UNIVERSITY OF MADRAS

B.COM. DEGREE PROGRAMME IN COMPUTER APPLICATIONS

SYLLABUS WITH EFFECT FROM 2023-2024

THIRD YEAR – SEMESTER - V

CORE – IX: COST ACCOUNTING – I

(Common to B.Com- Gen., AF, BM, MM & ISM)

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
347C5A	5				4	5	25	75	100

Learning Objectives	
LO1	To understand the various concepts of cost accounting.
LO2	To prepare and reconcile Cost accounts.
LO3	To gain knowledge regarding valuation methods of material.
LO4	To familiarize with the different methods of calculating labour cost.
LO5	To know the apportionment of Overheads.

Prerequisite: Should have studied Commerce in XII Std

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

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SYLLABUS WITH EFFECT FROM 2023-2024

THEORY 20% & PROBLEMS 80%	
Course Outcomes	
CO1	Remember and recall the various concepts of cost accounting
CO2	Demonstrate the preparation and reconciliation of cost sheet.
CO3	Analyse the various valuation methods of issue of materials.
CO4	Examine the different methods of calculating labour cost.
CO5	Critically evaluate the apportionment of Overheads.
Textbooks	
1	Jain S.P. and Narang K.L, Cost Accounting. Kalyani Publishers, New Delhi
2	Khanna B.S., Pandey I.M., Ahuja G.K., and Arora M.N., Practical Costing, S. Chand & Co, New Delhi,
3	Dr.S.N. Maheswari, Principles of Cost Accounting, Sultan Chand Publications, New Delhi
4	T.S. Reddy and Y. Hari Prasad Reddy, Cost Accounting, Margham publications, Chennai
5	S.P. Iyengar, Cost Accounting, Sultan Chand Publications, New Delhi
Reference Books	
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 &GurusamyS,CostAccounting,Vijay Nicole Imprints Pvt.Ltd.Chennai
5	Prasad.N.K and Prasad.V.K, Cost Accounting, Book Syndicate, Kolkata
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://study.com/learn/lesson/cost-accounting-principles-examples-what-is-cost-accounting.html
2	https://www.accountingtools.com/articles/what-is-material-costing.html
3	https://www.freshbooks.com/hub/accounting/overhead-cost

MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES

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

3 – Strong, 2- Medium, 1- Low

UNIVERSITY OF MADRAS

B.COM. DEGREE PROGRAMME IN COMPUTER APPLICATIONS

SYLLABUS WITH EFFECT FROM 2023-2024

THIRD YEAR – SEMESTER - V

CORE – X: BANKING LAW AND PRACTICE

(Common to B.Com- Gen., AF, BM, MM, ISM, Co-op. & CS)

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
347C5B	5				4	5	25	75	100

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

Unit	Contents	No. of Hours
I	**Introduction to Banking** History of Banking- Provisions of Banking Regulations Act 1949 - Components of Indian Banking - Indian Banking System-Phases of Development - Banking Structure in India – Public Sector Banks, Private Banks, Foreign Banks, RRB, UCB, Payment Banks and Small Finance Banks - Banking System – Branch Banking - Unit Banking - Universal Banking- Financial Inclusion	15
II	**Central Bank and Commercial Bank** Central Banking: Definition –Need - Principles- Central Banking Vs Commercial Banking - Functions of Central Bank – Credit Creation. Commercial Banking: Definition - Functions – Personal Banking – Corporate Banking – Digital banking – Core Banking System (CBS) - Role of Banks in Economic Development.	15

