



**MARUDHAR KESARI JAIN COLLEGE FOR WOMEN
(AUTONOMOUS)**

Vaniyambadi – 635 751

PG Department of Commerce CA

for

Postgraduate Programme

Master of Commerce (Computer Applications)

From the Academic Year 2024-25

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Preamble

PG Department of Commerce (CA) was started in the year 2010 and became PG Department of Commerce (CA) in the year 2016. The Department aims at providing holistic and value-based knowledge and guidance that students need to become worthy accounting and management professionals. This Programme is meant to heighten technological know-how, to train students to become industry specialists and to encourage software development. This course offers ample opportunities to students both in terms of job and higher education. Students are offered jobs after B.Com Computer Application in a variety of emerging sectors like Edutech, fintech and software firms. Graduates acquire programming skills and knowledge of business during the course, which provides them opportunities in a diverse range of careers. The career choices for graduates are not limited to just one sector but are available in a range of sectors.

The career opportunities for B. Com (CA) graduates are:

- Chartered Accountant
- Business Analyst
- Budget Analyst
- Financial Consultant
- Computer Software Developer
- Auditor
- GST Practitioner
- Computer Programmer
- App Developer

**LEARNING OUTCOMES-BASED CURRICULUM FRAMEWORK FOR
POSTGRADUATE EDUCATION**

Programme	M.Com CA
Programme Code	PA04
Duration	2 Years [PG]
Programme Outcomes	<p>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.</p> <p>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 concisemanner to different groups.</p> <p>PO3: Critical thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development.</p> <p>PO4: Problem solving: Capacity to extrapolate from what one haslearned 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.</p> <p>PO5: Analytical reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples and addressing opposing viewpoints.</p> <p>PO6: Research-related skills: A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating; Ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation.</p> <p>PO7: Cooperation / Teamwork: Ability to work effectively andrespectfully with diverse teams; facilitate cooperative or coordinatedeffort on the part of a group, and act together as a group or a team in theinterests of a common cause and work efficiently as a member of a team.</p> <p>PO8: Scientific reasoning: Ability to analyse, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence, and experiences from an open-minded and reasoned perspective.</p>

<p>Programme Specific Outcomes:</p>	<p>PSO1 – Placement: To prepare the students who will demonstrate respectful engagement with others' ideas, behaviors, beliefs and apply diverse frames of reference to decisions and actions.</p> <p>PSO2 - Entrepreneur: To create effective entrepreneurs by enhancing their critical thinking, problem solving, decision making and leadership skills that will facilitate startups and high potential organizations.</p> <p>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.</p>
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Eligibility for Admission:

Candidate for admission to the first year of M.COM CA Department of Commerce (Computer Applications) shall be required to have passed the UG in B.Com. B.Com. (Corporate Secretaryship), B.C.S., B.B.A., B.Com. (Bank Management), B.A (Co-op.), B.A. (Economics), B.A. (Corporate Economics) and B.Sc. Mathematics or B.Sc. (Computer Science) or with two Account Courses are eligible.

CC	Core Course	14
EC	Elective Paper	6
SEC	Skill Enhancement Course	2
AEC	Ability Enhancement Compulsory Courses	1
VE	Value Educations	1
	Internship	1
PEC	Professional Enhancement Course	1
SLC	Self-Learning Course	1

FIRST YEAR - SEMESTER I

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCC11	ADVANCED ACCOUNTS - I	Core	3	1	2	0	4	6	25	75	100
Learning Objectives											
LO1	To understand the accounting treatment for issue of shares										
LO2	To learn the form and contents of financial statements as per Schedule III of Companies Act 2013										
LO3	To determine profits for fire and marine insurance										
LO4	To prepare consolidated financial statements										
LO5	To learn account for price level changes										
Unit	Content										Hours
1	Issue of Shares Issue of Shares: ESOPs - ESPS - Sweat Equity Shares - Book Building- Buy-back of Shares - Conversion of debentures into shares.										19
2	Final Accounts of Companies Final accounts of Companies as per Schedule III of the Companies Act, 2013 – Managerial remuneration.										18
3	Insurance Company Accounts Insurance Company Accounts: Types of Insurance - Final accounts of life assurance Companies- Ascertainment of profit- Valuation Balance Sheet-Final accounts of Fire, Marine and miscellaneous Insurance Companies.										19
4	Consolidated financial statements Consolidated financial statements as per AS 21: Consolidated Profit and Loss Account– Minority interest – Cost of control – Capital reserve – Inter-company holdings – Preparation of consolidated Balance Sheet.										18
5	Contemporary Accounting Methods Accounting for price level changes – Social responsibility accounting – Human resource accounting. reporting financial reporting: Meaning, Objectives, Characteristics – Indian Accounting Standards (AS 5, AS 10, AS 19, AS 20)										16

Financial Theory: 20%; Problems: 80%

CO	Course Outcomes
CO1	Prepare and account for various entries to be passed in case of issue of shares
CO2	Financial statements of companies as per schedule III of Companies Act,2013
CO3	Apply the provisions of IRDA Regulations in the preparation of final accounts of Life Insurance and General Insurance Companies.
CO4	Determine the overall profitability and financial position by Preparing consolidated financial statements of holding companies in accordance with AS21.
CO5	Analyse contemporary accounting methods based on appropriate Accounting Standards and provisions of Companies Act 2013
Textbooks:	
1	Gupta R. L. & Radhaswamy M. (2021), “Corporate Accounting – Volume I & II”, 14thEdition, Sultan Chand & Sons, New Delhi.
2	Maheshwari S. N., Sharad K. Maheshwari & Suneel K. Maheshwari, (2022),“Advanced Accountancy - Volume I &II”, 11thEdition, Vikas Publishing House Pvt. Ltd., New Delhi.
3	Jain S. P., Narang K. L., Simmi Agrawal and Monika Sehgal (2019), “Advanced Accountancy - Corporate Accounting – Volume - II”, 22ndEdition, Kalyani Publishers, New Delhi.
4	Reddy T. S. &Murthy A., (2022), “Corporate Accounting – Volume I &II”, 17th Edition, Margham Publications, Chennai.
Reference Books:	
1	Arulanandam M .A &Raman K.S., (2021), “Advanced Accounting (Corporate Accounting – II)”, 8thEdition, Himalaya Publishing House Pvt Ltd, Mumbai.
2	Shukla M C, Grewal T S and Gupta S C, (2022), “Advanced Accounts Volume II”,19thEdition, Sultan Chand &Sons, New Delhi.
3	Gupta R. L., (2022), “Problems and Solutions in Company Accounts”, 2 nd Edition, Sultan Chand &Sons, New Delhi.
Web resources:	
1	https://resource.cdn.icai.org/66550bos53754-p1-cp9.pdf
2	https://resource.cdn.icai.org/66545bos53754-p1-cp4.pdf
3	https://resource.cdn.icai.org/66638bos53803-cp1.pdf

FIRST YEAR - SEMESTER I

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCC12	ADVANCED FINANCIAL MANAGEMENT	Core	3	1	2	0	4	6	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 of capital budgeting										
LO4	To learn about dividend payment models.										
LO5	To understand the needs and calculation of working capital in an organization.										
Unit	Content									Hours	
1	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.									18	
2	FINANCIAL DECISION: Financial Decision Capital Structure – Definition – Meaning - Factors determining Capital Structure. Cost of Capital – Meaning – Factors determining cost of capital - Methods - Cost of Equity Capital – Cost of Preference Capital – Cost of Debt – Weighted Average (or) Composite Cost of Capital (WACC).									18	
3	INVESTMENT DECISION: Investment Decision Capital Budgeting - Meaning - Process - 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.									18	
4	DIVIDEND DECISION: 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.									18	
5	WORKING CAPITAL DECISION: Working Capital Decision Working Capital - Meaning and Importance – Classification - Working Capital Cycle - Factors Influencing Working Capital – Determining Working Capital.									18	

Theory 40% Problem 60%

Course Outcome	
CO1	Understanding the concepts in financial management.
CO2	Formation of Capital Structure and Application of various capital structure theories.
CO3	Application of 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 Book	
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.

Mapping with Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	2	2	3	3	3	2
CO2	2	3	2	3	2	3	2	3	3	3	3
CO3	3	3	3	3	3	3	2	2	3	3	3
CO4	3	3	3	3	3	3	3	3	3	3	3
CO5	3	3	3	2	2	2	2	3	3	3	3
Total	14	15	14	13	12	13	11	14	15	15	14
Average	1.5	1.6	1.5	1.4	1.3	1.4	1.2	1.5	1.6	1.6	1.5

3 Medium, 2 Strong, 1Low

FIRST YEAR - SEMESTER I

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCC13	DESKTOP APPLICATION USING C #	Core	3	0	0	0	2	3	25	75	100
Learning Objectives											
LO1	To have the understanding of the Introduction to C#										
LO2	To have the understanding of Object-Oriented Programming in C#										
LO3	To facilitate the students to the understanding of working with windows Applications.										
LO4	To bring subject knowledge about advance C#.										
LO5	To let students to be acquainted with the subject of overview of ADO.NET										
Unit	Content									Hours	
1	Introducing C#, Understanding .NET, Overview of C#, Literals, Variables, Data types, Expressions, Branching, Looping, Methods, Arrays, Strings, Structures, operators.									9	
2	Classes, Objects, Inheritance, Polymorphism, Interfaces, Operator Overloading and overriding.									9	
3	Working with C# windows applications, working with common form controls. Windows form – Mouse Handling – Keyboard Handling.									9	
4	Assemblies, Versioning, Attributes, Reflection, Threads, Exception Handling.									9	
5	Overview of ADO.NET framework, Dataset, Binding data with Data grid.									9	

CO	Course Outcomes
CO1	To have the understanding of the Introduction to C# and Understanding .NET Overview
CO2	To have the understanding of Object-Oriented Programming in C#
CO3	To facilitate the students to the understanding of working with windows Applications
CO4	To bring subject knowledge about advance C#
CO5	To let students to be acquainted with the subject of overview of ADO.NET

Textbooks:	
1	E. Balagurusamy , “Programming in C#”,2011
2	J. Liberty, “Prgramming in C#”, 2 nd Edition – O’Reill.
3	David S.Platt , “Introducing Microsoft.Net ”, Prentice Hall of India, Private Limited - New Delhi.
Reference Books:	
1	David S.Platt , “Introducing Microsoft .Net”, Prentice Hall of India, Private Limited – New Delhi
2	Vikas Gupta , “Comdex .NET Programming “ , Dream Tech Press, New Delhi, 2010
3	Kogent Solutions, “ C# 2008 Programming Black Book”, Dream Tech Press, New Delhi, 2009
4	Microsoft ADO .Net Step by Step, Prentice Hall of IndiaPrivate Limited

Mapping with Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	2	2	3	3	3	2
CO2	2	3	2	3	2	3	2	3	3	3	3
CO3	3	3	3	3	3	3	2	2	3	3	3
CO4	3	3	3	3	3	3	3	3	3	3	3
CO5	3	3	3	2	2	2	2	3	3	3	3
Total	14	15	14	13	12	13	11	14	15	15	14
Average	1.5	1.6	1.5	1.4	1.3	1.4	1.2	1.5	1.6	1.6	1.5

3 – Strong, 2- Medium, 1- Low

FIRST YEAR - SEMESTER I

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCC14P	DESKTOP APPLICATION USING C # LAB	Core Practical	0	0	2	0	1	2	25	75	100
Learning Objectives											
LO1	To have the understanding of Operators.										
LO2	To facilitate the students to the understanding of working with windows Applications.										
LO3	To understand the Control Structure, Data types and Array										
LO4	To learn the applications of Menus										
LO5	To bring subject knowledge about Multithreading in C#.										

