E.M.G. YADAVA WOMEN'S COLLEGE, MADURAI – 625 014.
(*An Autonomous Institution – Affiliated to Madurai Kamaraj University*)
Re-accredited (**3rd Cycle**) with Grade **A+** & **CGPA 3.51** by NAAC

DEPARTMENT OF COMMERCE

TANSCHE - **CBC**S With OBE

BACHELOR OF COMMERCE
(Computer Applications)

PROGRAMME CODE - D

COURSE STRUCTURE

(w.e.f. 2023 – 2024 Batch onwards)

E.M.G. YADAVA WOMENS COLLEGE, MADURAI -14.

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TANSCHE - CBCS with OBE

DEPARTMENT OF COMMERCE – UG

B.COM(CA)
(w.e.f. 2023– 2024 Batch onwards)

Vision

1. To empower the students with the knowledge and problem solving skills and make them to realize their potential and assure them to cope with the competitiveness globally.
2. To envision the Department of Commerce as a ICMA Centre with excellence and create more Chartered Accountants.

Mission

1. To empower the students to become innovative entrepreneurs, to contribute to the success of business and betterment to the society.
2. To prepare students for higher education in Commerce, Management and Business studies.
3. To inculcate the use of information and communication technology in the Teaching Learning Process.
4. To establish internship with industry, business, professionals and government so as to enhance the experience and gain knowledge of the students.
5. To develop the students to become socially responsible and globally employable through our Curriculum.

Programme Educational Objectives (PEOs): BCom(CA)

S.No	On completion of the Programme, the student will
PEO-1	To became experts in Accounting Methodology and enhance Professionalismthrough innovative practices in academics.
PEO-2	To motivate the student's capabilities towards novelty and creativity in problemsolving skills in business modelling with societal crash.
PEO-3	To adopt innovative opportunities, latest technologies and develop new businesses. Educate and to deal with the complex issues of the businesscommunity in particular and society and so on.
PEO-4	To enlarge the strong knowledge in the areas such as finance, taxation and laws relating to commerce helps to relate the conceptual and analytical skills in the fieldof auditing, finance etc.
PEO-5	To Improve the students in managerial competencies through career andprofessional learning Viz., Chartered Accountants(CA), Cost & Management Accountants (CMA), Company Secretary (CS) and master degree programmes inthe field of Commerce.
PEO-6	To develop skills on management, leadership and team building among the group, enhanced with social responsibility and ethical values for shaping them asprofessionals and entrepreneurs

PROGRAMME OUTCOMES

On Completion of B Com(CA) students will be able to

S.No	Programme Outcomes
PO1	**Disciplinary knowledge:** Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study
PO2	**Communication Skills:** Ability to express thoughts and ideas effectively in writing and orally; 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
PO3	**Problem solving: Capacity** 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.
PO4	**Analytical reasoning**: Ability to evaluate the reliability and relevance of evidence; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints. **Research-related skills** 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
PO5	**Cooperation/Team work:** Ability to work effectively and respectfully with diverse teams; **Leadership readiness / qualities:** Capability for mapping out the tasks of a team, 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.
PO6	**Lifelong learning:** Ability to acquire knowledge and skills, including „learning how to learn", that are necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to changing trades and demands of work place through knowledge/skill development/ re skilling.

Programme Specific Outcomes (PSOs):

PSOs	After completion of B Com CA the students will be able to	PO Addressed
Programme Specific Outcomes:	**PSO1 – Placement:** 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. **PSO 2 - Entrepreneur:** To create effective entrepreneurs by enhancing their critical thinking, problem solving, decision making and leadership skill that will facilitate startups and high potential organizations **PSO3 – Research and Development:** Design and implement HR systems and practices grounded in research that comply with employment laws, leading the organization towards growth and development. **PSO4 – Contribution to Business World:** To produce employable, ethical and innovative professionals to sustain in the dynamic business world. **PSO 5 – Contribution to the Society:** To contribute to the development of the society by collaborating with stakeholders for mutual benefit	**PO 2 & PO 3** **PO5** PO4 PO1 & PO2 PO6

Qualification for Admission

Candidates should have passed the Higher Secondary Examination, Commerce and accounting as one of the subject, conducted by the Board of Higher Education, Government of Tamilnadu, CBSC&ICSE or any other examination approved by Madurai Kamaraj University as equivalent.

Duration of the Course

The students shall undergo this prescribed course of study for the period of three academic years under TANSCHE - Choice Based Credit System (CBCS) semester pattern with outcome based education.

Medium of Instruction: English

System: Choice Based Credit System with Outcome Based Education Model.

Nature of the Course

Courses are classified according to the following nature

1. Knowledge and skill oriented, 2.Employability oriented, 3.Entrepreneurship oriented

Outcome Based Education (OBE) & Assessment

Students understanding must be built on and assessed for wide range of learning activities, which includes different approaches and are classified along several basis, such as

1. **Based on purpose:**
   - Continuous Assessment (internal tests, Assignment, seminar, quiz, Documentation, Case lets, ICT based Assignment, Mini projects administered during the learning process)
   - External Assessment (Evaluation of students' learning at the end of instructional unit)
2. **Based on Domain Knowledge: (for UG Up to K4 levels)**
   - Assessment through K1,K2,K3& K4

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TANSCHE – CBCS with OBE
(w.e.f. 2023-2024 batch onwards)

(PARTI/PARTII/PARTIII)

Internal (Formative) : 25 marks
External (Summative) : 75marks
Total : 100marks

Formative Test (CIA-Continuous Internal Assessment): 25 Marks

Components	Marks
Test(Average of two tests)**(**Conducted for 100marks and converted into 10 marks)	**10**
Assignment	**5**
Seminar	**5**
Quiz/ Documentation / Case lets/ ICT Based Assignment/ Mini Project	**5**
Total	**25**

- ✓ **Centralized system** of Internal Assessment Tests
- ✓ There will be **Two Internal Assessment** Tests
- ✓ Duration of Internal assessment test will be **2 hours for Test I and II**
- ✓ Students shall write **retest** with the approval of HOD on genuine grounds if they are absent.

Question Paper Pattern for Continuous Internal Assessment- Test I and II

Section	Marks
A-Multiple Choice Question (7x1mark)	7
B-Short Answer (4x 2marks)	8
C-Either Or type (3/6 x 5marks)	15
D-Open choice type (2 /3 x 10marks)	20
Total	50

Conducted for 100 marks and converted into 10 marks

Question Paper Pattern for Summative Examination

Section	Marks
A-Multiple choice Questions without Choice (10 x 1 mark)	10
B-Short Answer without choice (5 x 2marks)	10
C-Either Or type (5/10x5marks)	25
D-Open Choice type (3outof 5x10marks)	30
Total	75

In respect of Summative Examinations passing minimum is **36%for uUG.** Latest amendments and revision as per **UGC** and **TANSCHE norms** is taken into consideration in curriculum preparation.

