2- Medium, 1- Low**



<b>UML Lab</b> <b>Common for both Electives in semester V</b>	<b>Core - Core -S5EC1/2L</b>
<b>Credits 4</b>	<b>Lecture Hours:5 per week</b>
<b>Learning Objectives:</b> (for teachers: what they have to do in the class/lab/field) <ul style="list-style-type: none"> <li>To get familiarized to the usage of UML tool kit.</li> <li>To understand the requirements of the software and to map them appropriately to subsequent phases of the software development</li> <li>To develop the ability to verify and validate their designs</li> </ul>	
<b>Course Outcomes:</b> (for students: To know what they are going to learn) <p>CO1: Students must be able to analyse and design the problem at hand.</p> <p>CO2: Students should be able to use UML tools for the designing the software and test the correctness and soundness of their software through testing tools.</p>	

<b>LIST OF PRACTICALS</b>
Using UML tools produce analysis and design models for a. Library Management System b. Automatic Teller Machine c. Student Information Management d. Matrimony Service e. Stock Management System

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC – CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CCEV1</b>	<b>VALUE EDUCATION</b>	<b>VAE 1</b>	<b>2</b>	<b>-</b>		<b>-</b>	<b>2</b>	<b>2</b>	<b>25</b>	<b>75</b>	<b>100</b>

**Learning Objectives**

1	Value education will enable the students to identify the personal and social values through moral learning and support system from the environment
2	Students will develop personal values
3	To prepare students to develop the art of community value
4	To train students towards developing biological values and development
5	To enable students to learn and identify the feminist values

**COURSE CONTENT****Unit 1: Introduction to Value Education****(6Hrs)**

Values (Valuation)- Explanation- Problem of Values-Old, New Values; Conflicts-Direct Value; Opposite Value-Adhering to Direct Values; Decaying of values- Individuals/ Community/ Impact of Decaying Values of Culture-Ways to Recover- the Impact of Decaying Values as a Culture-Values found in Tamil Literature- Concept of Individual values and Societal Values in “Thirukkural”.

**Unit2:PersonalValues****(6Hrs)**

Personal Values- Human Advancement-Individual and Cognitive Freedom - New Economic Predation-Production and Sharing – Globalization-Liberalization-Intellectual Property Rights– Patent-Expropriation-World Trade Organization-Pricing of Drugs- Resourceful Life and Social Justice-(Peace) (Prosperity, Social, Justice)-Poverty Alleviation and Sustainability Project in India- Peace and Hygiene

**Unit 3: Community Values****(6Hrs)**

Community Values -Plural Community- Unity in Diversity-Social Responsibilities of Individuals-consumer rights-consumer awareness-consumer protection act-Healthy Responsibilities-Social Responsibility-Dealing with the Media with Dignity-Being Ambitious- Admiration of Psychological Values-Self-esteem-self-Recognition-Emotional Cognitive Ability-Spiritual Values and Spiritual Self-sufficiency

**Unit 4: Biological****(6Hrs)**

Biological Values-Biology - Medical Ethics - Acceptance - Reliability - Improper Medicine - Transplantation - Life Extension - Euthanasia - Medical Cruelty - Human Studies - Reproductive Science Rights - Contraception - Abortion - Artificial Fertility - Surrogacy- Genetically modified

foods – Science of Humanity - Biological warfare - Biological weapons against agriculture - Nanotechnology - Ways to recover from drug addiction - Animal use. Slave - Child labor

**Unit 5: Feminist Values****(6Hrs)**

Feminist Values - Gender - Obstacles to Women's Empowerment - Obstruction to Women's Development - Violence Against Women - Abortion - Infanticide - Sexual Harassment - Sexual Violence - Harassment at Workplace - Domestic Violence - Women Stigma - Women Development - Government laws and programs for Women

**Note: Question Paper shall cover 100% Theory Textbooks**

**COURSE OUTCOMES**

**At the end of the course students would be able to**

CO No	CO Statement	Knowledge Level
1	Explain the value system and importance of having value education	<b>K1</b>
2	Cultivating the personal value habits and learning out of them	<b>K2</b>
3	Identifying the community values and development of community	<b>K4</b>
4	Identifying the biological values and taking care of them	<b>K4</b>
5	Gender relevance- Importance of Feminist values and empowerment of women	<b>K5</b>
<b>K1</b> - Remember; <b>K2</b> - Understand; <b>K3</b> - Apply; <b>K4</b> - Analyze; <b>K5</b> - Evaluate; <b>K6</b> – Create		