1. Develop a C# program to simulate simple arithmetic operations
2. Data Types and Variables
3. Design a Webpage to demonstrate the Label, Button and Textbox controls.
4. Design a C# program to print Armstrong number between 1 to 1000
5. Control Structure
6. Arrays
7. Inheritance
8. Tree view
9. Menu strip
10. Threading

3 –

Course Outcomes	
CO1	To have the understanding of Operators.
CO2	To facilitate the students to the understanding of working with windows Applications.
CO3	To understand the Control Structure, Data types and Array
CO4	To learn the applications of Menus
CO5	To bring subject knowledge about Multithreading in C#.
Textbooks	
1	C# solved programs/example with output and explanation - Include.
2	C# Menu Strip & Context Menu Strip Controls – Coding Examples (coding-examples.com)
3	Windows Form Application C# (c-sharpcorner.com)
4	First C# Program (tutorialsteacher.com)
Reference Books	
1	C# Operators: Arithmetic, Comparison, Logical and more. (programiz.com)
2	C# - Data Types (tutorialspoint.com)
3	C# - Arrays (tutorialspoint.com)
4	C# - Inheritance (tutorialspoint.com)
5	C# - Polymorphism (tutorialspoint.com)

Mapping with Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	2	3	3	3
CO2	3	3	3	3	2	3	2	3	3	3	3
CO3	2	3	2	3	3	2	3	3	3	3	3
Total	8	9	8	9	8	8	8	8	9	9	9
Average	2.6	3	2.6	3	2.6	2.6	2.6	2.6	3	3	3

Strong, 2- Medium, 1- Low

FIRST YEAR - SEMESTER I

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCE11	BANKING AND INSURANCE	EC	4	1	0	0	3	5	25	75	100
Learning Objectives											
LO1	To understand the evolution of new era banking										
LO2	To explore the digital banking techniques										
LO3	To analyse the role of insurance sector										
LO4	To evaluate the mechanism of customer service in insurance and the relevant Regulations										
LO5	To analyse risk and its impact in banking and insurance industry										
Unit	Content									Hours	
1	Introduction to Banking: Banking: Brief History of Banking - Rapid Transformation in Banking: Customer Shift - Fintech Overview - Fintech Outlook - Digital Financial Revolution. Digital Banking – Electronic Payment Systems–Electronic Fund Transfer System – Electronic Credit and Debit Clearing – NEFT – RTGS –VSAT–SFMS–SWIFT.									15	
2	Contemporary Developments in Banking: Distributed Ledger Technology – Blockchain: Meaning - Structure of BlockChain - Types of Block Chain - Differences between DLT and Blockchain - Benefits of Blockchain and DLT - Unlocking the potential of Blockchain – Crypto currencies, Central Bank Digital Currency (CBDC) - Role of DLT in financial services - AI in Banking: Future of AI in Banking - Applications of AI in Banking - Importance of AI in banking - Banking reimaged with AI. Cloud banking - Meaning - Benefits in switching to Cloud Banking.									15	
3	Indian Insurance Market: History of Insurance in India – Definition and Functions of Insurance – Insurance Contract – Indian Insurance Market - Reforms in Insurance Sector – Insurance Organisation – Insurance organisation structure. Insurance Intermediaries: Insurance Broker – Insurance Agent - Surveyors and Loss Assessors - Third Party Administrators (Health Services) – Procedures - Code of Conduct.									15	
4	Customer Services in Insurance: Customer Service in Insurance – Quality of Service - Role of Insurance Agents in Customer Service-Agent’s Communication and Customer Service –Ethical Behaviour in Insurance – Grievance Redressal System in Insurance Sector - Integrated GrievanceManagement System- Insurance Ombudsman - Insurance Regulatory and Development-Authority of India Act (IRDA) – Regulations and Guidelines.									15	
5	Risk Management: Risk Management and Control in banking and insurance industries – Methods of Risk Management – Risk Management by Individuals and Corporations – Tools for Controlling Risk.									15	

CO	Course Outcomes
CO1	Students will be able to Relate the transformation in banking from traditional to new age
CO2	Students will be able to Apply modern techniques of digital banking
CO3	Students will be able to Evaluate the role of insurance sector
CO4	Students will be able to Examine the regulatory mechanism
CO5	Students will be able to Assess risk mitigation strategies

Textbooks:

1	Indian Institute of Banking and Finance (2021), “Principles & Practices of Banking”, 5 th Edition, Macmillan Education India Pvt. Ltd, Noida, Uttar Pradesh.
2	Mishra M N & Mishra S B, (2016), “Insurance Principles and Practice”, 22 nd Edition, S. Chand and Company Ltd, Noida, Uttar Pradesh.
3	Emmett, Vaughan, Therese Vaughan M., (2013), “ Fundamentals of Risk Insurance”, 11 th Edition, Wiley & Sons, New Jersey, USA.
4	Theo Lynn , John G. Mooney, Pierangelo Rosati, Mark Cummins (2018), Disrupting Finance: FinTech and Strategy in the 21st Century (Palgrave Studies in Digital Business & Enabling Technologies), Macmillan Publishers, NewYork (US)

Reference Books:

1	Sundaram KPM & Varshney P. N., (2020), “Banking Theory, Law and Practice”, 20 th Edition, Sultan Chand & Sons, New Delhi.
2	Gordon & Natarajan, (2022), “Banking Theory, Law and Practice”, 9 th Edition, Himalaya Publishing House Pvt Ltd, Mumbai.
3	Gupta P. K. (2021), “Insurance and Risk Management” 6 th Edition, Himalaya Publishing House Pvt Ltd, Mumbai.
4	Susanne Chishti., & Janos Barberis (2016), The Fintech book: The financial technology handbook for investors, entrepreneurs and visionaries. John Wiley & Sons.

Mapping with Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2	2	1	3	3	3	3	3	3	3	2
CO2	3	3	3	3	3	3	3	3	3	2	3
CO3	2	2	1	2	2	2	2	3	2	3	2
CO4	3	2	2	1	2	2	2	3	2	2	2
CO5	3	3	1	3	3	1	3	3	3	1	3
Total	13	12	8	12	13	12	13	15	13	12	12
Average	2.6	2.4	1.6	2.4	2.6	2.4	2.6	3	2.6	2.4	2.4

3 – Strong, 2- Medium, 1- Low

FIRST YEAR - SEMESTER I

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCE12	DATABASE MANAGEMENT SYSTEM	EC	3	1	0	0	3	4	25	75	100
Learning Objectives											
LO1	To introduce the basic concepts of Relational Database Management System										
LO2	To understand designing Entity relationship model										
LO3	To learn SQL Definition and Normalization										
LO4	To up skill the Relational model concepts										
LO5	To understand the Query Processing, locks										
Unit	Content									Hours	
1	Database System Applications: Database system applications - Purpose of database systems - View of data- Database languages - Database architecture - Database users and administrators - History of database systems- enhanced E-R and object modeling, sub classes; super classes, inheritance.									12	
2	Entity Relationship Modeling: Entity relationship modeling: entity types, entity set, attribute and key, relationships, relation types, roles and structural constraints, weak entities, specialization and generalization									12	
3	SQL Definition and Normalization: SQL – Data Definition - Queries in SQL - Updates - Views - Integrity and Security, Dynamic SQL, Relational Database design – Functional dependences and Normalization for relational databases (up to BCNF) - Query Forms.									12	
4	Relational Model Concepts: Relational model concepts, Relational constraints, Relational Languages : Relational Algebra, The Tuple Relational Calculus - The Domain Relational Calculus, Aggregate Functions, Modification Of Database, Joined Relations, Joined Relations									12	
5	Query Processing: Query Processing - Transaction Concept - Concurrency Control -Locks based protocol Deadlock Handling - Recovery Systems.									12	

CO	Course Outcomes
CO1	Students will be able to understand the basic concepts of Relational Database Management System
CO2	Students will be able to understand designing Entity relationship model
CO3	Students will be able to learn SQL Definition and Normalization
CO4	Students will be able to Examine the Relational model concepts
CO5	Students will be able to Assess e Query Processing, locks
Textbooks:	
1	Ramakrishnan Raghu and Gehrke Johannes, “Database Management Systems”, McGraw–Hill, USA.
2	Rajendra Prasad Mahapatra and GovindVerma, “Database Management System”, Khanna Publications, New Delhi
Reference Books:	
1	Ramon A Mata-Toledo and Pauline K Cushman, “Database Management System”, Schaun’s Outlines, New York.
2	Abraham Silberschatz, Henry F Korth and S. Sudarshan, “Database System Concepts” McGraw–Hill, USA.
Web resources:	
1	http://education-portal.com/academy/lesson/what-is-a-database-managementsystempurpose-and-function.html .
2	http://www.comptechdoc.org/os/linux/usersguide/linux_ugbasics.html .
3	http://www.dummies.com/how-to/content/common-linux-commands.html

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	2	3	4	5	6	1	2	3
CO1	2	3	3	3	2	2	2	3	2
CO2	3	3	2	3	3	3	2	2	3
CO3	1	2	2	2	1	2	1	2	2
CO4	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	1	2	1	3	2
	Strong - 3			Medium – 2			Low – 1		

FIRST YEAR - SEMESTER I

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCA11	MOBILE COMPUTING	AECC	2	0	0	0	2	2	25	75	100
Learning Objectives											
LO1	To introduce the basic concepts of Mobile Computing										
LO2	To understand the MAC Protocols										
LO3	To learn Overview of Mobile IP										
LO4	To up skill the Global System for Mobile Communication										
LO5	To understand the Ad-Hoc Basic Concepts										
Unit	Content									Hours	
1	Mobile Computing – Mobile Computing Vs wireless Networking – Mobile Computing Applications Characteristics of Mobile computing – Structure of Mobile Computing Application									6	
2	MAC Protocols – Wireless MAC Issues – Fixed Assignment Schemes – Random Assignment Schemes – Reservation Based Schemes.									6	
3	Overview of Mobile IP – Features of Mobile IP – Key Mechanism in Mobile IP – route Optimization. Overview of TCP/IP – Architecture of TCP/IP									6	
4	Global System for Mobile Communication (GSM) – General Packet Radio Service (GPRS) – Universal Mobile Telecommunication System (UMTS).									6	
5	Ad-Hoc Basic Concepts – Characteristics – Applications – Design Issues – Routing – Essential of Traditional Routing Protocols.									6	

CO	Course Outcomes
CO1	To understand about basic concepts of Mobile Computing
CO2	To understand the MAC Protocols
CO3	To learn about Overview of Mobile IP
CO4	To learn about Global System for Mobile Communication
CO5	To understand Ad-Hoc Networks

Textbooks:	
1	Prasant Kumar Pattnaik, Rajib Mall, “Fundamentals of Mobile Computing”, PHI Learning Pvt. Ltd, New Delhi – 2012.
Reference Books:	
1	Jochen H. Schller, “Mobile Communications”, Second Edition, Pearson Education, New Delhi, 2007.
2	Dharma Prakash Agarval, Qing and An Zeng, "Introduction to Wireless and Mobile systems", Thomson Asia Pvt Ltd, 2005.
3	Uwe Hansmann, Lothar Merk, Martin S. Nicklons and Thomas Stober, “Principles of Mobile Computing”, Springer, 2003.
4	William. C.Y. Lee, “Mobile Cellular Telecommunications-Analog and Digital Systems”, Second Edition, Tata Mc Graw Hill Edition , 2006.
5	C.K. Toh, “AdHoc Mobile Wireless Networks”, First Edition, Pearson Education,

. Mapping with Programme Outcomes and Programme Specific Outcomes

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

3 – Strong, 2- Medium, 1- Low

FIRST YEAR - SEMESTER I

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCHR11	Human Rights	VE- Comp Course	1	1	0	0	2	2	25	75	100
Learning Objectives											
LO1	To provide a comprehensive idea of English literature and language over the ages										
LO2	To protect Human Rights and its enforceability.										
LO3	To help them to understand the structural development of the English language										
LO4	To inform them about the various external linguistic influences										
LO5	To create the ability of critically examining a text										
Unit	Content										Hours
1	Human rights- Concepts and Nature										6
2	Human Rights – The International Perspective International human rights										6
3	Regional Human Rights										6
4	Human Rights in India										6
5	Human Right Violations and Redressal Mechanism										6