BLUE PRINT FOR INTERNAL ASSESSMENT – I

Articulation Mapping - K Levels with Course Learning Outcomes (CLOs)

Sl.No	CLOs	K- Level	Section A		Section B		Section C	Section D	Total
			MCQs (No Choice)		Short Answers(No Choice)		(Either or Type)	(Open choice)	
			No. of Questions	K-Level	No. of Questions	K-Level			
1	CLO 1	Up to K3	3	(K1/K2)	3	(K1/K2)	2 (K2)/2(K3)/2(K4)(Each set of questions must be in same level)	2 (K3) &1(K4)	
2	CLO 2	Up to K4	2	(K1/K2)					
3	CLO 3	Up to K4	2	(K1/K2)	1	(K1/ K2)			
No. of Questions to be asked			7		4		6	3	20
No. of Questions to be answered			7		4		3	2	16
Marks for each question			1		2		5	10	-
Total Marks for each section			7		8		15	20	50

BLUE PRINT FOR INTERNAL ASSESSMENT – II

Articulation Mapping - K Levels with Course Learning Outcomes (CLOs)

Sl.No	CLOs	K- Level	Section A		Section B		Section C	Section D	Total
			MCQs(No Choice)		Short Answers(No Choice)		(Either or Type)	(Open choice)	
			No. of Questions	K-Level	No. of Questions	K-Level			
1	CLO3	Up to K3	2	(K1/K2)	1	(K1/K2)	2 (K2)/2(K3)/2 (K4)(Each set of questions must be in the same level)	2 (K3) &1(K4)	
2	CLO4	Up to K4	2	(K1/K2)	3	(K1/K2)			
3	CLO5	Up to K4	3	(K1/K2)					
No. of Questions to be asked			7		4		6	3	20
No. of Questions to be answered			7		4		3	2	16
Marks for each question			1		2		5	10	-
Total Marks for each section			7		8		15	20	50

Distribution of Marks with K-Levels CIA I and CIA II

CIA	K Levels	Section-A MCQ (No choice)	Section-B Short Answer (No choice)	Section-C (Either or Type)	Section-D (Open choice)	Total Marks	% of Marks
I & II	K1	4	4	-	-	8	10
	K2	3	4	10	-	17	23
	K3	-	-	10	20	30	40
	K4	-	-	10	10	20	27
	Marks	7	8	30	30	75	100

Articulation Mapping - K Levels with Course Learning Outcomes (CLOs) for External Assessment

Sl.No	CLOs	K-Level	Section A		Section B		Section C	Section D (open choice)	Total
			MCQs(No choice)		Short Answers (No choice)		(Either/or Type		
			No. of Questions	K-Level	No. of Questions	K-Level			
1	CLO1	Up to K3	2	K1/K2	1	K1/K2	2 (K3 & K3)	1(K2)	
2	CLO2	Up to K3	2	K1/K2	1	K1/K2	2(K2 & K2)	1(K3)	
3	CLO3	Up to K4	2	K1/K2	1	K1/K2	2(K4&K4)	1(K4)	
4	CLO4	Up to K 3	2	K1/K2	1	K1/K2	2 (K3 & K3)	1(K3)	
5	CLO5	Up to K 4	2	K1/K2	1	K1/K2	2 (K4 & K4)	1(K4)	
No. of Questions to be asked			10		5		10	5	30
No. of Questions to be answered			10		5		5	3	23
Marks for each question			1		2		5	10	
Total Marks for each section			10		10		25	30	75(Marks)

Distribution of Section –wise Marks with K Levels for External Assessment

K levels	Section A (MCQ'S) (No choice)	Section B (Short Answer) (No choice)	Section C (Either or Type)	Section D (Open Choice)	**Total Marks**	%of Marks
K1	9	6	-	--	**15**	13
K2	1	4	10	10	**25**	21
K3	-	-	20	20	**40**	33
K4	-	-	20	20	**40**	33
Total Marks	10	10	50	50	**120**	100

K1-Rememberingandrecallingfactswithspecificanswers

K2-Basicunderstandingoffactsandstatingmainideaswithgeneralanswers

K3- Application oriented- Solving Problems, Justifying the statement and deriving inferences

K4-Examining, analyzing, presentation and make inferences with evidences

EVALUATION (THEORY)

(PART IV – SEC / DSEC)

Internal (Formative) : 25 Marks

External (Summative) : 75 Marks

Total : 100 Marks

Formative test (CIA- Continuous Internal Assessment): 25 Marks

Components	Marks
Test (Average of two tests) (Conducted for 60 marks and converted into 20 marks)	20
Assignment/ Quiz/ Documentation (from Unit 5)	5
Total	25

- ✓ There will be two internal Assessment Test
- ✓ Duration of Internal assessment test will be 1 hour for test
- ✓ Students shall write retest with the approval of HOD on genuine grounds if they are absent.

Question Paper Pattern for Continuous Internal Assessment Test I & II

Section	Marks
A- Multiple choice Question (4 x 1 mark)	4
B – Short Answer (3 x 2 marks)	6
C – Either Or type (2/4 x 5 marks)	10
D – Open choice type (1/2 x 10 marks)	10
Total	**30**

Conducted for 60 marks and converted into 20 marks

Question Paper Pattern for External Examination

Section	Marks
A- Multiple choice Question (10 x 1 mark)	10
B – Short Answer (5 x 2 marks)	10
C – Either Or type (5/5 x 5 marks)	25
D – Open choice type (3/5 x 10 marks)	30
Total	**75**

Question Paper Pattern for External Examination

BLUE PRINT FOR INTERNAL ASSESSEMENT – I

Articulation Mapping – K Levels with Course Learning Outcomes (CLOs)

Sl.No	CLOs	K – Level	Section A MCQs (No Choice)		Section B Short Answers (No Choice)		Section C (Either or Type)	Section D (Open Choice)	Total
			No. of Questions	K- Level	No. of Questions	K- Level			
1	CLO1	Up to K3	2	K1	3	K1	1(K2) & 1 (K3) (Each set of questions must be in same level)	1 (K2) & 1 (K3)	
2	CLO2	Up to K3	2						
No. of Questions to be asked			4		3		4	2	13
No. of Questions to be answered			4		3		2	1	10
Marks for each question			1		2		5	10	
Total Marks for each Section			**4**		**6**		**10**	**10**	**30**

BLUE PRINT FOR INTERNAL ASSESSEMENT – II

Articulation Mapping – K Levels with Course Learning Outcomes (CLOs)

Sl.No	CLOs	K – Level	Section A MCQs (No Choice)		Section B Short Answers (No Choice)		Section C (Either or Type)	Section D (Open Choice)	Total
			No. of Questions	K-Level	No. of Questions	K-Level			
1	CLO3	Up to K3	2	K1	3	K1	1(K2) & 1 (K3) (Each set of questions must be in same level)	1 (K2) & 1 (K3)	
2	CLO4	Up to K3	2						
No. of Questions to be asked			4		3		4	2	13
No. of Questions to be answered			4		3		2	1	10
Marks for each question			1		2		5	10	
Total Marks for each Section			**4**		**6**		**10**	**10**	**30**

Distribution of Marks with K-Levels CIA I and CIA II

CIA	K Levels	Section-A MCQ (No choice)	Section-B Short Answer (No choice)	Section-C (Either or Type)	Section-D (Open choice)	Total Marks	% of Marks
I & II	K1	4	6	-	-	10	20
	K2	-	-	10	10	20	40
	K3	-	-	10	10	20	40
	Marks	4	6	20	20	50	100

Articulation Mapping - K Levels with Course Learning Outcomes (CLOs) for External Assessment

Sl.No	CLOs	K-Level	Section A MCQs		Section B Short Answers		Section C (Either/or Choice)	Section D (Open Choice)	Total
			No. of Questions	K-Level	No. of Questions	K-Level			
1	CLO1	Up to K3	2	K1	1	K1	6(K2)&4(K3) (Each set of questions must be in the same level)	2(K2)&3(K3)	
2	CLO2	Up to K3	2		1				
3	CLO3	Up to K3	2		1				
4	CLO4	Up to K3	2		1				
5	CLO5	Up to K3	2		1				
No. of Questions to be asked			10		5		10	5	30
No. of Questions to be answered			10		5		5	3	23
Marks for each question			1		2		5	10	
Total Marks for each section			10		10		25	30	75

Annexure - 7a

Distribution of Section-wise Marks with K Levels for External Assessment

K Levels	Section A(MCQ'S)	SectionB (ShortAnswer)	Section C(Either/or)	SectionD (OpenChoice)	**TotalMarks**	%ofMarks withoutchoice
K1	10	10	-	--	**20**	16
K2	-	-	30	20	**50**	42
K3	-	-	20	30	**50**	42
Total Marks	10	10	50	50	**120**	100

Annexure - 7a

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TANSCHE – CBCS with OBE

DEPARTMENT OF COMMERCE – UG

B.Com (CA)

COURSE STRUCTURE

(w.e.f. 2023 – 2024 Batch onwards)