**Books for Study**

<b>1</b>	Ananda Valli Mahadevan Jaya Kothaipillai (Editors) - Feminism, 2004, Published by Mother Teresa Women's University, Kodaikanal
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**Books for Reference**

<b>1</b>	Ramathal, K.M. and Others - Protection of Women from Domestic Violence Act, 2005, Brochure. <b>மு.பி.</b> 2007. Published by Tamil Nadu State Women's Commission, Chennai
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**NOTE: Latest Edition of Text books May be Used**

**Web References**

<b>1</b>	<a href="https://www.valuesbasededucation.com">https://www.valuesbasededucation.com</a>
<b>2</b>	<a href="https://livingvalues.net">https://livingvalues.net</a>
<b>3</b>	<a href="https://sim.edu.in">https://sim.edu.in</a>

**Mapping with Programme Outcomes and Programme Specific Outcomes**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
<b>CO1</b>	2	3	3	3	3	2	3	2	3	3	2
<b>CO2</b>	2	3	2	2	2	2	3	2	2	3	2
<b>CO3</b>	2	3	2	3	3	2	2	2	3	3	3
<b>CO4</b>	3	3	2	3	2	3	2	2	3	3	2
<b>CO5</b>	3	3	3	3	3	3	3	3	3	3	3

**3 – Strong, 2- Medium, 1- Low**

**Third Year**                      **B.COM ,Computer Applications**

**Semester V**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCNM54	NAAN MUDHALVAN		2	-		-	2	2	25	75	100

**SEMESTER-VI****B.COM ,Computer Applications****Third Year****CORE XIII****Semester VI**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CCT613</b>	<b>COST ACCOUNTING II</b>	<b>CORE XIII</b>	<b>6</b>			<b>-</b>	<b>4</b>	<b>6</b>	<b>25</b>	<b>75</b>	<b>100</b>

**Learning Objectives**

1	To understand the standards in Cost Accounting
2	To know the concepts of contract costing
3	To be familiar with the concept of process costing
4	To learn about operation costing.
5	To gain insights into standard costing.

**COURSE CONTENT****Unit 1: Cost Accounting Standards****(18Hrs)**

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.

**Unit 2: Contract Costing****(18Hrs)**

Definition - Features of Contract Costing - Calculation of Profit on Contracts – Cost Plus Contract- Contract Costing and Job Costing - A Comparison -Preparation of Contract A/c.

**Unit 3: Process Costing****(18Hrs)**

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.

**Unit4:Operation Costing****(18Hrs)**

Operation Costing – Meaning – Preparation of Operating Cost Sheet – Transport Costing – Power Supply Costing–Hospital Costing–Simple Problems.

**Unit5:Standard Costing****(18Hrs)**

Definition – Objectives – Advantages – Standard Cost and Estimated Cost – Installation of Standard Costing – Variance Analysis – Material, Labour, Overhead, and Sales Variances – Calculation of Variances.

**Note: Question Paper shall cover 20% Theory & 80% Problems**

**COURSE OUTCOMES**

**At the end of the course students would be able to**

CO No	CO Statement	Knowledge Level
1	Remember and recall standards in cost accounting	<b>K1</b>
2	Apply the knowledge in contract costing	<b>K3</b>
3	Analyze and assimilate concepts in process costing	<b>K4</b>
4	Understand various bases of classification cost and prepare operating cost statement.	<b>K2</b>
5	Set up standards and analyse variances.	<b>K6</b>
<b>K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create</b>		

**Books for study**

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,

**Books for Reference**

5	S.P. Iyengar, Cost Accounting, Sultan Chand Publications, New Delhi.
1	Polimeni, Cost Accounting: Concepts and Applications for Managerial Decision Making, New York, McGraw–Hill, Noida.
2	Jain S.P. and Narang K.L. Cost Accounting, Kalyani Publishers, New Delhi.
3	V.K.Saxena and C.D. Vashist, Cost Accounting, Sultan Chand publications, New Delhi.
4	Murthy A & Gurusamy S, Cost Accounting, Vijay Nicole Imprints Pvt. Ltd. Chennai
5	Prasad. N.K and Prasad.V.K, Cost Accounting, Book Syndicate, Bangladesh.