Course Outcomes	
CO1	The student will be able to know the nature of human rights its origin , the theories, the movements in the march of human rights and the facets of future of human rights.
CO2	The student will be able to know the international dimension of human rights, the role of UN and the global effort in formulating conventions and declarations
CO3	The student will be able to Perceive the regional developments of human rights in Europe, Africa and Asia and the enforceable value of human rights in international arena.
CO4	The student will be able to have knowledge on the human rights perspectives in India, more developed by its constitution and special legislations
CO5	The student will be able to know the redressal mechanism made available in case of human rights violation confined to India.
Textbooks	
1	Human Rights Lalit Parmar, Anmol Publications Pvt. Limited, 1998
2	Alston, Philip, And Frederic Megret, Eds. The United Nations And Human Rights: A Critical Appraisal. Second Edition. Oxford University Press, 2014.
3	Rebecca Wallace, International Human Rights, Text And Materials 1997
4	Human Rights Bharatiya Values, Mandagadde Rama Jois, Bharatiya Vidya Bhavan, 2015
5	G S Bhargave and R M Pal Human Rights of Dalit Societal Violation 1999
Reference Books	
1	Protection Of Human Rights Act, 1993.
2	Constitutional Law of India (3 Volumes) by Seervai H.M 2015
3	The Human Rights Watch Global Report on Women's Human Rights 2000 Oxford Publication
4	RS Sharma Perspectives in Human Rights Development
5	Research Handbook on International Human Rights Law, Edited by Sarah Joseph & Edited By Sarah Joseph, Edward Elgar Publishing Limited USA

Mapping with Programme Outcomes and Programme Specific Outcomes

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

3 – Strong, 2- Medium, 1- Low

FIRST YEAR - SEMESTER II

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCC21	ADVANCED ACCOUNT II	Core	3	1	2	-	4	6	25	75	100
Learning Objectives											
LO1	To know about the accounting procedures related to preparation of bank accounts										
LO2	To know the types of Amalgamation, Internal and external Reconstruction										
LO3	To enable the students to acquire knowledge in valuation of shares and goodwill										
LO4	To have an insight on modes of winding up of a company										
LO5	To know the human resource accounting system										
Unit	Content									Hours	
I	Accounting of Banking Company Final Statements of Banking Companies (As Per New Provisions) – Non-Performing Assets - Rebate on Bills Discounted- Profit and Loss a/c - Balance Sheet as Per Banking Regulation Act 1949.									18	
II	Amalgamation, Absorption, External and Internal Reconstruction Amalgamation – Meaning - Purchase Consideration - Lump sum Method, Net Assets Method, Net Payment Method, Intrinsic Value Method, Absorption: Meaning- Accounting Treatment-External Reconstruction- Internal Reconstruction.									18	
III	Valuation of Goodwill & Shares Valuation of Goodwill – Meaning – Need for Valuation of Goodwill – Methods of Valuing Goodwill – Average Profit – Super Profit – Annuity and Capitalization Method. Valuation of Shares – Need for Valuation of Shares – Methods of Valuation of Shares – Net Assets Method – Yield and Fair Value Methods.									18	
IV	Liquidation of Companies Meaning-Modes of Winding Up – Preparation of Statement of Affairs - Order of Payment – Liquidators Remuneration- Liquidator’s Final Statement of Accounts.									18	
V	Human Resource Accounting Human Resource Accounting – Need and Development – Importance of Human Resource Accounting – Objections against Human Resource Accounting – Human Resource Accounting in India. Corporate Social Reporting – Concept and Objectives.									18	

COURSE OUTCOMES	
CO1	The students will be able to understand Construct Profit and Loss account and Balance Sheet of Banking Companies in accordance in the prescribed format.
CO2	The students will be able to understand Understand the accounting treatment of amalgamation, Internal and external reconstruction.
CO3	The students will be able to understand Compute the value of goodwill and shares under different methods and assess its applicability
CO4	The students will be able to understand Preparation of liquidator's final statement of account
CO5	The students will be able to understand to know about Human Resource Accounting in India
TEXT BOOKS	
1	T.S. Reddy, A. Murthy – Corporate Accounting- Margham Publication, Chennai.
2	S.P. Jain and N.L. Narang, Advanced Accounting Vol I, Kalyani Publication, New Delhi.
3	M.C.Shukla, Advanced accounting Vol I and II, S.Chand, New Delhi
4	R.L. Gupta – Corporate Accounting, Sultan Chand & Sons, New Delhi.
5	R.L. Gupta , Radha- Corporate Accounting, Sultan Chand & Sons, New Delhi.
REFERENCE BOOKS	
1	Anil Kumar, Rajesh kumar, Corporate accounting I, Himalaya Publishing house, Mumbai.
2	S.N. Maheswari – Advanced Accountancy, Sultan Chand
3	Shukla, Grewal and Gupta- Advanced Accounts VolI,S.Chand, New Delhi.
4	R.L. Gupta and M. Radha swamy, Advanced Accounts Vol I, Sultan Chand, New Delhi.
WEB RESOURCES	
1	https://www.slideshare.net/debchat123/accounts-of-banking-companies
2	https://www.accountingnotes.net/amalgamation/amalgamation-absorption-andreconstructionaccounting/126
3	https://www.taxmann.com/bookstore/bookshop/bookfiles/chapter12valuationofgoodwillandshares.pdf
4	https://www.accountingnotes.net/liquidation/liquidation-of-companiesaccounting/12862
5	https://www.slideshare.net/slideshow/human-resource-accounting-69465076/69465076

Mapping with Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	2	3	3	3	3	3
CO2	3	3	3	3	2	3	3	3	3	3	3
CO3	3	3	2	3	3	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	2	3	3	3	3	3
Total	15	15	14	15	14	14	15	15	15	15	15
Average	3	3	2.8	3	2.8	2.8	3	3	3	3	3

3 – Strong, 2- Medium, 1- Low

FIRST YEAR - SEMESTER II

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCC22	ADVANCED COST ACCOUNTING	Core	3	1	2	-	4	6	25	75	100
Learning Objectives											
LO1	To enhance the understanding of the basic concepts in Cost Accounting										
LO2	To extend the knowledge of Methods of Costing										
LO3	To facilitate the students to have the deep understanding of Standard Costing and Variance analysis										
LO4	To bring about the awareness of Cost Control and Cost Reduction.										
LO5	To let the students to know about Benefits from adoption of ABC analysis and Just in Time Costing (JIT).										
Unit	Content									Hours	
I	Introduction: Nature and significance of cost accounts-Definition of Costing, Scope, Objectives, Functions and limitations of cost accounting-Installation of costing system-Elements of Cost- Cost Centre and profit Centre-Preparation of Cost sheet, tender of quotations.									18	
II	Methods of Costing: Process costing, Treatment of equivalent production- Inter process profit-Joint and by product Costing-Preparation of Contract account, Cost plus contract and escalation clause.									18	
III	Standard Costing and Variance Analysis: - Material -Labour-Overheads - Fixed - Variable -Sales Variance- Reporting of variances.									18	
IV	Cost Management Techniques: Cost Control: Meaning and Prerequisites - Cost Reduction: Meaning and Scope – Differences between Cost control and Cost Reduction - Pareto Analysis: Meaning, importance and applications – Theory only.									18	
V	Activity Based Cost Management and Just in Time (JIT): Activity Based Cost Management- Concept, Purpose, Stages, Benefits, Relevance in Decision making and its Application in Budgeting – Role of ABC analysis in E-Commerce- Just in Time - Introduction, Benefits, Use of JIT in Measuring the Performance – Practical problems.									18	

CO	Course Outcomes
CO1	The student will be able to understand the basic concepts in Cost Accounting and also familiarizing with the preparation of Cost Sheets, Tenders and Quotations.
CO2	The student will be able to understand Preparation of Process Costing and Contract Costing.
CO3	The student will be able to Know the Standard Costing and Variance Analysis and reporting of Variances.
CO4	The student will be aware of the Cost Control and Cost Reduction and its applications. Student Can Able to Prepare Pareto Diagram.
CO5	The student will be able to develop the knowledge about Activity based costing and Just in Time.

TEXT BOOK

1. Cost and Management Accounting- T.S.Reddy and Y.H. Reddy, Margam Publications, Chennai.
2. Cost accounting - S.P. Jain and K.L. Narang , Kalyani Publishers-New Delhi.

REFERENCE BOOKS

1. Advanced Management Accounting - Ravi M Kishore, Taxman's-New Delhi,
2. Cost Accounting- B.K. Bhar, Academic publishers, Calcutta.
3. Cost Accounting - A Managerial Emphasis- C.T.Horangren, Pearson education-New Delhi.
4. Cost Accounting- Jawaharlal, Tata Mc. Graw Hill
5. Advanced Management Accounting - Robert S. Kaplan-Anthony A. Atkinson, Prentice Hall of India-New Delhi 8.
6. Cost Accounting and Cost Methods - Weldon's, Mc. Donald and Evens Limited.

WEB RESOURCES

- 1 <https://in.search.yahoo.com/search?fr=mcafee&type=E210IN826G0&p=methods+of+costing>
- 2 <https://in.search.yahoo.com/search?fr=mcafee&type=E210IN826G0&p=cost+management+techniques>
- 3 <https://in.search.yahoo.com/search?fr=mcafee&type=E210IN826G0&p=standard+costing+and+variance+analysis>

Note: The proportion between theory oriented and problem-oriented questions in the university examination shall be 40:60

Mapping with Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2	3	3	2	3	2	3	3	2	3	3
CO2	3	2	2	2	3	2	3	3	3	2	3
CO3	3	3	3	3	2	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	2	3	3
CO5	3	2	3	3	3	3	3	2	3	3	3
Total	14	13	14	13	14	13	15	14	13	14	14
Average	2.8	2.6	2.8	2.6	2.8	2.6	3	2.8	2.6	2.8	2.8

3 – Strong, 2- Medium, 1- Low

FIRST YEAR - SEMESTER II

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCC23P	ACCOUNTING IN TALLY PRIME LAB	Core Practical	-	-	5	-	3	5	25	75	100
Learning Objectives											
LO1	To create company, groups and ledgers and obtain financial statements using Tally Prime										
LO2	To understand inventory management and account for goods and services tax										
LO3	To perform GST and its returns										
Content											
<ol style="list-style-type: none"> 1. Introduction to Tally Prime Tally Prime: Introduction – Starting Tally Prime – Creation of a Company - Selecting company - Shutting a company - Altering company– Creating Accounting groups and ledgers – Vouchers - Practical problems for a new and existing business and not-for profit organisation. 2. Accounting reports: Introduction – Displaying Trial balance, Profit 62 and Loss Account, Balance sheet, Day book, Purchase register, Sales register, Cashflow/Funds flow and ratio analysis – Practical problems. Preparation of Trial Balance - preparation of profit and loss accounts, Balance sheet 3. Inventory and GST in Tally Prime Inventory: Introduction to Inventory Masters – Creation of stock group – Creation of Godown – Creation of unit of measurement – Creation of stock item – Entering inventory details in Accounting vouchers – Practical problems. 4. GST: Introduction – Enabling GST – Defining tax details – Entries in Accounting vouchers – View invoice report – Practical problems. 5. GST, Getting started with GST, Transferring Input tax to GST, Interest supply of goods, GST reports. 6. Electronic Commerce Introduction, Tax Collected at Source (TCS), Procedures for E-commerce Operator, Input Tax Credit: - Introduction, Important Points, Input Service Distributors 7. Matching of Input Tax Credit, Returns, GSTR-2, Other Taxable Persons, Annual Return, Overview of the IGST Act, Overview, Other Provisions. 8. GST Portal, Introduction, GST Eco-system, GST Suvidha Provider (GSP), Uploading Invoices 											
100 % Practical											

Course Outcomes	
CO 1	Create a company, form groups and get automated financial statements
CO 2	Automate inventory management and GST filing

Books for study:

1. SundaraPandian.P, Muthulakshmi. S &Vijayakumar, T (2022), Research Methodology &Applications of SPSS in Social Science Research, Sultan Chand & Sons, New Delhi
2. Morgan George. A, Barrett C Karen, Leech L Nancy and Gloeckner Gene W (2019), IBM SPSS for Introductory Statistics, Routledge, 6th Edition, U.K
3. Official Guide to Financial Accounting using TallyPrime (2021), BPB Publication, Delhi
4. Chheda Rajesh, U (2020), Learn Tally Prime, Ane Books, 4th Edition, New Delhi

Books for reference:

1. Kulas John, Renata Garcia Prieto Palacios Roji, Smith Adams (2021), IBM SPSS Essentials: Managing and Analysing Social Sciences Data, 2nd Edition, John Wiley & Sons Inc., New York
2. Rajathi. A, Chandran. P (2011), SPSS for You, MJP Publishers, Chennai
3. SangwanRakesh (2022), Learn Tally Prime in English, Ascend Prime Publication, Pilani
4. LodhaRoshan (2022), Tally Prime with GST Accounting, Law Point Publication, Kolkata

Web references:

1. <https://www.spss-tutorials.com/basics/>
2. <https://www.tallyclub.in/>
3. <https://tallysolutions.com/business-guides/inventory-management-in-tally-erp9/>

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	2	3	4	5	6	1	2	3
CO 1	2	3	2	2	3	3	2	3	3
CO 2	3	3	2	2	3	3	2	3	3
CO 3	3	3	2	2	3	3	2	3	3
CO 4	3	3	2	3	3	3	3	3	3
CO 5	3	3	2	3	3	3	3	3	3

Strong - 3**Medium – 2****Low - 1**

FIRST YEAR - SEMESTER II

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCC24	SETTING UP OF BUSINESS ENTITIES	Core	3	1	-	-	3	4	25	75	100
Learning Objectives											
LO1	To understand the startup landscape and its financing										
LO2	To analyse the formation and registration of Section 8 company										
LO3	To outline the concept of LLP and business collaboration										
LO4	To understand the procedure for obtaining registration and license										
LO5	To create awareness about the legal compliances governing business entities										
Unit	Content									Hours	
1	Startups in India Start ups- Evaluation-Definition of a Start up – Choice of business Organisation-Types of business organizations – Factors governing selection of an organisation – Startups and its Registration-Startup India policy – Funding support and incentives – Indian states with Startup policies – Exemptions for startups – Life cycle of a Startup – Financing options available for Startups.									12	
2	Not-Profit Organisations Formation and registration of NGOs – Section 8 Company – Definition – Features – Exemptions – Requirements of Section 8 Company – Application for incorporation – Trust: Objectives of a trust – Persons who can create a trust – Differences between a public and private trust – Exemptions available to trusts – Formation of a trust - Trust deed–Society–Advantages–Disadvantages–Formation of a society–Tax exemption to NGOs.									12	
3	Limited Liability Partnership and Join Venture Limited Liability Partnership: Definition – Nature and characteristics -Advantages and disadvantages – Procedure for incorporation – LLP agreement – Annual compliances of LLP- Business collaboration: Definition – Types –Joint venture: Advantages and disadvantages–Types–Joint venture agreement-Successful joint ventures in India–Special Purpose Vehicle–Meaning– Benefits – Formation.									12	

4	Registration and Licenses Registration and Licenses: Introduction – Business entity registration – Mandatory registration – PAN – Significance – Application and registration of PAN – Linking of PAN with Aadhar –TAN – Persons liable to apply for TAN – Relevance of TAN – Procedure to apply for TAN –GST: Procedure for registration —MSME registration – Clearance from Pollution Control Board – FSSAI registration and license – Trade mark, Patent and Design registration.	12
5	Environmental Legislations in India Geographical Indication of Goods (Registration and Protection) Act, 1999: Objectives, Salient Features - The Environmental Protection Act,1986:Prevention, control and abatement of environmental pollution-The Water (Prevention And Control of Pollution) Act, 1974: The Central and State Boards for Prevention and Control of Water Pollution - Powers and Functions of Boards - Prevention and Control of Water Pollution - Penalties and Procedure- The Air (Prevention and Control of Pollution) Act, 1981:	12

CO	Course Outcomes
CO1	Build a startup and acquire finance
CO2	Comply with the legal requirements for Section 8Company
CO3	Initiate the proceedings for LLP
CO4	Illustrate the registration and licensing procedure
CO5	Examine the compliance of regulatory framework
TEXT BOOK	
1.	KailashThakur,(2007)“EnvironmentProtectionLawandPolicyinIndia”,2 nd Edition, Deep & Deep Publication Pvt. Ltd., New Delhi.
2.	Avtar Singh,(2015),“Intellectual Property Law”, Eastern Book Company,Bangalore

3.	ZadN.SandDivyaBajpai,(2022)“SettingupofBusinessEntitiesandClosure” (SUBEC), Taxmann, Chennai
4.	Amit Vohra & Rachit Dhingra (2022) “Setting Up Of Business Entities & Closure”, 6 th Edition, Bharath Law House, New Delhi
REFERENCE BOOKS	
1.	Setting up of Business Entities and Closure (2021), Module 1, Paper 3, The Institute of Company Secretaries of India, MP Printers, Noida
2.	TheAir(PreventionandControlofPollution)Act,1981,BareAct,2022Edition, Universal/LexisNexis, Noida
3.	The Water (Prevention and Control of Pollution) Act, 1974, Bare Act, 2022 Edition, Universal/LexisNexis, Noida

Mapping with Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	1	3
CO2	3	2	2	3	2	3	2	3	3
CO3	3	3	2	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3
TOTAL	15	14	13	15	14	15	14	13	15
AVERAGE	3	2.8	2.6	3	2.8	3	2.8	2.6	3

3 – Strong, 2- Medium, 1- Low

FIRST YEAR - SEMESTER II

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCE21	TECHNOLOGY IN BANKING	EC	3	1	-	-	3	4	25	75	100
Learning Objectives											
LO1	To understand the network essentials for an operational core banking system										
LO2	To provide an overview of customer centric electronic banking.										
LO3	To understand the evolution of electronic fund transfer systems in the banking Sector										
LO4	To analyse the digital technologies offered in banking services.										
LO5	To understand the information security system										
Unit	Content										Hours
1	Introduction to Core Banking Computerization Essentials of Bank Computerization–Stand Alone and Multi-User System–Local Area Network and Wide Area Network: Features, Advantages and Limitations – Core Banking: Essential Requirements and Benefits.										12
2	Electronic Payment System Electronic Payment Systems–ATM: Features–Advantages–Disadvantages–Brown Label and White Label ATM, PIN, Electro Magnetic Cards, Credit Cards, Debit Cards and Smart Cards: Features, Benefits and Limitations– Multiple Pin in Smart Card – Electronic Purse –Electronic Cheque –Electronic Cash										12
3	Banking Facilities Electronic Banking– Home Banking (Corporate and Personal) — Internet Banking – Mobile Banking: Features, Advantages and Limitations – Signature Storage and Retrieval System – Cheque Truncation – MICR and OCR: Characteristics–Advantages and Limitations.										12
4	Trends in Banking Technology Recent Developments in Banking Technology: Digital Account Opening – Application Programming Interface – Video Collaboration – Person-to-Person Payments – Cloud Computing – NUUP (National Unified USSD Platform), AePS (Aadhaar enabled Payment System) –APBS (Aadhaar Payments Bridge System) - Role of IDBRT (Institute of Development and Research in Banking) in banking technology development - Status of E-banking in India .										12
5	Information Security System Information security - Software based security systems - Hardware based security systems (smart card, M chip) – Hackers: Techniques used by the hackers, Phishing, Pharming, Key loggers, Screen loggers, Phishing - Trojans transaction poisoning - Card related fraud - Site cloning – False merchant site - Authentication methodologies and security measures (Password protection - Smart cards -										12

	Biometric characteristics) - Encryption and security - Customer confidentiality - Regulatory environment of internet banking - Legal Framework for Electronic Transactions – Cyber security as per Information Technology Act, 2000 – RBI Guidelines on Internet Banking.	
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	Course Outcomes
CO 1	Discuss the utility of stand-alone and multi-user systems access in Core banking.
CO 2	Assess the multi-faceted electronic payment options available to customer and host transactions in banking.
CO 3	Evaluate the dynamic transitions in Electronic Fund transfer systems.
CO 4	Evaluate the enhanced utility and user interface and other recent developments in banking technologies.
CO5	Assess the information security system

Books for study:

1. SangeethaR,(2013) “Technology in Banking”, 1st Edition, Charulatha Publications, Chennai.
2. Sohani, A K, (2012) “Technology in Banking Sector”, SBS Publishers and Distributors Pvt Ltd, New Delhi.
3. Uppal R K and Dhiraj Sharma, (2017) “Banking with Technology: A New Vision - 2020”, Bharti Publication, New Delhi
4. Indian Institute of Banking and Finance, (2017) “Information Technology, Data Communications and Electronic Banking”, 3rd Edition, Macmillan Publishers India Private Limited, Noida.
- 5.

Books for reference:

1. Vadlamani Ravi, (2007) “Advances in Banking Technology and Management: Impacts of ICT and CRM”, 1st Edition, Information Science Reference, Hershey, (USA).
2. Lucian Morrisand Tim Walker, (2021) “ The Handbook of Banking Technology” , John Wiley & Sons, New York.
3. Indian Institute of Banking and Finance, (2017), “Security in Electronic Banking”, 3rd Edition, Macmillan Publishers India Private Limited, Noida.
4. Uppal R.K., AgrimUppal(2008) “Banking Services and Information Technology: The Indian Experience”, New Century Publications, New Delhi.

Web references:

1. <https://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/64767.pdf>
2. https://www.researchgate.net/profile/Ravi-Vadlamani/publication/237383828_Chapter_I_Introduction_to_Banking_Technology_and_Management/links/572a89bc08aef7c7e2c4fbc3/Chapter-I-Introduction-to-Banking-Technology-and-Management.pdf
3. <https://eprocure.gov.in/cppp/rulesandprocs/kbadqkdlcswfjdelrquehwuxcfmijmuixngudufgbuubgubfugbububjxcgfvvsbdihbfgGhdfgFHtyhRtMjk4NzY=#:~:text=%5B9th%20June%2C%202000%5D%20An,communication%20and%20storage%20of%20information%2C>

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	2	3	4	5	6	1	2	3
C01	2	3	2	3	3	2	3	2	2
C02	2	3	2	3	3	3	3	3	3
C03	1	2	3	3	3	3	3	3	3
C04	2	2	2	3	3	3	3	3	3
C05	1	2	3	2	2	3	2	3	3

Strong - 3 Medium – 2 Low – 1

FIRST YEAR - SEMESTER II

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCE22	MANAGEMENT INFORMATION SYSTEM	EC	2	1	-	-	3	3	25	75	100
Learning Objectives											
LO1	To understand the basic concepts of MIS										
LO2	To have knowledge on the different types of information system										
LO3	To know about system analysis in detail										
LO4	To acquire knowledge in the needs of MIS										
LO5	To know about the development if MIS system										
Unit	Content									Hours	
1	Introduction: Management Information - Meaning of Information - Information needs of Managers-Web Data basis - Data warehousing - Knowledge management - Information system for decision making.									9	
2	Information Systems: Types of Information System - Transaction Processing System - Office Automation System - Decision Support System - Executive Support System - MIS - Evolution of MIS - Computer and MIS.									9	
3	System Analysis: System Analysis - System Planning and Mutual Investigation - System Design - The Process and Stages of System Design - Input / Output forms Design - File Organisation - System Implementation.									9	
4	MIS: Management Information Needs and Communication links for Marketing system, Production System, Accounting System, Manufacturing System, Inventory Control System and Budget Control System - IS Organisation - Top Management Responsibility - Processing Group Responsibility.									9	
5	Role of Computer in MIS Development - Maintenance of MIS - Operation of manual Information System - Role of Computer in MIS - Data base Concept - Expert Systems - System Audit.									9	

CO	Course Outcomes
CO1	To understand the basic concepts of MIS and knowledge management
CO2	To know the functions and different types of information system
CO3	To understand the different types system implementation
CO4	To study the processing of group responsibility
CO5	To acquire the knowledge about maintenance of MIS

TEXT BOOK

1.	M. Assam, Fundamentals of Management Information System, Fundamentals of Management Information System
2.	Effy Oz Management Information Systems Second edition, Thomson Learning Course Technology, 2002
3.	Kenneth.C Laudon and Jane P. Laudon Management Information Systems Prentice Hall of India Ltd, 2002
4.	Jawadekar W.S, Management Information Systems Tata McGraw Hill Publishing Company Ltd, 2002.