Semester	Part	Course Code	Course Title	Teaching hrs (per week)	Duration of Exam (hrs.)	Marks Allotted			CREDITS
						CIA	EXT	Total	
I	I	23OU1TA1	Tamil/Hindi	6	3	25	75	100	3
	II	23OU2EN1	General English 1	6	3	25	75	100	3
	III	23OUCCA11	**Core Course 1** Financial Accounting I	5	3	25	75	100	5
		23OUCCA12	**Core Course 2** Principles of Management	5	3	25	75	100	5
	III	23OUCCAGECA1	**GEC 1:** Programming in C	2	3	25	75	100	2
		23OUCCAGECA1P	**GEC 1:** Programming in C Lab	2	3	40	60	100	1
	IV	23OUCCASECN1	**SEC 1(NME)** Operating System	2	3	25	75	100	2
		23OUCCAFC1	**FC** Basic Computer Knowledge	2	3	25	75	100	2
II	I	23OU1TA2	Tamil/Hindi	6	3	25	75	100	3
	II	23OU2EN2	General English 2	6	3	25	75	100	3
	III	23OUCCA21	**Core Course 3** Financial Accounting II	5	3	25	75	100	5
	III	23OUCCA22	**Core Course 4** Business Law	5	3	25	75	100	5
		23OUCCAGECA2	**GEC 2:** Programming in C++	2	3	25	75	100	2
		23OUCCAGECA2P	**GEC 2:** Programming in C++ Lab	2	3	40	60	100	1
	IV	23OUCCASECN2	**SEC 2(NME)** E-Commerce	2	3	25	75	100	2
		23OUCCASEC3	**SEC 3** Data Structures	2	3	25	75	100	2
			Total	60					46

								I B.Com(CA)
Sem	**Category**	**Course Code**	**Course Title**	**Credits**	**Contact Hours / Week**	**CIA**	**SE**	**Total**
I	**Core**	23OUCCA11	Financial Accounting -1	5	5	25	75	100

Nature of the Course		
Knowledge and Skill Oriented	Employability Oriented	Entrepreneurship oriented
✔	✔	

Course 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.

Course Content:

UNIT-I : Fundamentals of Financial Accounting 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.

UNIT-II : **Final Accounts** Final Accounts of Sole Trading Concern- Capital and Revenue Expenditure and Receipts – Preparation of Trading, Profit and Loss Account and Balance Sheet with Adjustments.

UNIT-III : **Depreciation and Bills of Exchange** 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: **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: **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)

Books 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.

Websites and e-Learning resources

1. https://www.slideshare.net/mcsharma1/accounting-for-depreciation1
2. https://www.slideshare.net/ramusakha/basics-of-financial-accounting
3. https://www.accountingtools.com/articles/what-is-a-single-entry-system.html

Pedagogy: Chalk and Talk, PPT, Group Discussion, Presentations, quiz and Seminar.

Rationale for nature of Course: Will be able to check and collect the bills and reports.

- **Knowledge and Skill:** To make the student aware of Financial statements and accounting reports of the company.
- **Activities to be given:** Preparing financial accounts and collection of bills.

COURSE OUTCOMES:

COs	CLO Statement	Knowledge According to Bloom's Taxonomy (Upto K level)
CO1	Remember the concept of rectification of errors and Bank reconciliation statements	K3
CO2	Apply the knowledge in preparing detailed accounts of sole trading concerns	K4
CO3	Analyse the various methods of providing depreciation	K3
CO4	Evaluate the methods of calculation of profit	K4
CO5	Determine the royalty accounting treatment and claims from insurance companies in case of loss of stock.	K4

Mapping of Course Learning Outcomes (CLOs) with Programme Outcomes (Pos)

	PO1	PO2	PO3	PO4	PO5	PO6
CLO1	1	3	2	2	1	3
CLO2	2	1	3	2	1	2
CLO3	2	1	2	3	1	3
CLO4	1	2	1	3	2	3
CLO5	2	1	3	2	2	3

1 – Basic Level 2- Intermediate Level 3- Advanced Level

LESSON PLAN: TOTAL HOURS (75 Hrs)

UNIT	Details	No. of Hours	Mode of Teaching
I	**Fundamentals of Financial Accounting** 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 – Need and Preparation - Bank Reconciliation Statement.	15	Chalk and Talk
II	**Final Accounts** Final Accounts of Sole Trading Concern- Capital and Revenue Expenditure and Receipts – Preparation of Trading, Profit and Loss Account and Balance Sheet with Adjustments.	15	Chalk and Talk, PPT, quiz, on the spot test
III	**Depreciation and Bills of Exchange** Depreciation - Meaning – Objectives – Accounting Treatments - Types - Straight Line Method – Diminishing Balance method – Conversion method.	15	Chalk and Talk, PPT,

	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		quiz, on the spot test
IV	**Accounting from Incomplete Records** 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.	15	Chalk and Talk, PPT, quiz, on the spot test
V	**Royalty and Insurance of 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)	15	Seminar, PPT presentation , Quiz
	Total	**75**	

Course Designer :M.Neelavathy

B.Com(CA)								I
Sem	**Course Type**	**Course Code**	**Course Title**	**Credits**	**Contact Hours / Week**	**CIA**	**SE**	**Total**
I	Core	23OUCCA12	Principles of Management	5	5	25	75	100

Nature of the Course		
Knowledge and Skill Oriented	Employability Oriented	Entrepreneurship oriented
✔	✔	

Course 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

Course Content:

UNIT I: Introduction to Management

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.

UNIT II: Planning

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.

UNIT III: Organizing

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: 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 Performance Appraisal – Work from Home - Managing Work from Home [WFH].

UNIT V: **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].

Books for Study:

1. Gupta.C.B, -Principles of Management-L.M. Prasad, S.Chand& Sons Co. Ltd, New Delhi.
2. DinkarPagare, 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. Grifffin, 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.

Web Resources / E.Books:

1. http://www.universityofcalicut.info/sy1/management

2. https://www.managementstudyguide.com/manpower-planning.htm
3. https://www.businessmanagementideas.com/notes/management-notes/coordination/coordination/21392

Pedagogy: Chalk and Talk, PPT, Group Discussion, Presentations, quiz and Seminar.

Rationale for nature of Course: Will be able to check the theories of principles of management.

Knowledge and Skill: It will help the students to make planning in work Environment.

Activities to be given: Preparing different types of communications in Organization.

COURSE OUTCOMES:

COs	CLO Statement	Knowledge According to Bloom's Taxonomy (Upto K level)
CO1	Demonstrate the importance of principles of management.	K3
CO2	Paraphrase the importance of planning and decision making in an organization.	K4
CO3	Comprehend the concept of various authorizes and responsibilities of an organization.	K3
CO4	Enumerate the various methods of Performance appraisal	K4
CO5	Demonstrate the notion of directing, co-coordination and control in the management.	K4

Mapping of Course Learning Outcomes (CLOs) with Programme Outcomes (Pos)

	PO1	PO2	PO3	PO4	PO5	PO6
CLO1	3	2	2	1	3	2
CLO2	3	3	2	3	2	3
CLO3	2	1	3	2	2	3
CLO4	2	2	2	3	1	3
CLO5	2	3	2	3	2	1

1– Basic Level, 2- Intermediate Level, 3- Advanced Level

LESSON PLAN: TOTAL HOURS (75 Hrs)

Unit	Contents	No. of Hours	Mode of Teaching
I	**Introduction to Management** 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.	**15**	Chalk and Talk
II	**Planning** 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.	**15**	Chalk and Talk, PPT, quiz, on the spot test
III	**Organizing** 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.	**15**	Chalk and Talk, PPT, quiz, on the spot test
IV	**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 Performance Appraisal – Work from Home - Managing Work from Home [WFH].	**15**	Chalk and Talk, PPT, quiz, on the spot test
V	**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].	**15**	Seminar, PPT presentation, Quiz
	Total	**75**	

Course Designer : K.Padmavathy

I B.Com(CA)								
Sem	**Course Type**	**Course Code**	**Course Title**	**Credits**	**Contact Hours / Week**	**CIA**	**SE**	**Total**
I	**Generic Elective Course**	**23OUCCAGECA1**	**PROGRAMMING IN C**	2	2	25	75	100

Nature of the Course		
Knowledge and Skill Oriented	**Employability Oriented**	**Entrepreneurship oriented**
✓	✓	

Course 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, struct.