**NOTE: Latest Edition of Textbooks May be Used**

**Web References**

1. <https://www.economicdiscussion.net/cost-accounting/contract-costing/32597>
2. <https://www.wallstreetmojo.com/process-costing/>
3. <https://www.accountingnotes.net/cost-accounting/operating-costing/17755>

**Mapping with Programme Outcomes and Programme Specific Outcomes**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
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<b>CO2</b>	3	3	2	2	2	2	3	2	2	3	2
<b>CO3</b>	3	3	2	3	3	2	2	2	3	3	3
<b>CO4</b>	3	3	2	3	2	3	2	2	3	3	2
<b>CO5</b>	3	3	3	3	3	3	3	3	3	3	3

**3 – Strong, 2- Medium, 1- Low**

**Third Year**  
**B.COM ,Computer Applications**  
**CORE XIV**

**Semester VI**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CCT614</b>	<b>MANAGEMENT ACCOUNTING</b>	<b>CORE XIV</b>	<b>6</b>			<b>-</b>	<b>4</b>	<b>6</b>	<b>25</b>	<b>75</b>	<b>100</b>

**Learning Objectives**

1	To understand basics management accounting
2	To know the aspects of Financial Statement Analysis
3	To familiarize with fund flow and cash flow analysis
4	To learn about budgetary control
5	To gain insights into marginal costing

**COURSE CONTENT**

**Unit 1: Introduction to Management Accounting (18Hrs)**

Management Accounting – Meaning – Scope – Importance- Limitations - Management Accounting Vs Cost Accounting – Management Accounting Vs Financial Accounting.

**Unit2:Financial Statement Analysis (18Hrs)**

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.

**Unit 3: Fund Flow Analysis & Cash Flow Analysis (18Hrs)**

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.

**Unit 4: Budgetary Control (18Hrs)**

Budgetary Control: Meaning – Preparation of Various Budgets – Cash Budget - Flexible Budget– Production Budget – Sales Budget.

**Unit5:MarginalCosting (18Hrs)**



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.

**Note: Question Paper shall cover 20% Theory  
80% Problems**

### COURSE OUTCOMES

CO No	CO STATEMENT	Knowledge Level
1	Remember and recall basics in management accounting	<b>K1</b>
2	Apply the knowledge of preparation of Financial Statements	<b>K3</b>
3	Analyse the concepts relating to fund flow and cash flow	<b>K4</b>
4	Evaluate techniques of budgetary control	<b>K5</b>
5	Formulate criteria for decision making using principles of marginal costing.	<b>K6</b>
<b>K1</b> - Remember; <b>K2</b> - Understand; <b>K3</b> - Apply; <b>K4</b> - Analyze; <b>K5</b> - Evaluate; <b>K6</b> – Create		

### Book for Study

1	Jain S.P. & Narang K.L. (2018) Cost and Management Accounting, Kalyani Publications,
2	Rds. Maheswari, Cost and Management Accounting, Sultan Chand Sons Publications, New Delhi.
3	Sharma and Shashi K. Gupta, Management Accounting, Kalyani Publishers, Chennai.
4	Jenitra L Mervin ,Daslton L Cecil, Management Accounting, Lerantec Press, Chennai.
5	T.S.Reddy& Y. Hari Prasad Reddy, Management Accounting, Margham Publications, Chennai.

### Books for Reference

1	Chadwick – The Essence of Management Accounting, Financial Times Publications, England.
2	Charles T.Horngren and Gary N. Sundem–Introduction to Management Accounting, Pearson, Chennai.
3	Murthy A and Gurusamy S ,Management Accounting- Theory &Practice, Vijay Nicole Imprints Pvt. Ltd .Chennai.
4	Hansen - Mowen, Cost Management Accounting and Control, South Western College, India.
5	N.P. Srinivasan, Management Accounting, New Age publishers, Chennai.

**NOTE: Latest Edition of Textbooks May be Used**

### Web References

1	<a href="https://www.accountingnotes.net/companies/fund-flow-analysis/fund-flow-analysis-9">https://www.accountingnotes.net/companies/fund-flow-analysis/fund-flow-analysis-9</a>
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	accounting/13300
<b>2</b>	<a href="https://accountingshare.com/budgetary-control/">https://accountingshare.com/budgetary-control/</a>
<b>3</b>	<a href="https://www.investopedia.com/terms/m/marginalcostofproduction.asp">https://www.investopedia.com/terms/m/marginalcostofproduction.asp</a>