III	**Banking Practice** Types of Accounts CASA – Types of Deposits - Opening Bank Account- Jan Dhan Yojana - Account Statement vs Passbook vs e-statement - Banker Customer Relationship - Special Types of Customers –KYC norms. Loans & Advances –Lending Sources- Lending Principles-Types of Loans - classification of assets and income recognition / provisioning (NPA) – Repo Rate & Reverse Repo Rate - securities of lending- Factors influencing bank lending.	**15**
IV	**Negotiable Instruments Act** Negotiable Instruments – Meaning & Definition – Characteristics -Types of negotiable instruments. Crossing of Cheques– Concept - Objectives – Types of Crossing - - Consequences of Non-Crossing. Endorsement - Meaning-Components-Kinds of Endorsements-Cheques payable to fictitious person Endorsement by legal representative – Negotiation bank-Effect of endorsement-Rules regarding Endorsement. Paying banker - Banker's duty - Dishonouring of Cheques- Discharge by paying banks - Payments of a crossed cheque - Refusal of cheques Payment. Duties of Collecting Banker-Statutory protection under section 131-Collecting bankers' duty –RBI instruction –Paying Banker Vs Collecting Banker- Customer Grievances- Grievance Redressal –Banking Ombudsman.	**15**
V	**Digital Banking** Meaning- Services - e-banking and financial services- Initiatives- Opportunities - Internet banking Vs Traditional Banking Mobile banking–Anywhere Banking-Any Time Banking- Electronic Mobile Wallets. ATM – Concept - Features - Types-. Electronic money-Meaning-Categories-Merits of e-money - National Electronic Funds Transfer (NEFT), RTGS, IMPS, UPI and Digital currency – Differences - Safety and Security in Digital Banking.	**15**
	TOTAL	**75**
Course Outcomes		
CO1	Aware of various provision of Banking Regulation Act 1949 applicable to banking companies including cooperative banks	
CO2	Analyse the evolution of Central Banking concept and prevalent Central Banking system in India and their roles and function	
CO3	Gain knowledge about the Central Bank in India, its formation, nationalizing its organization structure, role of bank to government, role in promoting agriculture and industry, role in financial inclusion	
CO4	Evaluate the role of capital fund of commercial banks, objectives and process of Asset securitization etc	
CO5	Define the practical banking systems relationship of bankers and customers, crossing of cheques, endorsement etc.	

Textbooks	
1	Gurusamy S, Banking Theory: Law and Practice, Vijay Nicole Publication, Chennai
2	Muraleedharan, Modern Banking: Theory and Practice, Prentice 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
Reference Books	
1	B. Santhanam, Banking & Financial System, Margam Publication, Chennai
2	KataitSanjay, 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	NektariosMichail, Money, Credit, and Crises: Understanding the Modern Banking System, Palgrave Macmillan, London
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://www.rbi.org.in/
2	https://businessjargons.com/e-banking.html
3	https://www.wallstreetmojo.com/endorsement/

MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES

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

3 – Strong, 2- Medium, 1- Low

UNIVERSITY OF MADRAS

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SYLLABUS WITH EFFECT FROM 2023-2024

THIRD YEAR – SEMESTER - V

CORE – XI: INCOME TAX LAW AND PRACTICE- I

(Common to B.Com- Gen., AF, BM, MM, ISM & CS)

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
347C5C	5				4	5	25	75	100

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

Prerequisite: Should have studied Commerce in XII Std

Unit	Contents	No. of Hours
I	**Introduction to Income Tax** Introduction to Income Tax – History – Objectives of Taxation - Features of Income Tax – Meaning of Income – Types – Important Definitions Under the Income Tax Act –Types of Assessee – Income exempted under Section 10.	15
II	**Residential Status** Residential Status – Residential Status of an Individual – Company – HUF – Basic Conditions – Additional Conditions – Incidence of Tax and Residential Status – Problems on Residential Status and Incidence of Tax.	15
III	**Income from Salary** Salary Income - Definition – Allowances –Taxability - Perquisites – Kinds of Perquisites –Types of Provident Fund - Gratuity – Pension – Commutation of Pension – Deduction of Salary - Profits in Lieu of Salary - Computation of Salary Income .	15
IV	**Income from House Property** Income from House Property –Basis of Charge – Annual Value – Gross Annual Value, Net Annual Value - Let-out vs Deemed to be let out Self-Occupied Property – Deductions – Computation of Income from House Property.	15

V	**Profits and Gains from Business or Profession** Income from Business or Profession – Allowable Expenses – Expenses Disallowed - General Deductions – Depreciation – Undisclosed Income & Investments, Unexplained expenditure (Sec 69A, 69B, 69C, 69D) – Compulsory Maintenance of Books of Accounts – Audit of Accounts of Certain Persons – Special Provisions for Computing Incomes on Estimated Basis (Deemed Income) – Computation of Income from Business or Profession.	15
	TOTAL	**75**

Course Outcomes	
THEORY 20% & PROBLEMS 80%	
CO1	Demonstrate the understanding of the basic concepts and definitions under the Income Tax Act.
CO2	Assess the residential status of an assessee& the incidence of tax.
CO3	Compute income of an individual under the head salaries.
CO4	Ability to compute income from house property.
CO5	Evaluate income from a business carried on or from the practice of a Profession.