REFERENCE BOOKS

1.	David Knoenke (1989), Management Information Systems Tata McGraw Hill, New Delhi.
2.	Iandon K.C and Landon J.P (2001), Management Information Systems Maxwell Macmillan Publishing Company.
3.	Murdic Rose and Elaggett Information System for Modern Management Prentice Hall.
4.	Robert Schultheis Management Information Systems The Manager's View, Fourth edition, Tata McGraw Hill Edition, 1999

Mapping with Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	3	3	2	3	3	3	3	3	3
CO2	3	3	2	3	3	3	3	3	3
CO3	3	3	2	2	3	2	3	3	2
CO4	3	3	2	2	3	3	3	3	3
CO5	3	3	1	3	3	2	3	3	2
TOTAL	15	15	9	13	15	13	15	15	13
AVERAGE	3	3	1.8	2.6	3	2.6	3	3	2.6

3 – Strong, 2- Medium, 1- Low

FIRST YEAR - SEMESTER II

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCS21	DIGITAL MARKETING	SEC-NME	1	1	-	-	2	2	25	75	100
Learning Objectives											
LO1	To assess the evolution of digital marketing										
LO2	To appraise the dimensions of online marketing mix										
LO3	To infer the techniques of digital marketing										
LO4	To analyse online consumer behaviour										
LO5	To interpret data from social media and to evaluate game-based marketing										
Unit	Content										Hours
1	Introduction to Digital Marketing Digital Marketing – Transition from traditional to digital marketing – Rise of internet – Growth of e-concepts – Growth of e-business to advanced e-commerce – Emergence of digital marketing as a tool – Digital marketing channels.										6
2	Online Marketing Mix Online marketing mix-E-product – E-promotion – E-price – E-place – Consumer segmentation – Targeting – Positioning – Consumers and online shopping issues – Website characteristics affecting online purchase decisions – Distribution and implication on online marketing mix decisions – Digitization and implication on online marketing mix decisions.										6
3	Digital media channels Digital media channels – Search engine marketing – EPR – Affiliate marketing – Interactive display advertising – Opt-in-email marketing and mobile text messaging.										6
4	Social media and Viral Marketing viral marketing – Online campaign management using – Facebook, Twitter, Instagram, Snapchat, Pinterest – Metaverse marketing -Advantages and disadvantages of digital media channels – Metaverse marketing										6
5	Digital Analytics and Gamification Digital Analytics – Concept – Measurement framework – Demystifying web data - Owned social metrics – Measurement metrics for various media platforms – Earned social media metrics - Digital brand analysis Gamification and game-based marketing – Benefits – Consumer motivation for playing online games.										6

CO	Course Outcomes
CO1	Explain the dynamics of digital marketing
CO2	Examine online marketing mix
CO3	Compare digital media channels
CO4	Explain online consumer behavior
CO5	Analyse social media data

TEXT BOOK

3.	Puneet Singh Bhatia, (2019) “Fundamentals of Digital Marketing”, 2 nd Edition, Pearson Education Pvt Ltd, Noida.
2.	Dave Chaffey, Fiona Ellis-Chadwick, (2019) “Digital Marketing”, Pearson Education Pvt Ltd, Noida.
3.	Chuck Hemann & Ken Burbary, (2019) “Digital Marketing Analytics”, Pearson Education Pvt Ltd, Noida.

REFERENCE BOOKS

1.	Vandana Ahuja, (2016) “Digital Marketing”, Oxford University Press. London.
2.	Ryan Deiss & Russ Henneberry, (2017) “Digital Marketing”, John Wiley and Sons Inc. Hoboken.
3.	Alan Charlesworth, (2014), “Digital Marketing-A Practical Approach”, Routledge, London.
4.	https://www.digitalmarketer.com/digital-marketing/assets/pdf/ultimate-guide-to-digital-marketing.pdf https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/educational-technologies/all/gamification-and-game-based-learning https://journals.ala.org/index.php/ltr/article/download/6143/7938

Mapping with Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	3	3	2	3	3	3	3	3	3
CO2	3	3	2	3	3	3	3	3	3
CO3	3	3	2	2	3	2	3	3	2
CO4	3	3	2	2	3	3	3	3	3
CO5	3	3	1	3	3	2	3	3	2
TOTAL	15	15	9	13	15	13	15	15	13
AVERAGE	3	3	1.8	2.6	3	2.6	3	3	2.6

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER – III

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCC31	TAXATION	Core	3	1	2	0	5	6	25	75	100
Learning Objectives											
LO1	To identify deductions from gross total income of persons other than individual										
LO2	To compute taxable income for different classes of persons other than individual										
LO3	To understand the procedure for filing of returns and tax planning										
LO4	To assess Goods and Services Tax and Assessment of GST										
LO5	To compute customs duty as per Customs Act										
Unit	Content										Hours
1	Deductions (other than Individual) Deductions to be made in computing total income of persons other than individual - (80G, 80GGB & 80GGC, 80IA, 80IAB, 80IAC, 80IB, 80IBA, 80ID, 80IE, 80JJA, 80JAA, 80LA, 80M, 80P, 80PA) – Theory and Problems										18
2	Assessment of persons (other than Individual) Assessment of Firms, AOP, BOI, Company and Co-operative society - Problems										18
3	Tax Returns and Tax planning Return of income: Statutory obligation, Return Forms, Time for filing of return, Revised return, Modified return–Assessment -Tax Deducted at Source - Advance payment of Tax - Tax planning, Tax avoidance and Tax evasion – Theory only										18
4	Goods and Services Tax Goods and Services Tax: GST Act, 2017 – Important Definitions - Registration – Procedure for registration under Schedule III – Amendment of registration – Rates of Tax of IGST, CGST, SGST/UGTST- Assessment of GST- Self assessment – Provisional assessment – Scrutiny of returns – Assessment of non-filers of returns – Assessment of unregistered persons – Assessment in certain special cases – Tax Invoice – Credit and Debit Notes – Input Tax Credit- Anti profiteering- Theory only										18
5	Customs Act, 1962 Customs Act, 1962: Important Definitions – Basics – Importance of Customs Duty – Constitutional authority for levy of Customs Duty – Types of Customs 61 Duty – Prohibition of Importation and Exportation of goods – Valuation of goods for Customs Duty – Transaction Value – Assessable Value – Computation of Assessable Value and Customs Duty – Simple Problems and Theory										18

CO	Course Outcomes Students will be able to:
CO1	Apply the provisions of income tax to determine taxable income of person other than individual.
CO2	Evaluate the various types of taxes assessment.
CO3	Illustrate the methods of tax returns and tax planning
CO4	Apply the provisions of GST
CO5	Summarize the provisions of Customs Act

TEXT BOOK

1. D.P Guar & Narang, Income tax Law and practice,
2. Dr.T.Srinivasan, Income Tax Law and Practice
3. Balachandran V, (2021) Textbook of GST and Customs Law, Sultan Chand and Sons, New Delhi (Unit (4& 5)

REFERENCE BOOKS

1. Sha R.G. and Usha DeviN.,(2022) “Income Tax” (Direct and Indirect Tax), Himalaya Publishing House, Mumbai.
2. Anurag Pandey, “Law & Practices of GST and Service Tax”- Sumedha Publication House, New Delhi..
3. Swetha Jain, GST Law & Practice, Taxmann Publishers Pvt. Ltd, Chennai.
4. Girish Ahuja and Ravi Gupta, “Practical Approach to Direct and Indirect Taxes: Containing Income Tax and GST”, Wolters Kluwer India Private Limited

WEB RESOURCES

1. https://www.icsi.edu/media/webmodules/Final_Direct_Tax_Law_17_12_2020.pdf
2. https://www.icsi.edu/media/webmodules/16112021_Advance_Tax_Laws.pdf
3. https://www.icsi.edu/media/webmodules/TL_Final_pdf_25102021.pdf

Mapping with Programme Outcomes and Programme Specific Outcomes

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

3 – Strong, 2- Medium, 1- Lo

SECOND YEAR – SEMESTER – III

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	Ext	Total
24PCCC32	RESEARCH METHODOLOGY	Core	3	1	2	-	5	6	25	75	100
Learning Objectives											
LO1	To enhance the understanding the basics of Research Methodology										
LO2	To extend the knowledge of Data Collection and Sampling.										
LO3	To facilitate the students to have the deep understanding of Processing of Data										
LO4	To inculcate knowledge of data Analysis through Statistical Tools.										
LO5	To make the student to write the Research Report and know the basic knowledge of SPSS										

Unit	Content	Hours
I	INTRODUCTION Research - definition, characteristics, nature and scope. Various types of research - Formulation of research problem - Major steps in Research – Hypothesis – Research Design - Uses of social research.	15
II	SAMPLING AND DATA COLLECTION Sampling: Meaning, definition, need and types - Merits and demerits of sampling. Data collection: Sources of data; Primary and Secondary data. Procedure for data collection, Tool of data collection – Methods of Data Collection-Questionnaire – Interview-Schedule.	15
III	DATA PROCESSING AND ANALYSIS Processing of data: Editing, Coding and Tabulation - Problems - use of computer in social research. Analysis of data: Statistical analysis; Diagrammatic and Graphic Representation. Interpretation of results.	20
IV	STATISTICAL APPLICATIONS Statistical Tools used in Research – F test – t- Test, Analysis of Variance (ANOVA) – Chi-Square Analysis.(Problems)	20
V	RESEARCH REPORTS Structure and components - Types of Research Report, Good Research Report. Pictures and Graphs. Introduction to SPSS Package	20

Theory 80% Problem 20%

Course Outcome	
Student can able to “:	
CO1	Understand the basics of Research Methodology.
CO2	Know the Data Collection Methods and Sampling Types
CO3	Process Data collected through various representation
CO4	Do the data Analysis through opt Statistical Tools
CO5	Write the Research Report and Basic knowledge on SPSS Package
Textbooks	
1	Kothari.C.R. Research Methodology - Methods & Technology, New Age International Publisher, New Delhi.
2	Panneerselvam. R. Research Methodology, Prentice Hall of India, New Delhi, 2004.New Delhi, 1994.
3	Gupta, C.B., An introduction to Statistics Methods, Vikas Publishing House, 1998, New Delhi
Reference Book	
1	Wilkinson. T.S. & Bhandarkar. P.L. Methodology and Techniques of Social Research, Himalaya Publishing House, 2000, Mumbai.
2	Young, P.V., Scientific Social Survey and Research, Prentice Hall, 1949. New York.
3	Gupta, S.P. Statistical Methods, Sultan Chand and sons, 1999, New Delhi

Mapping of Course outcomes with POs and PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	3	1	1	2	3	3	3	2
CO2	3	3	3	3	1	1	2	1	1	3	2
CO3	3	3	3	3	1	1	2	1	1	3	1
CO4	3	3	3	3	1	1	2	1	1	3	2
CO5	3	3	3	3	1	1	2	3	1	3	2
Total	15	15	15	15	5	5	10	9	7	15	9
Average	3	3	3	3	1	1	2	1.8	1.4	3	1.8