### Mapping with Programme Outcomes and Programme Specific Outcomes

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	3	3	3	3	3	2	3	2	3	3	2
<b>CO2</b>	3	3	2	2	2	2	3	2	2	3	2
<b>CO3</b>	3	3	2	3	3	2	2	2	3	3	3
<b>CO4</b>	3	3	2	3	2	3	2	2	3	3	2
<b>CO5</b>	3	3	3	3	3	3	3	3	3	3	3

**3 – Strong, 2- Medium, 1- Low**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CCT615</b>	<b>INCOME TAC LAW AND PRACTICE-II</b>	<b>CORE XV</b>	<b>6</b>			<b>-</b>	<b>4</b>	<b>6</b>	<b>25</b>	<b>75</b>	<b>100</b>

Learning Objectives	
1	To understand provisions relating to capital gains
2	To know the provisions for computation of income from other sources.
3	To familiarize law relating to set off and carry forward of losses and deductions from Gross Total Income
4	To learn about assessment of individuals
5	To gain knowledge about assessment procedures.

COURSE CONTENT	
<b>Unit 1: Capital Gains</b>	<b>(18Hrs)</b>
Capital Gains – Kinds of Capital Assets – Computation of Capital Gains – Exemption under Section 54 , 54B, 54D, 54EC, 54F, 54GA.	
<b>Unit 2: Income From Other Sources</b>	<b>(18Hrs)</b>
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.	
<b>Unit 3: Set Off and Carry Forward of Losses and Deductions From Gross Total Income</b>	<b>(18Hrs)</b>
Provisions for Set-off and Carry Forward of Losses (Simple Problems). Deductions U/S 80C, 80CC, 80CCB, 80CCC, 80CCD, 80 CCE, 80D, 80DD, 80DDB, 80E, 80EE, 80EEA, 80EEB,80G, 80GG, 80GGA, 80TTA, 80TTB, and 80U only.	
<b>Unit 4: Assessment of Individuals</b>	<b>(18Hrs)</b>
Assessment: Meaning and Types, Computation of Total Income and Tax Liability of an Individuals (simple problems in case of Income from salaries, HP and Profits and Gains – computed income may be given).	

**Unit 5: Income Tax Authorities****(18Hrs)**

Administration of Income Tax Act – Income Tax Authorities – Powers of CBDT – Powers of Income – Tax Officers - Procedures for Assessment – Filing of Return – Due Dates of Filing – Voluntary Filing – Return of Loss – Related Return – Defective Return – Signing of Return – Permanent Account Number (PAN)

**Note: Question Paper shall cover 40% Theory & 60% Problems**

**COURSE OUTCOMES**

**At the end of the course students would be able to**

CO No	CO STATEMENT	Knowledge Level
1	Remember and recall provisions on capital gains	<b>K1</b>
2	Apply the knowledge about income from other sources	<b>K3</b>
3	Analyse the set off and carry forward of losses provisions	<b>K4</b>
4	Learn about assessment of individuals	<b>K5</b>
5	Apply procedures learnt about assessment procedures.	<b>K3</b>

**K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create

**Book for Study**

1	V.P.Gaur, Narang, Puja Gaur and 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	Mehrotra H.C, 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.

**Books for Reference**

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	Vinod K. Singhania, Students Guide to Income Tax., U.K. Bharghava Taxman, New Delhi.
4	Dr.Vinod K Singhania, Dr. Monica Singhania, Taxmann's Students' Guide to Income Tax, New Delhi.
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 References	
1.	<a href="https://www.investopedia.com/terms/c/capitalgain.asp">https://www.investopedia.com/terms/c/capitalgain.asp</a>
2.	<a href="https://www.incometaxmanagement.com/Direct-Taxes/AY-2021-22/assessment/1-assessment-of-an-individual.html">https://www.incometaxmanagement.com/Direct-Taxes/AY-2021-22/assessment/1-assessment-of-an-individual.html</a>
3.	<a href="https://www.incometax.gov.in/iec/foportal/">https://www.incometax.gov.in/iec/foportal/</a>

### Mapping with Programme Outcomes and Programme Specific Outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
CO1	3	2	3	3	3	2	3	2	3	3	2
CO2	3	2	2	2	2	2	3	2	2	3	2
CO3	3	2	2	3	3	2	2	2	3	3	3
CO4	3	2	2	3	2	3	2	2	1	3	2
CO5	3	2	3	1	3	3	3	3	3	3	3