Textbooks	
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	DinkarPagare, Income Tax Law and Practice, Sultan & Chand Sons, New Delhi.
4	H.C. Mehrotra, Dr.Goyal S.P, Income Tax Law and Accounts, Sahitya Bhavan Publications, Agra.
5	T. Srinivasan – Income Tax & Practice –Vijay Nicole Imprints Private Limited , Chennai.

Reference Books	
1	Hariharan N, Income Tax Law & Practice, Vijay Nicole Imprints Pvt. Ltd. Chennai
2	Bhagwati Prasad, Income Tax Law and Practice, Vishwa Prakasan. New Delhi.
3	Vinod K. Singhania, Students Guide to Income Tax.,U.K.Bharghava Taxman.
4	Dr.Vinod K Singhania, Dr. Monica Singhania, Taxmann's Students' Guide to Income Tax, 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 Resources	
1	https://cleartax.in/s/residential-status/
2	https://www.legalraasta.com/itr/income-from-salary/
3	https://taxguru.in/income-tax/income-house-properties.html

3 – Strong, 2- Medium, 1- Low

MAPPING WITH PROGRAMME OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

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

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SYLLABUS WITH EFFECT FROM 2023-2024

THIRD YEAR – SEMESTER – V

CORE –XII : AUDITING & CORPORATE GOVERNANCE

(Common to B.Com- Gen., AF, BM, MM, ISM, Co-op. & CS)

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
347C5D	5				4	5	25	75	100

Learning Objectives	
LO1	To enable students to understand process of auditing and its classification.
LO2	To impart knowledge on internal check and internal control.
LO3	To illustrate the role of auditors in company.
LO4	To help students understand the framework, theories and models of Corporate Governance.
LO5	To provide insights into the concept of Corporate Social Responsibility

Prerequisite: Should have studied Commerce in XII Std

Unit	Contents	No. of Hours
I	**Introduction to Auditing** Meaning and Definition of Auditing –Distinction between Auditing and Accounting – Objectives – Advantages and Limitations of Audit – Scope of Audit – Classifications of Audits – Audit of For Profit enterprises and Non–profit Organizations	15
II	**Audit Procedures and Documentation** Audit Planning – Audit Programme – Procedures - Internal Audit - Internal Control – Internal Check System – Vouching – Cash and Trade Transactions - Verification of Assets and Liabilities and its Valuation	15
III	**Company Auditor** Appointment and Removal of Auditors – Rights, Duties and Liabilities of Auditor –Audit Report - Recent Trends in Auditing - Information Systems Audit (ISA) – Auditing around the computer – Auditing through the computer - e-audit tools.	15
IV	**Introduction to Corporate Governance** Conceptual Framework of Corporate Governance: Theories & Models, Broad Committees - Corporate Governance Reforms. Major Corporate Scandals in India and Abroad: Common Governance Problems Noticed in various Corporate Failures. Introduction to Environment, Social and Governance (ESG - Code of Conduct – Directors and Auditors	15
V	**Corporate Social Responsibility** Concept of CSR, Corporate Philanthropy, Strategic Relationship of CSR with Corporate Sustainability - CSR and Business Ethics, CSR and Corporate Governance - CSR Provisions under the Companies Act, 2013 (Section 135 schedule – VII). – CSR Policy Rules	15
	TOTAL	75