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER – III

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCC33	HUMAN RESOURCE MANAGEMENT	Core	5	0	0	0	4	5	25	75	100
Learning Objectives											
LO1	To understand HRM, HR manager, roles and responsibilities, trends.										
LO2	To understand planning, selection process and strategies, talent management.										
LO3	To analyse training, development and Appraisal Methods.										
LO4	To familiarize with compensation and benefits management.										
LO5	To understand grievance handling and AI in HRM										
Unit	Content									Hours	
1	Introduction to Human Resource Management Concept and Scope of HRM- Objectives and Functions of HRM- Role and Responsibilities of HR Managers- Emerging Trends and Challenges in HRM									15	
2	Talent Acquisition and Management Human Resource Planning- Recruitment and Selection Strategies– on boarding and Induction Process- Employee Retention and Talent Management									15	
3	Training and Development Training and Development Strategies- Career Planning and Management - Performance Appraisal Methods and Techniques- 360-Degree Feedback									15	
4	Compensation and Benefits Management Wage and Salary Administration- Incentive and Reward Systems- Employee Benefits and Services- Payroll Management									15	
5	Employee Redressal and Technology in HRM Grievance Handling and Disciplinary Procedures– Compliance Handling- Strategies for Promoting Positive Employee Relations – Technology and use of AI in HRM.									15	

CO	Course Outcomes students will be able to :
CO1	Appreciate of the role of Human Resource Management and explore recent trends in HRM
CO2	Possess the skill set required by today's HR professionals, enabling them to make appropriate staffing decisions, including recruitment and selection
CO3	Analyse training, development techniques, career development methods and appraisal methods.
CO4	Provide innovative solutions to problems related to wages and employee benefit services.
CO5	Solve employee grievances and use of AI in HRM

TEXT BOOK

1.	Human resource management, K.Aswathappa, Sadhna dash
2.	Shashi K. Gupta & Rosy Joshi, Human Resource Management, Kalayani Publisher 1st Edition, 2018

REFERENCE BOOKS

1.	Steve Brown, HR on Purpose: Developing Deliberate People Passion, Society for Human Resource Management, 1st Edition, 2017
2.	Bernard Marr, Data-Driven HR: How to Use Analytics and Metrics to Drive Performance, Kogan Page, 1st Edition, 2018
3.	Kirs Wayne Cascio and John Boudreau, Investing in People: Financial Impact of Human Resource Initiatives, Prentice Hall, 2nd Edition, 2015

WEB RESOURCES

1	https://www.opentextbooks.org.hk/system/files/export/32/32088/pdf/Human_Resource_Management_32088.pdf
2	https://www.sscasc.in/wp-content/uploads/downloads/BBM/Human-Resource-Management.pdf
3	https://ddceutkal.ac.in/Downloads/UG_SLM/Commerce/Elective_1.pdf

Mapping with Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	1	1	0	1	1	1	3	3	3
CO2	3	3	3	2	1	1	1	1	2	3	2
CO3	3	2	3	3	2	2	2	3	3	2	3
CO4	3	2	3	2	2	2	3	3	2	3	3
CO5	3	3	2	2	2	2	2	2	3	2	3
TOTAL	15	13	12	10	7	8	9	10	13	13	14
AVERAGE	3	2.6	2.4	2	1.4	1.6	1.8	2	2.6	2.6	2.8

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER – III

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCC34	PYTHON AND R PROGRAMMING	SEC	3	1	0	0	3	4	25	75	100
Learning Objectives											
LO1	To understand the basics of Python										
LO2	To learn the concepts of Numpy and Scipy										
LO3	To understand the features of R										
LO4	To understand using visualisation using R										
LO5	To learn data handling										
Unit	Content									Hours	
1	Introduction to Python Introduction to Python - Variables - Types - Strings - Jupiter notebooks - Objects - Functions - Control structures - Operators - User-Defined Functions - Data Structures - List, Tuple - Dictionary.									12	
2	Numpy and Scipy Numpy library – Ndarray - Basic Operations - Conditions and Boolean Arrays - Shape Manipulation - Array Manipulation - General Concepts - Structured Arrays - Reading and Writing Array on Files - SciPy Library for Statistics.									12	
3	R Programming Introduction to R - Installing R - Features of R - Reserved words - Operators, -Strings - Data types and operations - Basic Data types – Vectors - List, Matrices – Arrays - Factors - Data frames - Flow control - Decision making - Loop Control Statements.									12	
4	Visualisation using R R as a Deluxe Calculator - Creating Objects and Assigning Values - Graphics: Simple Plotting - Advanced Plotting - Using Color in Plots - Using Subscripts and Superscripts in Graph Labels - Interactive Graphics - Saving Graphical Output - Loops.									12	
5	Data Handling Feature selection models - Data Preprocessing - Normalization - Methods - Data reduction - Data sampling - Heat maps - Classification: Based on analogy - rules - probabilities - statistics and prediction with R.									12	

CO	Course Outcomes
CO1	Describe the basics of Python
CO2	Explain the necessity for programming in biology
CO3	Apply R programming
CO4	Describe the concepts of visualization using R
CO5	Discuss Data handling

TEXT BOOK	
1.	Fabio Nelli (2018), “Python Data Analytics with Pandas, Numpy and Matplotlib”, 2nd Edition, Apress, New York.
2.	Wes McKinney, “Python for Data Analysis”, 2nd Edition, O’Reilly publication, USA.
3.	Jeeva Jose (2018), "Beginner's Guide for Data Analysis using R Programming", Khanna Book Publishing Co. Ltd., New Delhi.
4.	Norman Matloff (2011), “The Art of R programming - A tour of statistical software design”, 1st Edition, No Starch Press, USA.
REFERENCE BOOKS	
1.	Mark Lutz (2009), "Learning Python", O’Reilly Media Publication, USA.
2.	Martin C Brown (2001), "Python: The Complete Reference". McGraw-Hill Media, USA.
3.	Gentleman R, Carey V.J, Huber W, Irizarry, RA, and Dudoit, S, "Bioinformatics and Computational Biology Solutions Using R and Bioconductor", Springer, New York.
WEB RESOURCES:	
1.	www.sthurlow.com/python/
2.	www.learnpython.org
3.	www.codecademy.com/en/tracks/pytho

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	2	3	4	5	6	1	2	3
CO1	1	1	2	2	1	2	1	2	2
CO2	2	2	2	2	12	2	1	2	2
CO3	3	3	3	3	1	2	1	2	2
CO4	3	3	3	3	2	3	2	3	3
CO5	3	3	3	3	2	3	2	3	3
					Strong-3	Medium-2	low-1		

SECOND YEAR – SEMESTER – III

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCE31	ENTERPRISE RESOURCE PLANNING	EC	3	1	0	0	3	4	25	75	100
Learning Objectives											
LO1	To learn the history and growth of ERP										
LO2	To Explore the risks while using ERP										
LO3	To gain knowledge on the various ERP technologies										
LO4	To learn the dynamics of ERP marketplace										
LO5	To choose appropriate ERP solutions or packages										
Unit	Content										Hours
1	Enterprise an Overview Business Functions and Business Processes - Integrated Management Information - Business Modelling - Integrated Data Model. Business Processes: Major Business Processes. Introduction to ERP: Common ERP Myths - A Brief History of ERP - Reasons for the Growth of ERP Market - Advantages of ERP.										12
2	Risk of ERP People Issues - Process Risks - Technological Risks - Implementation Issues-Operation and Maintenance Issues - Unique Risks of ERP Projects - Managing Risks on ERP Projects - Benefits of ERP.										12
3	ERP and Related Technologies Business Process Reengineering (BPR) - Business Intelligence (BI) - Business Analytics (BA) - Data Warehousing- Data Mining - On - Line Analytical Processing (OLAP) - Product Life Cycle Management (PLM) - Supply Chain Management (SCM) - Customer Relationship Management (CRM) - Geographic Information Systems (GIS) - Intranets and Extranets.										12
4	ERP Market Place and Market Place Dynamics Market Overview - ERP Market Tiers. Market Place Dynamics - Industry - Wise ERP Market Share - ERP: The Indian Scenario. Business Modules of an ERP Package: Functional Modules of ERP Software: Integration of ERP, Supply Chain, and Customer Relationship Applications.										12
5	ERP Implementation Benefits of Implementing ERP - Implementation Challenges. ERP Implementation Life Cycle: Objectives of ERP Implementation - Different Phases of ERP Implementation Reasons for ERP Implementation Failure. ERP Package Selection: ERP Package Evaluation and Selection - The Selection Process - ERP Packages: Make or Buy.										12

CO	Course Outcomes
CO1	Recall the history and growth of ERP
CO2	Appraise the risks involved while using ERP
CO3	Asses various ERP technologies
CO4	Analyse the dynamics of ERP marketplace
CO5	Distinguish and choose appropriate ERP solutions or packages

TEXT BOOK

1.	Alexis Leon (2008), “Enterprise Resource Planning”, 2nd edition, Tata McGraw-Hill, Noida.
2.	Jagan Nathan Vaman (2008), “ERP in Practice”, Tata Mc Graw-Hill, Noida.
3.	Mahadeo Jaiswal and Ganesh Vanapalli (2009), “ERP”, Macmillan India, Noida

REFERENCE BOOKS

1.	Sinha P. Magal and Jeffery Word (2012), “Essentials of Business Process and 27 Information System”, Wiley India, USA.
2.	Summer (2008), “ERP”, Pearson Education, Noida.
3.	Vinod Kumar Grag and N.K. Venkitakrishnan (2006), “ERP- Concepts and Practice”, Prentice Hall of India, New Delhi.

Mapping of course outcomes with POs and PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2	1	2	2	3	3	2	1	3	3	3
CO2	3	3	2	3	3	3	2	2	3	3	3
CO3	3	3	2	3	3	3	2	2	3	3	3
CO4	3	3	2	3	3	3	2	1	3	3	3
CO5	3	3	2	3	3	3	2	1	3	3	3
TOTAL	14	13	10	14	15	15	10	12	15	15	15
AVERAGE	2.8	2.6	1.5	2.8	3	3	1.5	2.4	3	3	3

3 – Strong, 2- Medium, 1- Low

SECOND YEAR - SEMESTER - III

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCE32	INTERNATIONAL BUSINESS	EC	3	1	0	0	3	4	25	75	100
Learning Objectives											
LO1	To understand the concepts of International Business and International Business Environment.										
LO2	To analyse the different theories of International Business.										
LO3	To understand the legal procedures involved in International Business.										
LO4	To evaluate the different types of economic integrations.										
LO5	To analyse the operations of MNCs through real case assessment										
Unit	Content									Hours	
1	Introduction International business: Meaning – nature- concepts – international trade – analyzing the business environment – types – Micro and Macro environment: Role of Political environment- role of social – cultural environment- role of economic environment in international business									12	
2	Theoretical Foundations of International business Theoretical Foundations of International Business: Theory of Mercantilism- Theory of Absolute and Comparative Cost Advantage- Haberler’s Theory of Opportunity Cost- Heckscher- Ohlin Theory Market Imperfections Approach-Product Life Cycle Approach - Transaction Cost Approach-Dunning’s Eclectic Theory of International Production.									12	
3	Legal framework of International Business Legal framework of International Business: Nature and complexities: Code and common laws and their implications to Business- International Business contract- Legal provisions, Payment terms.									12	
4	Multi-Lateral Agreements and Institutions Multi-Lateral Agreements and Institutions: Economic Integration: Developed and Developing Countries-NAFTA- EU-SAARC, ASEAN BRICS- OPEC-Promotional role played by IMF-World Bank and its affiliates- IFC, MIGA and ICSID – ADB Regulatory role played by WTO and UNCTAD.									12	
5	Multinational Companies (MNCs) and Host Countries Multinational Companies (MNCs) and Host Countries: MNCs – Nature and characteristics- Management Practices - Host Country Government Policies-International Business and Developing countries: Motives of MNC operations in Developing- Countries – Challenges posed by MNCs									12	