Course Content:

UNIT-I: Introduction to C Language: C Language Introduction-Features of C Language-Benefits of C over other languages-Compilation of C Program-First Program in CPre-processor in CPre-processor directives

UNIT-II: Variables, Data Types & Operators: Variables and Keywords in C-Scope rules in C-Data Types in C-Operators & Its Types-Typecasting in C

UNIT-III: 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. Multidimensional Arrays in C-String functions in C- Practice problems

UNIT-IV: Functions in C:Function Prototype-Parameter Passing Techniques in C-Storage Classes in C-Recursion Concept -Functions in CPractice problems

UNIT-V: 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)

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 UniversityPress, 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.
3. Dr. Guruprasad Nagraj, “C Programming for Problem Solving”, Himalaya PublishingHouse. ISBN-978-93-5299-361-1.

Web Resources/ E.Books:

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

Pedagogy: Chalk and Talk, PPT, Group Discussion, Presentations, quiz and Seminar.

Rationale for nature of Course: **Understanding the concept of programming in c and its features.**

Knowledge and Skill: Knowledge, Problem Solving, Analytical ability, Professional Competency,

Professional Communication and Transferrable Skill

Activities to be given: 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)

Course learning Outcomes (CLO's):

CLO	Course Outcomes Statement	Knowledge(According to Bloom's Taxonomy)
CLO1	Apply the concept of Control Structures to solve any given problem.	K1 to K3
CLO2	Apply the concept of single and multi-dimensional arrays to solve problems related to searching, sorting and matrix operations.	K1 to K3
CLO3	Apply the concept of Strings for writing programs related to character array.	K1 to K4
CLO4	Write programs using concept of user defined and recursive functions.	K1 to K3
CLO5	Apply concept of structures to write programs.	K1 to K4

Mapping of Course Learning Outcomes (CLOs) with Programme Outcomes (POs)

	PO1	PO2	PO3	PO4	PO5	PO6
CLO1	1	2	2	3	2	3
CLO2	2	3	1	2	2	3
CLO3	1	2	1	2	3	3
CLO4	3	3	2	2	2	3
CLO5	2	2	3	2	2	3

1-Basic Level **2- Intermediate Level** **3- Advanced Level**

LESSON PLAN: TOTAL HOURS (30 Hrs)

UNIT	DESCRIPTION	HRS	MODE
I	Introduction to C Language:C Language Introduction-Features of C Language-Benefits of C over other languages-Compilation of C Program-First Program in CPre-processor in CPre-processor directives	4	Chalk and Talk, PPT, Assignment.
II	Variables, Data Types & Operators:Variables and Keywords in C-Scope rules in C-Data Types in C-Operators & Its Types-Typecasting in C	6	Chalk and Talk, PPT, Assignment.
III	Control Flow Statements:Decision Making Statements-Switch Statement in C-C Loops & Control Structure Practice problems-Continue Statement , Break StatementArray & String Handling in C:Arrays in C-Strings in C. Multidimensional Arrays in C-String functions in C- Practice problems	6	Chalk and Talk, PPT, Assignment.
IV	Functions in C:Function Prototype-Parameter Passing Techniques in C-Storage Classes in C-Recursion Concept -Functions in CPractice problems	6	Chalk and Talk, PPT, Assignment.
V	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)	8	Chalk and Talk, PPT, Assignment.

Course Designer: Mrs.A.Kavitha

I B.Com(CA)								
Sem	**Course Type**	**Course Code**	**Course Title**	**Credits**	**Contact Hours / Week**	**CIA**	**SE**	**Total**
I	**Core**	**23OUCCAGECA1P**	**PROGRAMMING IN C LAB**	1	2	40	60	100

Course Objectives:

Nature of the Course		
Knowledge and Skill Oriented	**Employability Oriented**	**Entrepreneurship oriented**
✓	✓	

1. Understand problem statements and identify appropriate solutions.
2. Demonstrate the use of IDE and C Compiler.
3. Develop programs using C Programming Language.

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.

Books for Study:

1. 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. 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.

Web Resources/ E.Books:

1.http://elearning.vtu.ac.in/econtent/courses/video/BS/14CPL16.html

2.https://nptel.ac.in/courses/106/105/106105171/

Pedagogy:

Rationale for nature of Course: Understanding the concept of programming in c and its features.

Knowledge and Skill: Knowledge, Problem Solving, Analytical ability, Professional Competency,
Professional Communication and Transferrable Skill

Activities to be given: 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)

Course learning Outcomes (CLO's):

CLO	Course Outcomes Statement	Knowledge(According to Bloom's Taxonomy)
CLO1	Apply the concept of Control Structures to solve any given problem.	K1 to K3
CLO2	Apply the concept of single and multi-dimensional arrays to solve problems related to searching, sorting and matrix operations.	K1 to K3
CLO3	Apply the concept of Strings for writing programs related to character array.	K1 to K4
CLO4	Write programs using concept of user defined and recursive functions.	K1 to K3
CLO5	Apply concept of structures to write programs.	K1 to K4

Mapping of Course Learning Outcomes (CLOs) with Programme Outcomes (POs)

	PO1	PO2	PO3	PO4	PO5	PO6
CLO1	1	2	2	3	2	3
CLO2	2	3	1	2	2	3
CLO3	1	2	1	2	3	3
CLO4	3	3	2	2	2	3
CLO5	2	2	3	2	2	3

1-Basic Level **2- Intermediate Level** **3- Advanced Level**

LESSON PLAN: TOTAL HOURS (30 Hrs)

UNIT	DESCRIPTION	HRS	MODE
I	Write a C program to find roots of a Quadratic equation. Write a C program to find the total no. of digits and the sum of individual digits of a positive integer.	4	Practical in Lab PPT, Assignment.
II	Write a C program to generate the Fibonacci sequence of first N numbers. Write a C program to sum the series S=1 – x + (x^2/2!) - (x^3/3!) + ---- - (x^n/n!)	6	Practical in Lab PPT, Assignment.
III	Write a C program to arrange the elements of an integer array using Bubble Sort algorithm. Write a C program to input two matrices and perform matrix multiplication on them	6	Practical in Lab PPT, Assignment.
IV	Write a C program to check whether the given string is palindrome or not without using Library functions. Write a C program to count the number of lines, words and characters in a given text.	6	Practical in Lab PPT, Assignment.
V	Write a C program to generate Prime numbers in a given range using user defined function. Write a C program to find factorial of a given number using recursive function. 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.	8	Practical in Lab PPT, Assignment.

Course Designer: Mrs.A.Kavitha

I B.Com(CA)								
Sem	**Course Type**	**Course Code**	**Course Title**	**Credits**	**Contact Hours / Week**	**CIA**	**SE**	**Total**
I	**Skill Enhancement Course (NME)**	23OUCCASECN1	**Operating System**	2	2	25	75	100

Nature of the Course		
Knowledge and Skill Oriented	**Employability Oriented**	**Entrepreneurship oriented**
✓		

Course Objectives:

1. To understand the services provided by and the design of an operating system.
2. To understand the structure and organization of the file system.
3. To learn about the Input/output and Memory Management system.
4. To understand what a process is and how processes are synchronized and scheduled.
5. To understand different approaches to memory management.

Course Content

Unit-I: Operating System – Introduction –Definition - What is Operating? – Examples-Functions-History– Why to learn Operating System?-Architecture.

Unit-II: Operating System Components: Processor Management- I/O Device Management– File Management– Network Management– Main Memory Management— Secondary Storage Management– Security Management.