Course Outcomes	
CO1	Define auditing and its process.
CO2	Compare and contrast essence of internal check and internal control.
CO3	Identify the role of auditors in companies.
CO4	Define the concept of Corporate Governance.
CO5	Appraise the implications of Corporate Social Responsibility
Textbooks	
1	Dinkar Pagare, Principles and Practice of Auditing, Sultan Chand & Sons, New Delhi
2	B. N. Tandon, S. Sudharsanam&S.Sundharabahu, Practical Auditing, S.Chand& Sons New Delhi.
3	Dr.T.R. Sharma, Dr. Gaurav Sankalp, Auditing & Corporate Governance, Sahithya Bhawan Publications, Agra
4	ArunaJha, Auditing & Corporate Governance, Taxmann Publication Pvt. Ltd, New Delhi.
5	Essentials of Auditing, Dr. K. Sundar & K. Paari, Vijay Nicole Imprints Private Limited, Chennai
Reference Books	
1	Kevin Keasey, Steve Thompson & Mike wright, Governance & Auditing, Emerald Group Publishing Limited, Bingley
2	Dr.T.R. Sharma, Auditing, Sahithya Bhawan Publications, Agra
3	C.B.Gupta, NehaSinghal, Auditing & Corporate Governance, Scholar Tech Press, New Delhi.
4	Shri. Vengadamani, Practical Auditing, Margham Publication, Chennai.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://www.wallstreetmojo.com/audit-procedures/
2	https://theinvestorsbook.com/company-auditor.html
3	https://www.investopedia.com/terms/c/corp-social-responsibility.asp

MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES

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

3 – Strong, 2- Medium, 1- Low

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SYLLABUS WITH EFFECT FROM 2023-2024

THIRD YEAR – SEMESTER – V

DISCIPLINE SPECIFIC ELECTIVE: FINANCIAL MANAGEMENT

(Common to B.Com-AF, BM & CA)

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
347E5A	4				3	4	25	75	100

Learning Objectives	
LO1	To introduce the concept of financial management.
LO2	To learn the capital structure theories.
LO3	To gain knowledge about techniques in capital budgeting
LO4	To learn about dividend payment models.
LO5	To understand the needs and calculation of working capital in an organization.

Prerequisites: Should have studied Commerce in XII Std

Unit	Contents	No. of Hours
I	**Introduction** Meaning and Objectives of Financial Management – Functions of Financial Management. Finance - Sources of Finance-Role of Financial Manager - Financial Goals- Profit maximization Vs. Wealth Maximization – Concept of Time Value Money –Risk and Return – Components of Financial Management.	12
II	**Financial Decision** Capital Structure – Definition - Meaning- Theories- Factors determining Capital Structure – Various approaches of Capital structure Cost of Capital – Meaning – Factors determining cost of capital - 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	12
III	**Investment Decision** 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) – Internal Rate of Return – Profitability Index.	12

IV	**Dividend Decision** 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.	12
V	**Working Capital Decision** Working Capital - Meaning and Importance – Classification - Working Capital Cycle - Factors Influencing Working Capital – Determining Working Capital - Management of Current Assets: Inventories, Accounts Receivables and Cash.	12
	TOTAL	60
THEORY 40% & PROBLEMS 60%		
Course Outcomes		
CO1	Recall the concepts in financial management.	
CO2	Apply the various capital structure theories.	
CO3	Apply capital budgeting techniques to evaluate investment proposals.	
CO4	Determine dividend pay-outs.	
CO5	Estimate the working capital of an organization.	
Textbooks		
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.	
Reference Books		
1	Prasana Chandra, Financial Management, Tata McGraw Hill, NewDelhi.	
2	I.M. 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 Textbooks May be Used		

Web Resources	
1	https://efinancemanagement.com/financial-management/types-of-financial-decisions
2	https://efinancemanagement.com/dividend-decisions
3	https://www.investopedia.com/terms/w/workingcapital.asp

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	2	3	2	3	3	3	2	2
CO2	3	2	2	2	3	2	2	2	3	2	3
CO3	3	3	3	2	3	2	3	3	3	2	2
CO4	3	2	2	2	3	2	2	2	3	2	2
CO5	3	3	3	2	3	2	3	3	3	2	2
TOTAL	15	12	13	10	15	10	13	13	15	10	11
AVERAGE	3	2.2	2.6	2	3	2	2.6	2.6	3	2	2.1

3 – Strong, 2- Medium, 1- Low

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THIRD YEAR – SEMESTER - V

DISCIPLINE SPECIFIC ELECTIVE – 3 /4 : SOFTWARE ENGINEERING AND UML LAB

(Common to BCom-ISM)