CO	Course Outcomes
	On the successful completion of the course, student will be able to:
CO1	Recall the concepts of International Business and International Business Environment
CO2	Analyze different theories of International Business
CO3	Evaluate the legal procedures involved in International Business.
CO4	Explain the different types of economic integrations.
CO5	Identify the operations of MNCs through real case assessment

TEXT BOOK

1.	Charles W.L. Hill, International Business: Competing in the Global Market Place, McGraw Hill, New York
2.	Charles W. L. Hill, Chow How Wee & Krishna Udayasankar, International Business: An Asian Perspective- McGraw Hill, New York

REFERENCE BOOKS

1.	Donald Ball, Michael Geringer, Michael Minor & Jeanne McNett, International Business: The Challenge of Global Competition, McGraw Hill Education, New York
2.	Alan M Rugman & Simon Collinson, International Business: Pearson Education, Singapore

WEB RESOURCES

1	https://www.icsi.edu/media/webmodules/publications/9.5%20International%20Business.pdf
2	https://ebooks.lpude.in/commerce/mcom/term_3/DCOM501_INTERNATIONAL_BUSINESS.pdf
3	3. https://www.shobhituniversity.ac.in/pdf/econtent/International-Business-Unit-1-DrNeha-Yajurvedi.pdf

Mapping with Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	1	3	1	2	2	2	2	3	3	1	2
CO2	3	2	3	1	3	3	3	3	2	2	1
CO3	2	1	2	3	2	2	3	2	3	3	3
CO4	1	3	1	2	1	1	2	2	2	2	2
CO5	3	2	2	2	2	2	2	2	1	1	1
TOTAL	10	11	9	10	10	10	12	12	11	9	9
AVERAGE	2	2.2	1.8	2	2	2	2	2.4	2.2	1.8	1.8

3 – Strong, 2- Medium, 1- Low

SECOND YEAR - SEMESTER - III

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCS31	INTRODUCTION TO INDUSTRY 4.0	SEC	1	1	0	0	2	2	25	75	100
Learning Objectives											
LO1	To comprehend the change from industry 1.0 to 4.0 .										
LO2	To gain knowledge on the challenges and future prospects of applying artificial intelligence										
LO3	To learn the applications of big data for industrial growth and development										
LO4	To understand the applications of IoT in various sectors										
LO5	To understand why education has to be aligned with industry 4.0										
Unit	Content									Hours	
1	Introduction Industry: Meaning, Types - Industrial Revolution: Industrial Revolution 1.0 to 4.0: Meaning, Goals and Design Principles - Technologies of Industry 4.0 - Big Data – Artificial Intelligence (AI) – Industrial Internet of Things - Cyber Security – Cloud – Augmented Reality.									6	
2	Artificial Intelligence Artificial Intelligence (AI): Need, History and Foundations -The AI - environment - Societal Influences of AI – Application Domains and Tools - Associated Technologies of AI - Future prospects of AI – Challenges of AI.									6	
3	Big Data Evolution - Data Evolution - Data: Terminologies - Essential of Big Data in Industry 4.0 - Big Data Merits and Limitations - Big Data Components- Internet of Things (IoT): Introduction to IoT – Architecture of IoT Technologies for IoT - Developing IoT Applications - Applications of IoT - Security in IoT.									6	
4	Applications of IoT IoT in Manufacturing – Healthcare – Education – Aerospace and Defence – Agriculture – Transportation and Logistics – Impact of Industry 4.0 on Society: Impact on Business, Government, People - Tools for Artificial Intelligence - Big Data and Data Analytics - Virtual Reality - Augmented Reality –IoT - Robotics.									6	
5	Industry 4.0 Education 4.0 – Curriculum 4.0 – Faculty 4.0 – Skills required for Future - Tools for Education – Artificial Intelligence Jobs in 2030 – Jobs 2030 - Framework for aligning Education with Industry 4.0.									6	

CO	Course Outcomes
	Students will be able
CO1	Changes from industry 1.0 to 4.0.
CO2	Discover the challenges and future prospects of applying artificial intelligence.
CO3	Apply big data for industrial growth and development.
CO4	Apply IoT in various sectors like Manufacturing, Healthcare, Education, Aerospace and Défense.
CO5	Appraise why education has to be aligned with industry 4.0.

TEXT BOOK

1.	Seema Acharya J, Subhashini Chellappan, (2019) “Big Data and Analytics”, 2nd Edition, Wiley Publication, New Delhi. (Unit 3)
2.	Russel S, Norvig P (2010), “Artificial Intelligence: A Modern approach”, 3 rd Edition, Prentice Hall, New York (Unit II)
3.	Pethuru Raj and Anupama C. Raman, (2017), "The Internet of Things: Enabling Technologies, Platforms, and Use Cases" ,Auerbach Publications (Unit 4 & 5)

REFERENCE BOOKS

1.	Judith Hurwitz, Alan Nugent, Fern Halper, Marcia Kaufman, “Big Data for Dummies”, John Wiley & Sons, Inc.
2.	2. Nilsson (2000), Artificial Intelligence: A new synthesis, Nils J Harcourt Asia PTE Ltd.

WEB RESOURCES:

	https://sist.sathyabama.ac.in/sist_coursematerial/uploads/SEEA1403.pdf
	https://library.oapen.org/bitstream/handle/20.500.12657/43836/external_content.pdf
	https://www.vssut.ac.in/lecture_notes/lecture1428643004.pdf

Mapping of course outcomes with POs and PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2	1	2	2	3	3	2	1	3	3	3
CO2	3	3	2	3	3	3	2	2	3	3	3
CO3	3	3	2	3	3	3	2	2	3	3	3
CO4	3	3	2	3	3	3	2	1	3	3	3
CO5	3	3	2	3	3	3	2	1	3	3	3
TOTAL	14	13	10	14	15	15	10	12	15	15	15
AVERAGE	2.8	2.6	1.5	2.8	3	3	1.5	2.4	3	3	3

3 – Strong, 2- Medium, 1- Low

SECOND YEAR - SEMESTER IV

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCC41	ACCOUNTING FOR MANAGERIAL DECISIONS	CC	3	1	2	0	5	6	25	75	100

Learning Objectives

LO1	To enhance the understanding of the Accounting for Decision making.
LO2	To extend the knowledge of Ratio Analysis
LO3	To facilitate the students to have the deep understanding Cash flow and Fund Flow statements
LO4	To bring about the awareness of Absorption and Marginal Costing. To bring knowledge towards Budgeting and Budgetary Control
LO5	To know about financial decisions.

Unit	Content	Hours
1	Accounting for Decision making Introduction- Characteristics - Scope and Importance –Functions – Advantages and Disadvantages of Decision Accounting – Decision Accounting vs. Financial Accounting and Cost Accounting	15
2	Ratio Analysis Financial and Investment analysis - Analysis and Interpretation - Ratio Analysis.-	23
3	Cash Flow and Fund Flow Analysis Introduction- Construction and analysis of Fund flow and Cash flow statements	22
4	Absorption and Marginal Costing& Budgeting and Budgeting Control Absorption and Marginal Costing - Cost - volume-profit analysis - Applications and techniques: Key factor, Make/Buy decision, Export decision and Plant merger decision and Other Decisions. Budgeting and budgetary control - Functional Budgets- Master Budget –Fixed Budget - Flexible budgeting - Zero Base Budgeting	20
5	Financial decisions Introduction to Financial Decisions, Meaning and Types -Capital Structure - Theories Net Income Approach Net Operating Income Approach Traditional Approach Modigliani & Miller (MM) Theories, Financial Leverage, Operating Leverage and Combined Leverage.	20

Theory20%Problem80%

CO	Course Outcomes
	The students can able to
CO1	Understand the concept of Accounting for Decision making
CO2	Understand the Ratio Analysis.
CO3	Know the analysis of Fund flow and cash flow statements
CO4	Elucidate the Marginal Costing, Applications and its techniques. Knowledge about Budgeting and Budgetary Control
CO5	Analyze Various the financial decisions Making.
Textbooks:	
1	Management Accounting and Financial Control - S.N.Maheswari, Sultan Chand & sons, New Delhi
2	Accounting for Managerial Decisions by Dr.K.L.Gupta, Sathiya Bhawan Publications
3	Management Accounting, Pandey, I.M., Vani Publication, Delhi.
Reference Books:	
1	Management Accounting - Man Mohan and Goyal.
2	Management Accounting - Hingorani and Ramanathan.
3	Management Accounting - Charles Horngren.
Web resources:	
1	https://study.com/learn/lesson/cost-accounting-principles-examples-what-is-cost-accounting.html
2	https://efinancemanagement.com/financial-management/types-of-financial-decisions
3	https://www.accountingnotes.net/companies/fund-flow-analysis/fund-flow-analysis-accounting/13300
4	https://www.investopedia.com/terms/m/marginal-cost-of-production.asp
5	https://www.taxmann.com/post/blog/financial-management-financial-capital-structure

Mapping with Programme Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	2	3	3	3	2	3
CO2	3	3	3	3	2	3	3	3	2	3	3
CO3	2	3	2	3	3	3	2	3	3	3	3
CO4	3	3	3	3	2	3	2	3	2	3	3
CO5	2	3	3	3	3	2	3	3	3	3	3
Total	13	15	14	15	13	14	13	15	13	14	15
Average	2.6	3	2.8	3	2.6	2.8	2.6	3	2.6	2.8	3

3– Strong,2-Medium, 1-Low

SECOND YEAR - SEMESTER IV

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCC42	CORPORATE AND ECONOMICS LAWS	CC	6	0	0	0	5	6	25	75	100
Learning Objectives											
LO1	To analyse current and capital account transactions and deal with foreign currency under FEMA Act										
LO2	To understand unethical competitive practices and forums for redressal of consumer disputes under Competition Act and Consumer Protection Act										
LO3	To understand the procedure for obtaining patents and copyright under The Copyright and Patents Act										
LO4	To evaluate offences and punishment for money laundering under Prevention of Money Laundering Act										
LO5	To explain the registration and related procedures under Real Estate Act										
Unit	Content									Hours	
1	Introduction to Foreign Exchange Management Act, 1999 Foreign Exchange Management Act, 1999: Introduction – Definitions – Current Account transactions – Capital Account transactions – Remittance of assets – Possession and retention of foreign currency or foreign coins – Authorised person – Adjudication and Appeal.									18	
2	Competition Act, 2002 and Consumer Protection Act, 2019 Competition Act, 2002: Objective – Prohibition of Agreements, Prohibition of Abuse of Dominant Position - Regulation of combinations - Competition Commission of India: Duties, Powers and Functions of Commission. The Consumer Protection Act, 2019: Objects; Rights of consumers – Consumer Dispute Redressal Commissions - Consumer protection councils – Appeal against orders.									18	
3	Law relating to intellectual property rights Law relating to intellectual property rights: Introduction - The Copyright Act, 1957: Works in which copyright subsist - Ownership of copyright and the rights of the owner Assignment of copyright - Disputes with respect to assignment of copyright - Term of copyright - Registration of copyright - Infringement of copyright. The Patents Act, 1970: Inventions not patentable - Applications for patents – Publication and examination of applications - Grant of patents and rights conferred - Register of patents. Trademarks Act, 1999: Conditions for registration - Procedure for and duration of registration - Effect of registration - Collective marks.									18	

4	Prevention of Money Laundering Act, 2002 Prevention of Money Laundering Act, 2002: Offence of money laundering –Punishment for money laundering –Attachment, adjudication and confiscation - Obligations of Banking Companies, Financial Institutions and Intermediaries – Summons, Search and Seizure –Appellate Tribunal..	18
5	Real Estate (Regulation and Development) Act, 2016 Real Estate (Regulation and Development) Act, 2016: Introduction - Salient features of the Act - Registration of Real Estate Project – Registration of Real Estate agents – Functions and duties of promoter – Rights and duties of Allottees – Offences, penalties and adjudication – Specimen agreement for sale to be executed between the promoter and the allottee.	18

CO	Course Outcomes
	After Completing the course, students will be able to:
CO1	Recall important provisions of FEMA
CO2	Evaluate the provisions of the Competition Act, 2002 and Consumer Protection Act to govern commercial competition and protect a consumer
CO3	Recall the process relating to obtaining copyrights and patents.
CO4	Examine the provisions of Money Laundering Act
CO5	Analyse the provisions relating to regulation of real estate.