Unit-III: Types of Operating System: Batch Operating System – Time-sharing Operating System – Distributed Operating System – Network Operating System – Real-time Operating System.

Unit – IV: Operating System Services: Program Execution – I/O Operation – File System Manipulation–Communication–Error Handling–Resource Management-Protection. Operating System Process: Introduction– Process Life Cycle.

Unit– V: File System: What is a File System- Objective of File management System – File structure-File Attributes –FileType–FunctionsofFile–FileAccessMethods-SpaceAllocation–FileDirectories

Books for Study:

1. Silberschatz, Galvin, Gagne, Operating System Concepts, John Wiley & Sons, Inc.,VIEdition.

Books for Reference:

1. Deital.H.M(2013),OperatingSystem,PearsonEducation,11th Edition.
2. Milon Milen Kovic (2013), Operating Systems Concepts and Design, Tata McGraw-Hill,New Delhi.
3. PramodChandra(2017),P.Bhatt,AnIntroductiontoOperatingSystems,PHI.
4. WilliamStallings(2018),OperatingSystemsInternalsandDesignPrinciples,PHI.5.Charles Crowley (2018), Operating system DesignOrientedApproach,McGraw-HillEducation.

Web Resources/ E.Books:

1. https://www.tutorialspoint.com/operating_system/index.htm
2. https://www.tutorialspoint.com/basics_of_computer_science/basics_of_computer_science_operating_system.htm
3. http://www.smartzworld.com/notes/linux-programming-pdf-lp-pdf-notes/
4. http://www.cs.put.poznan.pl/akobusinska/downloads/Operating_Systems_Concepts.pdf
5. http://web.cse.ohio-state.edu/~soundarajan.1/courses/3430/silberschatz8thedition.pdf

Pedagogy: Chalk and talk Materials, PPT, Assignment, Group discussion, Interaction and Demonstration.

Rationale for nature of Course: Understanding the concept of Operating System and its features.

Activities to be given: Assignments, Seminar

Course learning Outcomes (CLO's):

CLO	Course Outcomes Statement	Knowledge(According to Bloom's Taxonomy)
CLO1	Learn and Understand the functions of the Operating System and its Architecture.	K1 to K3
CLO2	Learn about the Input/output and Memory Management system	K1 to K3
CLO3	Know about the types of Operating systems.	K1 to K4
CLO4	Understand the concept of Operating System Services and the process	K1 to K3
CLO5	Gain knowledge on the operating system file structure	K1 to K4

Mapping of Course Learning Outcomes (CLOs) with Programme Outcomes (Pos)

(SCIENCE)

	PO1	PO2	PO3	PO4	PO5	PO6
CLO1	2	1	2	3	1	3
CLO2	2	2	1	3	1	2
CLO3	1	3	2	1	2	3
CLO4	3	2	1	3	1	2
CLO5	3	2	1	2	1	3

1 – Basic Level, 2- Intermediate Level, 3- Advanced Level

Mapping of Course Learning Outcomes (CLOs) with Programme Outcomes (Pos)

(ARTS)

	PO1	PO2	PO3	PO4	PO5	PO6
CLO1	2	1	2	3	1	3
CLO2	2	2	1	3	1	2
CLO3	1	3	2	1	2	3
CLO4	3	2	1	3	1	2
CLO5	3	2	1	2	1	3

LESSON PLAN : Total (30 Hrs)

UNIT	DESCRIPTION	HRS	MODE
I	Unit-I: Operating System – Introduction – Definition - What is Operating? – Examples-Functions-History– Why to learn Operating System?-Architecture.	4	Chalk and Talk, PPT, Assignment.
II	Unit-II: Operating System Components: Processor Management- I/O Device Management–File Management– Network Management– Main Memory Management—Secondary Storage Management– Security Management.	6	Chalk and Talk, PPT, Assignment.
III	Unit-III: Types of Operating System: Batch Operating System – Time-sharing Operating System – Distributed Operating System – Network Operating System – Real-time Operating System.	6	Chalk and Talk, PPT, Assignment.
IV	Unit – IV: Operating System Services: Program Execution – I/O Operation – File System Manipulation – Communication–Error Handling– Resource Management-Protection. Operating System Process: Introduction– Process Life Cycle.	6	Chalk and Talk, PPT, Assignment.
V	Unit–V:File System: What is a File System-Objective of File management System – File structure-File Attributes –File Type–Functions of File–File Access Methods-Space Allocation–File Directories	8	Chalk and Talk, PPT, Assignment.

Course Designer: Mrs. S. Niveethitha

B.Com(CA)								I
Sem	**Course Type**	**Course Code**	**Course Title**	**Credits**	**Contact Hours / Week**	**CIA**	**SE**	**Total**
I	**Foundation Course**	23OUCCAFC1	**Basic Computer Knowledge**	2	2	25	75	100

Nature of the Course		
Knowledge and Skill Oriented	**Employability Oriented**	**Entrepreneurship oriented**
✓		

Course Objectives:

1. To give basic knowledge about parts of computers and their functions.
2. To Understand and basic concept of Network and Topology

Course Content

Unit: I - Introduction to Computers: Introduction – Functions – Characteristics- Applications. Classification of Computers: Microcomputers-Minicomputer - Mainframes - Supercomputer - Network Computers.

Unit: II – Components of Computers: Input Unit – Output Unit – Memory Unit – Control Unit – Arithmetic & Logical Unit. Generations of Computers.

Unit: III- Number System: Introduction – Data Representation – Types of Number System: Decimal Number System – Binary Number System – Octal Number System – Hexadecimal Number System.

Unit : IV- Computer Networks: Introduction - Types of Networks: LAN, WAN, MAN. Network Topology: Star, Ring, Bus, Tree.

Unit :V – Concepts of Operating System: Introduction to OS – Type of OS – Architecture of OS – Features of OS.

Books for Study:

1. Alexis Leon & Mathews Leon (2017), *Fundamentals of Information Technology,* Second Edition, Leon VIKAS Publishing House Pvt Ltd, Chennai.

Books for Reference:

1. Balagurusamy.E (2015), *Computer Fundamentals*, Mc Graw Hill Pvt Ltd, New Delhi,
2. Puri.Y.P and Vipin Puri (2015), *Computer Information Technology*,Prentice Hall of India, India.
3. Rajaraman.V (2017), *Computer Fundamentals*, PHI Pvt Ltd, New Delhi
4. Amitesh Goswami (2018), Computer Fundamentals and Programming, Wisdom Press, New Delhi.
5. James,A OBrien (2019), *Introduction to Information System,* Tata McGraw Hill Publishing Co, New Delhi

Web Resources/ E.Books

https://www.tutorialspoint.com/data_communication_computer_network/dcn_useful_resources.htm

https://www.geeksforgeeks.org/how-many-types-of-number-systems-are-there/amp/

https://ashishmodi.weebly.com/uploads/1/8/9/7/18970467/computer_fundamental.pdf

Pedagogy: Chalk and Talk, PPT, Group Discussion, Presentations, quiz and Seminar.

Rationale for nature of Course: Understanding the concept of basic computer fundamentals

Knowledge and Skill: To make students aware of computer knowledge and skill.

Activities to be given: students shall be asked to prepare PPT on accounting.