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
347E5C	2		2		3	4	40	60	100

Learning Objectives	
LO1	To introduce the software development life cycles
LO2	To introduce concepts related to structured and objected oriented analysis & design co
LO3	To provide an insight into UML and software testing techniques

Prerequisite: Should have studied Commerce in XII Std

Unit	Contents	No. of Hours
I	Introduction – Evolution – Software Development projects – Emergence of Software Engineering. Software Life cycle models – Waterfall model – Rapid Application Development – Agile Model – Spiral Model	12
II	Requirement Analysis and Specification – Gathering and Analysis – SRS – Formal System Specification	12
III	Software Design – Overview – Characteristics – Cohesion & Coupling – Layered design – Approaches Function Oriented Design – Structured Analysis – DFD – Structured Design – Detailed design	12
IV	Object Modeling using UML – OO concepts – UML – Diagrams – Use case, Class, Interaction, Activity, State Chart – Postscript	12
V	Coding & Testing – coding – Review – Documentation – Testing – Black-box, White-box, Integration, OO Testing, Smoke testing.	12
	TOTAL (Theory + Practical)	60

Course Outcomes	
CO1	The students should be able to specify software requirements, design the software using tools

CO2	To write test cases using different testing techniques.
Textbooks	
1	Rajib Mall, "Fundamentals of Software Engineering", PHI 2018, 5th Edition.
2	Roger S. Pressman, "Software Engineering - A Practitioner's Approach", McGraw Hill 2010, 7thEdition.
Reference Books	
1	Pankaj Jalote, "An Integrated Approach to Software Engineering", Narosa Publishing House 2011,3rd Edition.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	NPTEL online course – Software Engineering - https://nptel.ac.in/courses/106105182/

UML Lab	**Core - Core -S5EC1/2L**
Credits 4	

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 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

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. Roger D. Peng," R Programming for Data Science ", 2012
2. Norman Matloff,"The Art of R Programming- A Tour of Statistical Software Design", 2011

Reference Books

1. Garrett Grolemund, Hadley Wickham,"Hands-On Programming with R: Write Your Own Functions and Simulations" , 1st Edition, 2014
2. Venables , W.N.,and Ripley,"S programming", Springer, 2000.

UNIVERSITY OF MADRAS

B.COM. DEGREE PROGRAMME IN COMPUTER APPLICATIONS

SYLLABUS WITH EFFECT FROM 2023-2024

SECOND YEAR – SEMESTER – IV

SEC – 7 FinTech

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
247S4B	2				2	2	40	60	100

Unit	Contents	No. of Hours
I	**Overview of Financial Technology** Financial Technology - Emerging Technologies - India's FinTech Ecosystem - Value Creation -FinTech Adaption - FinTech Global Scenario	6
II	**Internet of Things (IoT) & Application Program Interfaces** Introduction to Internet of Things & Application Program Interfaces - Financial System Communication - Open Banking	6
III	**Avenues of FinTech & Strategies of Artificial Intelligence/Machine Learning** Equity Crowd Funding - Wealth Management – P2P & Marketplace lending - Introduction to Artificial Intelligence / Machine Learning - Difference between Artificial Intelligence & Machine Learning - Fintech Applications / Case Studies	6
IV	**FinTech Regulations** Govt. initiatives in India (NPCI, UPI, OCEAN) - Security and Privacy in FinTech - Data Protection Laws & Regulations	6
V	**Project**	6
	Total	30

Note : 40 marks of CIA will be carried out in the form of Project

Text Books

1	Agustin Rubini, "Fintech in a Flash: Financial Technology Made Easy", Zaccheus, 3rd Edition, 2018
2	Susanne Chishti and Janos Barberis, " The FINTECH Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries", John Wiley, 1st Edition, 2016
3	Theo Lynn, John G. Mooney, Pierangelo Rosati, Mark Cummins, "Disrupting Finance: FinTech and Strategy in the 21st Century", Palgrave, 1st edition, 2018
4	Abdul Rafay, "FinTech as a Disruptive Technology for Financial Institutions", IGI Global, January, 2019
5	Bernardo Nicoletti , The Future of FinTech: Integrating Finance and Technology in Financial Services, Palgrave Macmillan, August, 2018
6	The Internet of Things by Samuel Greengard from The MIT Press