3 – Strong, 2- Medium, 1- Low

**B.COM ,Computer Applications**  
**Discipline Specific Elective –VII**

**Third Year** **Semester VI**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CCE67A</b>	<b>ENTREPRENEURIAL DEVELOPMENT</b>	<b>DSE VII</b>	<b>5</b>			<b>-</b>	<b>3</b>	<b>5</b>	<b>25</b>	<b>75</b>	<b>100</b>

**Learning Objectives**

1	To know the meaning and characteristics of entrepreneurship
2	To identify the various business opportunities
3	To understand the Process of setting up an enterprise
4	To gain knowledge in the aspects of legal Compliance of setting up of an enterprise
5	To develop an understanding of the role of MSME in economic growth

**COURSE CONTENT**

**Unit 1: Introduction to Entrepreneur**

**(15Hrs)**

Meaning of Entrepreneurship – Characteristics of Entrepreneurship – Types of Entrepreneurship – Self Employment – Difference between Entrepreneurship and Employment – Meaning of Entrepreneur – Traits – Classification – Functions – Entrepreneurial Scenario in India.

**Unit 2: Design Thinking**

**(15Hrs)**

Idea Generation – Identification of Business Opportunities – Design Thinking Process – Creativity – Invention – Innovation – Differences – Value Addition – Concept and Types – Tools and Techniques of Generating an Idea – Turning Idea into Business Opportunity.

**Unit 3: Setting Up an Enterprise**

**(15Hrs)**

Process of Setting Up an Enterprise – Forms of an Enterprise – Sole Proprietorship – Partnership – Limited Liability Partnership Firm – Joint Stock Company – One Man partnership – Choice of Form of an Enterprise – Feasibility Study – Marketing, Technical, Financial, Commercial and Economical.

**Unit 4: Business Model Canvas and Formulation of Project Report**

**(15Hrs)**

Introduction – Contents of Project Report – Project Description – Market Survey – Fund Requirement – Legal Compliance of Setting Up of an Enterprise – Registration – Source of Funds – Modern Sources of Funds.

**Unit 5: MSME's and Support Institutions**

**(15Hrs)**

Government Schemes and Women Entrepreneurship – Importance of MSME for Economic Growth – MSME – Definition – Role of Government Organizations in Entrepreneurship Development – MSME DI – DIC – Khadi and Village Industries Commission – NSIC – NABARD, SICVI, SFC, SDC, EDII, EPCCB. Industrial Estates – Government Schemes – Prime Minister Employment Generation Programme – Women Entrepreneurship in India.

**Note: Question Paper shall cover 100% Theory**

### Course Outcomes

**At the end of the course students would be able to**

CO.No	CO Statement	Knowledge level
1	Identify the various traits of an entrepreneur	K1
2	Turn ideas into business opportunities	K3
3	Do feasibility study before starting a project	K2
4	Identify the sources of funds for funding a project	K1
5	Develop an understanding about the Government schemes available for women entrepreneurs	K6

**K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create

### Book for Study

1	Jayashree Suresh, (Reprint 2017) Entrepreneurial Development, Margham Publications. Chennai.
2	Dr. C.B. Gupta & Dr. S.S. Khanka (Reprint 2014). Entrepreneurship And Small Business Management, Sultan Chand & Sons, New Delhi.
3	Charantimath Poornima, (Reprint 2014.), Entrepreneurship development-Small, Pearson Education, India.
4	RajShankar, (Reprint 2016), Entrepreneurship Theory and Practice, Vijay Nicole and Imprints Pvt. Ltd, Chennai.
5	Vasant Desai, (Reprint 2017). Dynamics of Entrepreneurial Development & Management Twenty Fourth Edition. Himalaya Publishing House. Mumbai.

### Books for Reference

1	Anilkumar, Poornima, Principles of Entrepreneurial development, Newage publication, Chennai.
2	Dr.A.K.singh, Entrepreneurial development and management, Laxmi publications, Chennai.
3	Dr. R.K. Singal, Entrepreneurial development and management, S.K.Kataria publishers, New Delhi.