Course learning Outcomes (CLO's):

CLO	Course Outcomes Statement	Knowledge(According to Bloom's Taxonomy)
CLO1	Understand the Introduction to Computer	K1 to K3
CLO2	Understand the concept of CPU and Memory	K1 to K3
CLO3	Ability to work Number System	K1 to K4
CLO4	Able to learn about Computer Networks.	K1 to K3
CLO5	Understand the concept of Operating System	K1 to K4

LESSON PLAN : Total (30Hrs)

UNIT	DESCRIPTION	HRS	MODE
I	Unit: I - Introduction to Computers: Introduction – Functions – Characteristics- Applications. Classification of Computers: Microcomputers- Minicomputer - Mainframes - Supercomputer - Network Computers.	4	Chalk and Talk, PPT, Assignment.
II	Unit: II – Components of Computers: Input Unit – Output Unit – Memory Unit – Control Unit – Arithmetic & Logical Unit. Generations of Computers.	6	Chalk and Talk, PPT, Assignment.
III	Unit: III- Number System: Introduction – Data Representation – Types of Number System: Decimal Number System – Binary Number System – Octal Number System – Hexadecimal Number System.	6	Chalk and Talk, PPT, Assignment.
IV	Unit : IV- Computer Networks: Introduction - Types of Networks: LAN, WAN, MAN. Network Topology: Star, Ring, Bus, Tree.	6	Chalk and Talk, PPT, Assignment.
V	Unit :V – Concepts of Operating System: Introduction to OS – Type of OS – Applications of OS – Features of OS.	8	Chalk and Talk, PPT, Assignment.

Course Designer: Mrs. S. Chitradevi

I B.Com(CA)								
Sem	**Course Type**	**Course Code**	**Course Title**	**Credits**	**Contact Hours / Week**	**CIA**	**SE**	**Total**
II	**Core**	23OUCCA21	**Financial Accounting – II**	5	5	25	75	100

Nature of the Course		
Knowledge and Skill Oriented	Employability Oriented	Entrepreneurship oriented
✔	✔	

Course Objectives:

1. The students are able to prepare different kinds of accounts such higher purchase and Instalments 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. Provides knowledge to the learners regarding Partnership Accounts relating to dissolution of firm.
5. To know the requirements of international accounting standards

Course Content:

UNIT I: 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

UNIT 11: 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.

UNIT III: 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: 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 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.

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, New Delhi.

Web Resources/ E.Books:

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

Pedagogy: Chalk and Talk, PPT, Group Discussion, Presentations, quiz and Seminar.

Rationale for nature of Course: Will be able to prepare and analyse the financial report.

Knowledge and Skill: It helps the students to know the admission of a partner, retirement and death of the partner.

Activities to be given: To collect the accounting standards and IND AS in current year.

COURSE OUTCOMES:

COs	CLO Statement	Knowledge According to Bloom's Taxonomy (Upto K level)
CO1	To evaluate the Hire purchase accounts and Instalment systems	K3
CO2	To prepare Branch accounts and Departmental Accounts	K4
CO3	To understand the accounting treatment for admission and retirement in partnership	K3
CO4	To know Settlement of accounts at the time of dissolution of a firm.	K4
CO5	To elaborate the role of IFRS	K4

Mapping of Course Learning Outcomes (CLOs) with Programme Outcomes (Pos)

	PO1	PO2	PO3	PO4	PO5	PO6
CLO1	3	1	3	1	1	3
CLO2	3	1	3	3	1	3
CLO3	3	1	3	3	1	2
CLO4	3	1	3	3	1	3
CLO5	3	1	3	3	1	3

1 – Basic Level **2- Intermediate Level** **3- Advanced Level**

LESSON PLAN:TOTAL(75 HRS)

Unit	Contents	No. of Hours	Mode of Teaching
I	**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.	**15**	Chalk and Talk, PPT
II	**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.	**15**	Chalk and Talk, PPT, quiz, on the spot test
III	**Partnership Accounts - I** Partnership Accounts: –Admission of a Partner – Treatment of Goodwill - Calculation of Hidden Goodwill –Retirement of a Partner – Death of a Partner.	**15**	Chalk and Talk, PPT, quiz, on the spot test
IV	**Partnership Accounts - II** Dissolution of Partnership - Methods – Settlement of Accounts Regarding Losses and Assets – Realization account – Treatment of Goodwill – Preparation of Balance Sheet - Insolvency of a Partner – One or more Partners insolvent – All Partners insolvent - Garner Vs Murray – Accounting Treatment - Piecemeal Distribution – Surplus Capital Method – Maximum Loss Method.	**15**	Chalk and Talk, PPT, quiz, on the spot test
V	**Accounting Standards for financial reporting** Objectives and Uses of Financial Statements for Users-Role of Accounting Standards - Development of Accounting Standards in India- Requirements of International Accounting Standards - Role of Developing IFRS- IFRS Adoption or Convergence in India- Implementation Plan in India- India AS- An Introduction - Difference between India AS and IFRS.	**15**	Seminar, PPT presentation , Quiz
	Total	**75**	

Course Designer:

M.Neelavathy

I B.Com(CA)								
Sem	**Category**	**Course Code**	**Course Title**	**Credits**	**Contact Hours / Week**	**CIA**	**SE**	**Total**
II	**Core**	23OUCCA22	**Business Law**	5	5	25	75	100

Nature of the Course		
Knowledge and Skill Oriented	Employability Oriented	Entrepreneurship oriented
✔	✔	

Course 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.

Course Content:

UNIT I: Elements of Contract

Indian Contract Act 1872: Definition of Contract, Essentials of Valid Contract, Classification of Contract, Offer and Acceptance – Consideration – Capacity of Contract – Free Consent - Legality of Object – Contingent Contracts – Void Contract.

UNIT II: Performance Contract

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.

UNIT III: Contract of Indemnity and Guarantee

Contract of Indemnity and Contract of Guarantee - Extent of Surety's Liability, Kinds of Guarantee, Rights of Surety, Discharge of Surety

UNIT IV: Bailment and Pledge

Bailment and Pledge –Bailment – Concept – Essentials and Kind - 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: 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

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&VivekKuchhal, Business law, S Chand Publishing, New Delhi.
4. M.V. Dhandapani, Business Laws, Sultan Chand and Sons, New Delhi.Shusma Aurora, Business Law, Taxmann, New Delhi.

Books For Reference :

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

Web Resources/Econtent:

1. www.cramerz.comwww.digitalbusinesslawgroup.com
2. http://swcu.libguides.com/buslaw
3. http://libguides.slu.edu/businesslaw

Pedagogy: Chalk and Talk, PPT, Group Discussion, Presentations, quiz and Seminar.

Rationale for nature of Course: Will be able to give the clear information to the principal and agent.

Knowledge and Skill: To have depth view on Indian Contract Act.

Activities to be given: Prepare a format of a valid Contract.

COURSE OUTCOMES:

COs	CLO Statement	Knowledge According to Bloom's Taxonomy (Upto K level)
CO1	Explain the Objectives and significance of Mercantile law	K3
CO2	Understand the clauses and exceptions of Indian Contract Act.	K4
CO3	Outline the contract of indemnity and guarantee	K3
CO4	Familiar with the provision relating to Bailment and Pledge	K4
CO5	Explain the various provisions of Sale of Goods Act 1930	K4

Mapping of Course Learning Outcomes (CLOs) with Programme Outcomes (Pos)

	PO1	PO2	PO3	PO4	PO5	PO6
CLO1	2	1	2	2	1	3
CLO2	3	1	2	2	1	3
CLO3	3	2	2	3	2	3
CLO4	2	1	2	3	1	2
CLO5	3	1	2	2	2	3

1– Basic Level, 2- Intermediate Level, 3- Advanced Level

Lesson plan:Total(75 Hrs)

Unit	Contents	No. of Hours	Mode of Teaching
I	**Introduction** An introduction – Definition – Objectives of Law - Law: Meaning and its Significance, Mercantile Law: Meaning, Definition, Nature, Objectives, Sources, Problems of Mercantile Law	**15**	Chalk and Talk, PPT, quiz, on the spot test
II	**Elements of Contract** **Indian Contract Act 1872:** Definition of Contract, Essentials of Valid Contract, Classification of Contract, Offer and Acceptance – Consideration – Capacity of Contract – Free Consent - Legality of Object – Contingent Contracts – Void Contract	**15**	Chalk and Talk, PPT
III	**Performance Contract** 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	**15**	Chalk and Talk, PPT, quiz, on the spot test
IV	**Contract of Indemnity and Guarantee** Contract of Indemnity and Contract of Guarantee - Extent of Surety's Liability, Kinds of Guarantee, Rights of Surety, Discharge of Surety – Bailment and Pledge – Bailment – Concept – Essentials and Kind - 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.	**15**	Chalk and Talk, PPT, quiz, on the spot test
V	**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	**15**	Seminar, PPT presentation , Quiz
	Total	**75**	

COURSE DESIGNER: B.KALYANI

B.Com(CA)								I
Sem	**Course Type**	**Course Code**	**Course Title**	**Credits**	**Contact Hours / Week**	**CIA**	**SE**	**Total**
II	**Generic Elective**	**23OUCCAGECA2**	**PROGRAMMING IN C++**	2	2	25	75	100

Nature of the Course		
Knowledge and Skill Oriented	**Employability Oriented**	**Entrepreneurship oriented**
✓		

Course Objectives:

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

Course Contents:

UNIT-I

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

UNIT-II :

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

UNIT-III : 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

UNIT-IV: Function overriding - Pure virtual function – Abstract base class.Templates: Function templates – Overloading a function template – Class templates.