**NOTE: Latest Edition of Textbooks May be Used**

<b>Web References</b>	
<b>1</b>	<a href="https://www.interaction-design.org/literature/topics/design-thinking">https://www.interaction-design.org/literature/topics/design-thinking</a>
<b>2</b>	<a href="https://www.bms.co.in/steps-involved-in-setting-up-of-an-enterprise/">https://www.bms.co.in/steps-involved-in-setting-up-of-an-enterprise/</a>
<b>3</b>	<a href="http://www.msme.gov.in/">http://www.msme.gov.in/</a>

### **Mapping with Programme Outcomes and Programme Specific Outcomes**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	3	2	3	3	3	2	2	2	3	3	2
<b>CO2</b>	3	2	2	2	2	2	3	2	2	3	2
<b>CO3</b>	2	2	2	2	3	2	2	2	3	3	3
<b>CO4</b>	3	2	2	3	2	3	2	2	1	3	2
<b>CO5</b>	3	2	3	1	3	3	3	3	3	3	3

**3 – Strong, 2- Medium, 1- Low**



Third Year

**B.COM ,Computer Applications  
Discipline Specific Elective –VII**

Semester VI

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CCE67B</b>	<b>ARTIFICIAL INTELLIGENCE IN BUSINESS</b>	<b>SB</b>	<b>5</b>			<b>-</b>	<b>3</b>	<b>5</b>	<b>25</b>	<b>75</b>	<b>100</b>

**Learning Objectives**

1	To understand the fundamentals of AI technologies, including machine learning, natural language processing, and computer vision.
2	To explore real-world applications of AI in various business domains such as marketing, finance, supply chain management, and human resources.
3	To learn how to collect, preprocess, and analyze data using AI tools and techniques to extract actionable insights.
4	To understand the ethical, legal, and societal implications of AI in business and developing frameworks for responsible AI deployment.
5	To develop AI-driven solutions to business challenges and opportunities

**COURSE CONTENT**
**Unit 1: Introduction To Artificial Intelligence**
**(15Hrs)**

Introduction Artificial Intelligence: Concept, benefits, and scope. Differences between AI, Machine Learning (ML) and Deep Learning (DL) - AI applications, capabilities and competitive advantage; Industry drivers; AI strategy for the enterprise - Considerations for an AI strategy, AI & Startups. Internet of Things (IoT), Introduction to mobile computing and Cloud computing.

**Unit 2:AI Algorithm**
**(15Hrs)**

Ai Led Strategic Interventions Algorithm: New member in the boardroom, Accelerated decision making with real time analytics, AI in operational models in an organisation, AI: future of AI in HR, Talent sciences, Algorithms & Talent Acquisitions (TA), AI & transformation in Finance &Accounting, CFO of tomorrow, Changing role of Chief Information Officer (CIO): Industry 4.0.

**Unit 3: AI In Banking**
**(15Hrs)**

Introduction - Meaning- AI in Banking & Insurance Redefined banking industry – adoption of Analytics, AI powered financial services, Fraud mitigation in banks with AI, Reorienting customer retention, Risk management with AI, AI driven transformation in Insurance, Digital based insurance model.

**Unit 4: AI in Retail****(15Hrs)**

AI in Retail -AI interventions in Retail Outlets. Emergence of smart customers, ad content predictions, Evolution of smart retailers, Omni channel experience, AI in consumer packaged goods, Fluid supply chain transformation with AI. AI-Led marketing transformations, Data to Clusters - Ad content prediction - AI based Ad buy and CPC optimization, AI driven campaign management. AI for Sales: Data to Classes - Insides Sales Rep workflow automation - Improved Lead, Opportunity Ranking and Reminder.

**Unit 5:AI And Technology****(15Hrs)**

Exponential Technologies Beating cyber-attacks with Analytics, AI in automotive industry: driverless cars and drones, IoT Analytics: extracting value and transforming business, Real time streaming analytics, Cryptocurrency Analytics, AI for customer service-data to scores, AI for Portfolio Management, Chatbots, Call center rep automation.

**Note: Question paper will cover 100% Theory**

**Course Outcomes**

**At the end of the course students would be able to**

CO.No	CO Statement	Knowledge level
1	identify how the AI is being leveraged by start-ups as a success tool	<b>K4</b>
2	analyse and interpret the applicability of AI in HR functions	<b>K4</b>
3	explain how algorithms is changing the board room landscape	<b>K6</b>
4	discuss the customer services provided by various banks using AI	<b>K4</b>
5	demonstrate the role of AI in transforming the retail sector	<b>K2</b>

**K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create

**Book for Study**

1	Dhanrajani, S. "AI & Analytics: Accelerating BusinessDecisions." New Jersey: Wiley. (2018).
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**Books for Reference**

1	Russell, S. J., & Norvig, P. "Artificial Intelligence: A ModernApproach", 3rd Edition. NewJersey: Prentice Hall. (2019).
2	Akerkar, R. "Artificial Intelligence for Business". Basingstoke: Springer Nature"(2018).
3	Altemeyer, B. Making the business case for AI in HR: twocase studies. Strategic HR Review,18(2),66-70.Retrieved from <a href="https://www.emerald.com/insight/content/doi/10.1108/SHR-12-2018-0101/full/html">https://www.emerald.com/insight/content/doi/10.1108/SHR-12-2018-0101/full/html</a> (2019)

**Web references**

1	<a href="https://www.geeksforgeeks.org/difference-between-artificial-intelligence-vs-machine-learning-vs-deep-learning/">https://www.geeksforgeeks.org/difference-between-artificial-intelligence-vs-machine-learning-vs-deep-learning/</a>
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2	<a href="https://www.geeksforgeeks.org/artificial-intelligence- an-introduction/">https://www.geeksforgeeks.org/artificial-intelligence- an-introduction/</a>
3	<a href="https://www.javatpoint.com/ai-in-banking">https://www.javatpoint.com/ai-in-banking</a>
4	<a href="https://www.diva- portal.org/smash/get/diva2:1246905/FULLTEXT01.pdf">https://www.diva- portal.org/smash/get/diva2:1246905/FULLTEXT01.pdf</a>
5	<a href="https://www.javatpoint.com/chatbot-vs-conversational-ai">https://www.javatpoint.com/chatbot-vs-conversational-ai</a>
6	<a href="https://www.linkedin.com/pulse/ai-led-strategy-boards-new-counselor-sameer-dhanrajani">https://www.linkedin.com/pulse/ai-led-strategy-boards-new-counselor-sameer-dhanrajani</a>
7	<a href="https://www.gartner.com/smarterwithgartner/the-cios- guide-to-artificial-intelligence">https://www.gartner.com/smarterwithgartner/the-cios- guide-to-artificial-intelligence</a>

### Mapping with Programme Outcomes and Programme Specific Outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3
<b>CO1</b>	3	2	3	3	3	2	2	2	3	3	2
<b>CO2</b>	3	2	2	2	2	2	3	2	2	3	2
<b>CO3</b>	2	2	2	2	3	2	2	2	3	3	3
<b>CO4</b>	3	2	2	3	2	3	2	2	1	3	2
<b>CO5</b>	3	2	3	1	3	3	3	3	3	3	3

**3 – Strong, 2- Medium, 1- Low**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCE68A	R LANGUAGE	DSE VIII	2		3	-	3	5	25	75	100

### Learning Objectives

1	Acquire programming skills in core R Programming
2	Acquire Object-oriented programming skills in R Programming
3	Develop the skill of designing graphical-user interfaces (GUI) in R Programming
4	Acquire R Programming skills to move into specific branches

### List of Exercises

1. Data In R
2. Reading And Writing Data
3. R And Databases
4. Dates
5. Factors
6. Subscribing
7. Character Manipulation
8. Data Aggregation
9. Reshaping DataBasics
10. The R Environment
11. Probability And Distributions
12. Descriptive Statistics and Graphics
13. One- And Two-Sample Tests
14. Regression And Correlation
15. Analysis Of Variance And The Kruskal–Wallis Test
16. Tabular Data
17. Power And The Computation Of Sample Size
18. Advanced Data Handling
19. Multiple Regression
20. Linear Models
21. Logistic Regression
22. Survival Analysis
23. Rates And Poisson Regression
24. Nonlinear Curve Fitting

**Note: Question paper will cover 100% Practical**

**Course Outcome**

At the end of the course students would be able to

<b>CO No</b>	<b>Co Statement</b>	<b>Knowledge Level</b>
<b>CO1</b>	To understand the problem solving approaches	<b>K2</b>
<b>CO2</b>	To learn the basic programming constructs in R Programming	<b>K2</b>
<b>CO3</b>	To practice various computing strategies for R Programming -based solutions to real world problems	<b>K2</b>
<b>CO4</b>	To use R Programming data structures - lists, tuples, dictionaries.	<b>K3</b>
<b>CO5</b>	To do input/output with files in R Programming	<b>K3</b>

<b>Books for Study</b>	
<b>1</b>	Maria Dolors Ugarte, Ana F. Militino , Alan T. Arnholt “ Probability and Statistics With R” 2 Edition on ,CRS Press, 2016.
<b>2</b>	P.Dalgaard . Introductoty Statistics With R, 2 <sup>nd</sup> Edition. Springer, 2008.