UNIT-V: 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.

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

Web Resources:

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

Pedagogy: Chalk and Talk, PPT, Group Discussion, Presentations, quiz and Seminar.

Rationale for nature of Course:

Knowledge and Skill: Knowledge, Problem Solving, Analytical ability, Professional Competency,

Professional Communication and Transferrable Skill

Activities to be given: 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)

Course learning Outcomes (CLO's):

CLO	Course Outcomes Statement	Knowledge(According to Bloom's Taxonomy)
CLO1	Explain the various basic concepts of Object-orientation.	K1 to K3
CLO2	Write programs to implement static binding	K1 to K3
CLO3	Write programs to implement inheritance and dynamic binding	K1 to K4
CLO4	Write programs to implement templates and exception handling and learn how to use STL class library.	K1 to K3
CLO5	Write programs implementing File and Stream I/O.	K1 to K4

Mapping of Course Learning Outcomes (CLOs) with Programme Outcomes (POs)

	PO1	PO2	PO3	PO4	PO5	PO6
CLO1	2	2	1	3	2	3
CLO2	2	1	2	2	2	3
CLO3	1	3	3	2	1	2
CLO4	2	1	2	2	3	2
CLO5	3	2	1	2	2	2

1-Basic Level **2- Intermediate Level** **3- Advanced Level**

LESSON PLAN : Total (30 Hrs)

UNIT	DESCRIPTION	HRS	MODE
I	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	6	Chalk and Talk, PPT, Assignment.
II	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	6	Chalk and Talk, PPT, Assignment.
III	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	6	Chalk and Talk, PPT, Assignment.
IV	Function overriding - Pure virtual function – Abstract base class.Templates: Function templates – Overloading a function template – Class templates	6	Chalk and Talk, PPT, Assignment.
V	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.	6	Chalk and Talk, PPT, Assignment.

Course Designer:

MRS.M.Sharmila devi

B.Com(CA)								I
Sem	**Course Type**	**Course Code**	**Course Title**	**Credits**	**Contact Hours / Week**	**CIA**	**SE**	**Total**
II	Generic Elective	**23OUCCAGECA2P**	**PROGRAMMING IN C++ LAB**	1	2	25	75	100

Nature of the Course		
Knowledge and Skill Oriented	**Employability Oriented**	**Entrepreneurship oriented**
✓		

Course Objectives:

1. Design classes for the given problems.
2. Write programs in C++.
3. Code, debug and execute a C++ program to solve the given problems using an IDE.

List of Programs

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 numbers
   c) Multiplying the complex number with a scalar value
2. Write a Point class that represents a 2-d point in a plane. 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
3. Design and implement a class to represent a Solid object.
   a) Apart from data members to represent dimensions, use a data member tospecify the type of solid.
   b) Use functions to calculate volume and surface area for different solids.
4. 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

5. 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
6. Design a class called cString to represent a string data type. Create a data member inthe class to represent a string using an array of size 100. Write the following functionality as member functions:
   a. Copy Constructor
   b. Concatenate two strings
   c. Find the length of the string
   d. Reversing a string
   e. Comparing two strings
7. 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:
   a. Copy Constructor
   b. Destructor
   c. Concatenate two strings
   d. Find the length of the string
   e. Reversing a string
   f. Comparing two strings

Books For Text:

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

Web Resources:

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

Pedagogy: Chalk and Talk, PPT, Group Discussion, Presentations, quiz and Seminar.

Knowledge and Skill: Knowledge, Problem Solving, Analytical ability, Professional Competency,

Professional Communication and Transferrable Skill

Activities to be given: 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)

Course learning Outcomes (CLO's):

CLO	Course Outcomes Statement	Knowledge(According to Bloom's Taxonomy)
CLO1	Design and create classes.Implement Stream I/O as appropriate.	K1 to K3
CLO2	Design appropriate data members and member functions.	K1 to K3
CLO3	Implement functions, friend functions, static members, constructors and compile-time polymorphism.	K1 to K4
CLO4	Implement inheritance, run-time polymorphism and destructors.	K1 to K3
CLO5	Implement templates and exceptions. Use STL class library.Implement File I/O.	K1 to K4

Lesson plan:Total(30 Hrs)

UNIT	DESCRIPTION	HRS	MODE
I	Write a class to represent a complex number which has member functions to do the following. Set and show the value of the complex number Add, subtract and multiply two complex numbers Multiplying the complex number with a scalar value	4	Practical in Lab PPT, Assignment.
II	Write a Point class that represents a 2-d point in a plane. Write member functions to Set and show the value of a point Find the distance between two points Check whether two points are equal or not Design and implement a class to represent a Solid object. Apart from data members to represent dimensions, use a data member tospecify the type of solid. Use functions to calculate volume and surface area for different solids.	6	Practical in Lab PPT, Assignment.
III	Design a class representing time in hh:mm:ss. Write functions to Set and show the time Find the difference between two time objects Adding a given duration to a time Conversion of the time object to seconds Design a 3x3 matrix class and demonstrate the following: Addition and multiplication of two matrices using operator overloading Maintaining a count of the number of matrix object created	6	Practical in Lab PPT, Assignment.
IV	Design a class called c String 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: Copy Constructor Concatenate two strings Find the length of the string Reversing a string Comparing two strings	6	Practical in Lab PPT, Assignment.
V	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: Copy Constructor Destructor Concatenate two strings Find the length of the string Reversing a string Comparing two strings	8	Practical in Lab PPT, Assignment.

Course Designer: MRS.M.Sharmila devi

I B.Com(CA)								
Sem	**Course Type**	**Course Code**	**Course Title**	**Credits**	**Contact Hours / Week**	**CIA**	**SE**	**Total**
II	**Skill Enhancement Course (NME)**	**23OUCCASECN2**	**E-Commerce**	2	2	25	75	100

Nature of the Course		
Knowledge and Skill Oriented	**Employability Oriented**	**Entrepreneurship oriented**
✓		

Course Objectives:

1. Advantages to Customers - Advantages to Society- 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.

Course Content

UNIT-I : E-Commerce Overview: Features - Traditional Commerce v/s E-Commerce.

UNIT-II : E-Commerce Advantages & Disadvantages: Advantages to Organizations - Technical Disadvantages- Non-Technical Disadvantages.

Unit-III: E-Commerce Business Models: Business - to - Business (B2B)-Business - to - Consumer (B2C)-Consumer - to - Consumer (C2C)-Consumer - to - Business (C2B)-Business - to - Government (B2G)-Government - to - Business (G2B)-Government - to - Citizen (G2C).

Unit – IV: E-Commerce Payment Systems: Credit Card - Credit Card Payment Process - Debit Card - Smart Card - Electronic Fund Transfer.

Unit – V: E-Commerce – EDI: Definition- EDI Documents – Advantages. E-Commerce-Security System: Measures to ensure Security-Security Protocols in Internet.

Books for Study:

1. E-Commerce, Mamta Bhusry, Firewall Media (An important of Laxmi Publications Pvt.Ltd.), 2018
2. E-Commerce, P.T. Joseph, S.J. Third Edition (Prentice Hall of India Pvt.Ltd, New Delhi, 2018)
3. Electronic Commerce, Pete Loshin/ John Vacca Firewall Media (An Important of Laxmi Publications Pvt.Ltd, New Delhi) Fourth Edition : 2016 Milon Milen Kovic,
4. Web Commerce Technology Handbook, by Daniel Minoli, Emma Minoli, McGraw-Hill, 2018
5. E-Commerce fundamentals and applications Hendry Chan, Raymond Lee, Tharam Dillon, Ellizabeth Chang, John Wiley, 2017

Books for **Reference:**

1. Dr. Arulanandan and Raman: Advanced Accountancy, Himalaya Publications, Mumbai.
2. Tulsian , Advanced Accounting, Tata McGraw Hills, Noida.
3. Tulsian , Advanced Accounting, Tata McGraw Hills, Noida.
4. Robert N Anthony, David Hawkins, Kenneth A. Merchant, Accounting:
5. Text and Cases. McGraw-Hill Education, Noida.

Web Resources:

1. https://www.tutorialspoint.com/e_commerce/index.htm
2. https://irp-cdn.multiscreensite.com/1c74f035/files/uploaded/introduction-to-e-commerce.pdf
3. https://backup.pondiuni.edu.in/storage/dde/dde_ug_pg_books/E-%20Commerce.pdf

Pedagogy: Chalk and Talk, PPT, Group Discussion, Presentations, quiz and Seminar.

Rationale for nature of Course: Creating telecommunication and computing technology to conduct business.

Activities to be given: Practise them for Online Shopping, online transaction etc.

Course learning Outcomes (CLO's):

CLO	Course Outcomes Statement	Knowledge(According to Bloom's Taxonomy)
CLO1	Learn and Understand the Overview of E-Commerce.	K1 to K3
CLO2	Learn the advantages and disadvantages of E-Commerce.	K1 to K3
CLO3	Know about the E-Commerce Business Models.	K1 to K4
CLO4	Study the E-Commerce Payment System	K1 to K3
CLO5	Understand the concept of E-Commerce EDI and Security System.	K1 to K4

Mapping of Course Learning Outcomes (CLOs) with Programme Outcomes (Pos)

(SCIENCE)

	PO1	PO2	PO3	PO4	PO5	PO6
CLO1	2	1	2	3	1	3
CLO2	2	2	1	3	1	2
CLO3	1	3	2	1	2	3
CLO4	3	2	1	3	1	2
CLO5	3	2	1	2	1	3

1 – Basic Level, 2- Intermediate Level, 3- Advanced Level

Mapping of Course Learning Outcomes (CLOs) with Programme Outcomes (Pos)

(ARTS)

	PO1	PO2	PO3	PO4	PO5	PO6
CLO1	2	1	2	3	1	3
CLO2	2	2	1	3	1	2
CLO3	1	3	2	1	2	3
CLO4	3	2	1	3	1	2
CLO5	3	2	1	2	1	3

LESSON PLAN : Total (30 Hrs)

UNIT	DESCRIPTION	HRS	MODE
I	E-Commerce Overview: Features - Traditional Commerce v/s E-Commerce.	6	Chalk and Talk, PPT, Assignment.
II	E-Commerce Advantages & Disadvantages: Advantages to Organizations - Technical Disadvantages- Non-Technical Disadvantages.	6	Chalk and Talk, PPT, Assignment.
III	**:** E-Commerce Business Models: Business - to - Business (B2B)-Business - to - Consumer (B2C)-Consumer - to - Consumer (C2C)-Consumer - to - Business (C2B)-Business - to - Government (B2G)-Government - to - Business (G2B)-Government - to - Citizen (G2C).	6	Chalk and Talk, PPT, Assignment.
IV	E-Commerce Payment Systems: Credit Card - Credit Card Payment Process - Debit Card - Smart Card - Electronic Fund Transfer.	6	Chalk and Talk, PPT, Assignment.
V	E-Commerce – EDI: Definition- EDI Documents – Advantages. E-Commerce-Security System: Measures to ensure Security-Security Protocols in Internet.	6	Chalk and Talk, PPT, Assignment.

Course Designer: Mrs. S. Chitradevi

B.Com(CA)								I
Sem	**Course Type**	**Course Code**	**Course Title**	**Credits**	**Contact Hours / Week**	**CIA**	**SE**	**Total**
II	Skill Enhancement Course	**23OUCCASEC3**	Data Structures	2	2	25	75	100

Nature of the Course		
Knowledge and Skill Oriented	**Employability Oriented**	**Entrepreneurship oriented**
✓		

Course Objectives:

1. To become familiar with the various data structures and their applications and to increase the understanding of basic concepts of the design and use of algorithms

Course Content

Unit: I – **Introduction and Overview**: Definitions – Concept of Data Structures – Overview of Data Structures – Implementation of Data Structures.

Unit: II – **Stack:** Introduction – Definition - Stack Implementation - Operations of Stack - Applications of Stack.

Unit: III- Queue: Introduction – Definition - Queue Implementation - Operations of Queue - Applications of queue.

Unit : IV – Linked Lists: Introduction, Representation and Operations of Linked Lists, Singly Linked List, Doubly Linked List.

Unit : V- Trees: Basic Terminologies – Representation of Binary Tree: Linear Representation – Linked Representation.

Books For Study:

1. Debasis Samantha (2013), Classic Data Structures, Second Edition, PHI Learning Private Limited.

2. 2. P. Sudharsan, J. John Manoj Kumar, C & Data Structures, Third Edition, RBA Publications.

Books For Reference:

1. Sara Baase, (2001), Computer Algorithms – Introduction to Design and Analysis, Addison- Wesley Publishing Company
2. Robert Kruse, C.L.Tondo, Bruce Leung, Data Structures and Program Design in C ,2nd Edition, PHI Publications.

Web Resources:

1. http://www.cs.sunysb.edu/~skiena/214/lectures/
2. http://datastructures.itgo.com/graphs/dfsbfs.htm
3. http://oopweb.com/Algorithms/Documents/PLDS210/VolumeFrames.html
4. http://discuss.codechef.com/questions/48877/data-structuresand-algorithms
5. http://code.tutsplus.com/tutorials/algorithms-and-datastructures--cms-20437

Pedagogy: Chalk and Talk, PPT, Group Discussion, Presentations, quiz and Seminar.

Rationale for nature of Course: Developing programming skills through data structure.

Activities to be given: Make them to apply data structure for creating programs.

Course learning Outcomes (CLO's):

CLO	Course Outcomes Statement	Knowledge(According to Bloom's Taxonomy)
CLO1	Outline the basic data structure	K1 to K3
CLO2	Identify the different operations of Stack	K1 to K3
CLO3	Interpret different techniques with Queue	K1 to K4
CLO4	Learn the different types of Linked List	K1 to K3
CLO5	Understand the various representations of Trees.	K1 to K4

LESSON PLAN : Total (30 Hrs)

UNIT	DESCRIPTION	HRS	MODE
I	– **Introduction and Overview**: Definitions – Concept of Data Structures – Overview of Data Structures – Implementation of Data Structures.	6	Chalk and Talk, PPT, Assignment.
II	Stack: Introduction – Definition - Stack Implementation - Operations of Stack - Applications of Stack.	6	Chalk and Talk, PPT, Assignment.
III	**Queue:** Introduction – Definition - Queue Implementation - Operations of Queue - Applications of queue	6	Chalk and Talk, PPT, Assignment.
IV	Linked Lists: Introduction, Representation and Operations of Linked Lists, Singly Linked List, Doubly Linked List.	6	Chalk and Talk, PPT, Assignment.
V	**Trees:** Basic Terminologies – Representation of Binary Tree: Linear Representation – Linked Representation	6	Chalk and Talk, PPT, Assignment.

Course Designer: Ms.A.Josephine