**Mapping with Programme Outcomes and Programme Specific Outcomes**

	<b>PO 1</b>	<b>PO 2</b>	<b>PO 3</b>	<b>PO 4</b>	<b>PO 5</b>	<b>PO 6</b>	<b>PO 7</b>	<b>PO 8</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>
<b>CO1</b>	3	2	3	3	3	2	2	2	3	3	2
<b>CO2</b>	3	2	2	2	2	2	3	2	2	3	2
<b>CO3</b>	2	2	2	2	3	2	2	2	3	3	3
<b>CO4</b>	3	2	2	3	2	3	2	2	1	3	2
<b>CO5</b>	3	2	3	1	3	3	3	3	3	3	3

**3 – Strong, 2- Medium, 1- Low**

**B.COM ,Computer Applications**  
**DISCIPLINE SPECIFIC ELECTIVE -VIII**

**Third Year**  
**VI**

**Semester**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>U23CCE68B</b>	<b>PRACTICAL TALLY</b>	<b>DSE VIII</b>	<b>2</b>	<b>-</b>	<b>3</b>	<b>-</b>	<b>3</b>	<b>5</b>	<b>25</b>	<b>75</b>	<b>100</b>

**Learning Objectives**

1	Examination of general accounting applications as they apply to computerized financial records for each step of the accounting cycle to the completion of financial statements, as well as management accounting applications.
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**List of Exercises**

1. Preparation of Trial Balance - preparation of profit and loss accounts, Balance sheet
2. Interest simple, compound interest calculation. Setting ledger master, Interest report.
3. Receivable and payable management, meaning activating bill wise details, all types of entries
4. Cost Centres and Category summary, cost centre breakup ledgers and group breakup outstanding receivable and payable, interest receivable and payable, statistics, cash and fund flow daybook list of account reversing journals, optional vouchers.
5. Budget Budgetary control creation of budget, group budget Budgetary ledger creation alteration of budget deletion of budget.
6. Introduction to GST, Getting started with GST, Transferring Input tax to GST, Interest supply of goods, GST reports
7. Recording advance entries, Exports, Imports, Exempted Goods, Adjustment and Return filing, GST tax payments
8. Electronic Commerce Introduction, Tax Collected at Source (TCS), Procedures for E-commerce Operator, Input Tax Credit: - Introduction, Important Points, Input Service Distributors
9. Matching of Input Tax Credit, Returns, GSTR-2, Other Taxable Persons, Annual Return, Overview of the IGST Act, Overview, Other Provisions.
10. GST Portal, Introduction, GST Eco-system, GST Suvidha Provider (GSP), Uploading Invoices

**Note: Question paper will cover 100% Practical**

**COURSE OUTCOMES**

Students will be able to

<b>CO</b>	<b>CO Statement</b>	<b>Knowledge level</b>
<b>CO1</b>	input journal entries, adjust entries and prepare financial statements for cash and accrual-based businesses	<b>K3</b>
<b>CO2</b>	record vendor, customer, and inventory transactions essential for maintaining accounts payable, accounts receivable, and inventory subsidiary ledgers	<b>K3</b>

**MAPPING WITH PROGRAMME OUTCOMES AND PROGRAMME-SPECIFIC OUTCOMES**

<b>Course Outcomes</b>	<b>Programme Outcomes (POS)</b>					<b>Programme Specific Outcomes (PSOS)</b>								<b>Means Score of COS</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	
<b>CO-1</b>	4	4	4	4	3	3	3	3	4	3	4	3	4	43/13=3.30
<b>CO-2</b>	4	3	4	3	3	3	3	4	4	3	3	3	4	44/13=3.38
<b>CO-3</b>	3	3	4	3	3	4	4	4	4	3	4	3	3	46/13=3.53
<b>CO-4</b>	4	3	4	3	4	4	3	4	3	4	3	4	4	47/13=3.61
<b>CO-5</b>	3	4	3	4	3	4	4	3	3	3	4	3	4	45/13=3.46
														<b>17.28/5=3.456</b>

**3 – Strong, 2- Medium, 1- Low**

Third Year

B.COM ,Computer Applications

Semester VI

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
U23CCNM65	NAAN MUDHALVAN		2	-	-	-	2	2	25	75	100