Textbooks:	
1	1. MunishBandari (2022), A Textbook on Corporate and Economic Laws, 33rd Edition, Bestword Publications, New Delhi
2	AmitVohra and RachitDhingra (2022), Economic, Business and Commercial Laws, 18th Edition, Bharat Book House, Siliguri
3	AnkajGarg (2021), Taxmann’s Corporate and Economic Laws, 7th Edition, Taxmann Publications., New Delhi
Reference Books:	
1	Sekar G and SaravanaPrasath B (2022), Students’ Handbook on Corporate and Economic Law, Commercial Law Publishers (India) Pvt.Ltd., New Delhi
2	Taxmann (2021), FEMA & FDI Ready Reckoner, 15th Edition, Taxmann Publications, New Delhi
3	AhujaV.K. and ArchaVashishtha (2020), Intellectual Property Rights (contemporary Developments), Thomson Reuters, Toronto, (CAN)
Web resources	
1	https://resource.cdn.icai.org/68524bos54855-cp2.pdf
2	https://resource.cdn.icai.org/67335bos54154-m3cp3.pdf
3	https://resource.cdn.icai.org/68523bos54855-cp1.pdf

Mapping with Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	2	2	3	3	3	2	3	2	1
CO2	3	3	3	2	2	3	2	2	3	1	2
CO3	3	3	2	2	2	3	2	2	3	2	1
CO4	3	3	3	3	3	3	3	2	3	1	1
CO5	3	3	2	2	3	3	3	2	3	2	2
TOTAL	15	15	12	11	13	15	13	10	15	8	7
AVERAGE	3	3	2.4	2.2	2.6	3	2.6	2	3	1.6	1.4

3 – Strong, 2- Medium, 1- Low

SECOND YEAR - SEMESTER IV

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCE41P	PROGRAMMING WITH JAVA LAB	EC	-	-	6	-	4	6	25	75	100
Learning Objectives											
LO1	To gain the knowledge of Datatypes, Operators and Control statements.										
LO2	To understand the concepts of Classes and objects and Constructor.										
LO3	Describe the concept of inheritance, Arrays and String Handling methods										
LO4	To understand the concepts of Exception Handling, Multithreading and AWT Controls										
LO5	To gain the knowledge of Crud Operation, TCP and UDP Sockets and GUI Concepts										
List of Programs									Hours		
1. Handling Primitive Data types, Operators and Control statements									90		
2. Creating Application using Classes and objects, Copy Constructor											
3. Developing Package, inheritances and interfaces											
4. Implementing Arrays and String Handling methods											
5. Exception Handling and I/O File handling											
6. Implementing Multithreading											
7. Applet and AWT Controls											
8. CRUD operation Using JDBC											
9. Client Server using TCP and UDP Socket											
10. GUI application with JDBC											

Course Outcomes	
CO	After Completing the course, students will be able to
CO1	Recognize and understand the concepts of Control statements
CO2	Learn the methods of Constructor.
CO3	To implement the concept of Arrays and String Handling methods.
CO4	Able to write programs in Exception Handling and methods,AWT Controls.
CO5	To understand the concepts of Crud Operation, TCP and UDP Sockets and GUI Concepts.

Textbooks:	
1	S. Sagayaraj, R. Denis, P. Karthik & D. Gajalakshmi, “Java Programming“, Universities Press, 2017
2	Java The complete reference, 9th edition, Herbert Schildt, McGraw Hill Education (India) Pvt. Ltd.
3	Understanding Object-Oriented Programming with Java, updated edition, T. Budd, Pearson Education.
4	The Complete Reference" by Herbert Schildt.
Reference Books:	
1.	Patrick Naughton & Herbert Schildt, “The Complete Reference: Java 2”, Tata McGraw Hill, 1999.
2.	K. Arnold and J. Gosling, “The JAVA programming language”, Third edition, Pearson Education, 2000.
3.	Timothy Budd, “Understanding Object-oriented programming with Java”, Updated Edition, Pearson Education,2000.
Web resources	
1	https://javabeginnerstutorial.com/core-java-tutorial
2	http://docs.oracle.com/javase/tutorial/
3	https://www.coursera.org/

Mapping with Programme Outcomes and Programme Specific Outcomes

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

3 – Strong, 2- Medium, 1- Low

SECOND YEAR - SEMESTER IV

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCE42P	PYTHON PROGRAMMING LAB	EC	-	-	6	-	4	6	25	75	100
Learning Objectives											
LO1	To Understand the basics of Python Working with Number and String Operations.										
LO2	To study about the Tuples, Sets and Dictionaries in Python.										
LO3	To Understand and apply the concepts List Operation.										
LO4	To identify and understand the concepts of Flow Control and Function in Python and Modules and Packages.										
LO5	To understand using Object Oriented and File Handling and Exception in Python.										
List of the Programs									Hours		
1. Write a Python Program Working with Numbers.									90		
2. Write a Program using String Operations.											
3. Write a Program using Tuples and Set.											
4. Write a Program using Implementation of Dictionaries.											
5. Write a Program using List Operation.											
6. Write a Program using Flow Control and Function.											
7. Write a Program using Modules and Package.											
8. Write a Program using File Handling											
9. Write a Program using Object Oriented Programming											
10. Write a Program using Exception Handling and Regular Expression											

CO	Course Outcomes After Completing the course, students will be able to
CO1	Describe the basics of Python Numbers and String Operations
CO2	Describe the concept of Tuples, Sets and Dictionaries
CO3	To make the students aware of Analyze the List Operations in Python
CO4	Able to write programs in Python using Flow Control and Function
CO5	To understand the concepts of Object Oriented and File Handling and Exception in Python.

Textbooks:	
1	1 Fabio Nelli (2018), "Python Data Analytics with Pandas, Numpy and Matplotlib", 2nd Edition, Apress, New York.
2	Wes McKinney, "Python for Data Analysis", 2nd Edition, O'Reilly publication, USA.
3	Jeeva Jose (2018), "Beginner's Guide for Data Analysis using R Programming", Khanna Book Publishing Co. Ltd., New Delhi.
4	Norman Matloff (2011), "The Art of R programming - A tour of statistical software design", 1st Edition, No Starch Press, USA.
Reference Books:	
1	Mark Lutz (2009), "Learning Python", O'Reilly Media Publication, USA.
2	Martin C Brown (2001), "Python: The Complete Reference". McGraw-Hill Media, USA.
3	Gentleman R, Carey V.J, Huber W, Irizarry, RA, and Dudoit, S, "Bioinformatics and Computational Biology Solutions Using R and Bioconductor", Springer, New York.
Web resources	
1	www.sthurlow.com/python/
2	www.learnpython.org
3	www.codecademy.com/en/tracks/pytho

Mapping with Programme Outcomes and Programme Specific Outcome

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

3 – Strong, 2- Medium, 1- Low

SECOND YEAR - SEMESTER IV

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCP41	STOCK MARKET OPERATIONS	PEC	2	-	1	-	2	3	25	75	100
Learning Objectives											
LO1	To get students acquainted with the nature of stock market										
LO2	To learn the pattern of trading and settlement in stock market										
LO3	To understand the process of online trading and meaning of basic concepts										
LO4	To know and categorize the option contracts and its strategies										
LO5	To observe the psychology of trader in the stock market										
Unit	Content									Hours	
1	Introduction to stock market Capital and Stock Market – Stock Exchanges – NSE & BSE– Index–Types of Index- Demat Account & Trading Accounting– Brokerage and Taxation –Intraday Trading.									9	
2	Trading & settlement in stock market Patterns of Trading & Settlement – Speculations and its types – Brokerage – Settlement Procedures –National Securities Depository Ltd. (NSDL), Central Securities Depository Ltd.(CDSL)									9	
3	Online trading process Trading – Types of trading – Risk, Reward, Target, Stop Loss – Walk through of online trading–Lot Sizes – Minimum Losses and Maximum Profits Stop loss method to increase profits – Ledger Statement–Transaction History–Contract Notes									9	
4	Options trading Concepts of Options – Call Option – Put Option – In-the-money, At-the-money, Out-of-the-money – Option Valuation Basic Option trading strategies.									9	
5	Trading psychology News and Social Media –Attitude of a Trader–Wealth Creation through Trading –Successful trading in various market movements – Trading Routine									9	
Theory 80% Practical Exposure 20%											

***The Practical exposure should be handled through various activities involved in concerned industries day to day operations**

CO	Course Outcomes After Completing the course, students will be able to
CO1	Explain students acquainted with the nature of stock market
CO2	Analyse the pattern of trading and settlement in stock market
CO3	Analyse the process of online trading and meaning of basic concepts
CO4	Examine the option contracts and its strategies
CO5	Analyse the psychology of trader in the stock market

Textbooks:	
1	Prasanna Chandra, "Investment Analysis and Portfolio management", Tata Mc Graw Hill ,3 rd Edn.,2008.
2	Punithavathy Pandian, "Security Analysis and Portfolio Management" , Vikas Publishing House Pvt. Ltd., Chennai,2021.
3	Securities Operations and Risk Management by National Institute of Securities Market, 2023.
Reference Books:	
1	V.A. Avadhani, Investment and Securities Market in India, Himalaya Publishing House, 10 th edition, 2017
2	Ravi Puliani and Mahesh Puliani, Manual of SEBI, Bharat Law House, Delhi, 2017.
3	NCFM- Options Trading Strategies Module book, National Stock Exchange of India Ltd, 2009

Mapping with Programme Outcomes and Programme Specific Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	3	1	2	3	2	1
CO2	3	2	3	2	1	1	1	2	2	2	2
CO3	3	3	2	3	2	3	2	3	3	3	3
CO4	3	2	2	2	2	3	2	3	2	2	1
CO5	2	2	2	2	2	2	2	2	3	3	2
TOTAL	14	12	12	11	9	12	8	12	13	12	9
AVERAGE	2.8	2.4	2.4	2.2	1.8	2.4	1.6	2.4	2.6	2.4	1.8

3 – Strong, 2- Medium, 1- Low

SECOD YEAR – SEMESTER IV

Course Code	Course Name	Category	L	T	P	S	Credits	Hours	Marks		
									CIA	External	Total
24PCCL41	WOMEN ENTREPRENEURSHIP	SLC	2	0	1	0	2	3	25	75	100
Learning Objectives											
LO1	To acquaint students to understand the basic concepts of Women Entrepreneurship.										
LO2	To Identify the process of entrepreneurship										
LO3	To understand the concepts of women entrepreneurship										
LO4	To understand attempts to provide exposure of the Micro Finance, SHGs and Governmental support to Women Entrepreneurs										
LO5	To acquire knowledge on SHG and Micro finance available to Women Entrepreneurs.										
Unit	Content									Hours	
1	Entrepreneurship Concept of Entrepreneurship - Nature and Development of Entrepreneurship - Entrepreneurial decision process - Entrepreneurial traits – types - Culture and structure - competing theories of Entrepreneurship - Entrepreneurial motivation - Establishing Entrepreneurial Systems.									9	
2	Entrepreneurial Process Identifying and evaluation the opportunity - developing a business plan – resources required and the managing the enterprise. Strategic orientation - commitment to opportunity – resources - control of resource and management structure. Entrepreneurial Careers – education – training - Entrepreneurial Ethics.									9	
3	Women entrepreneurship Concept of Women Entrepreneurs, Importance of Women Entrepreneurship, Functions of Women Entrepreneurs, Typologies of Women Entrepreneurs, factors contributing to women entrepreneurship progress, Entrepreneurial skills and competency requirements for women entrepreneur, Problems of Women Entrepreneurs, Role Models of Woman Entrepreneurs, Women Entrepreneurship, Role of Women Entrepreneurs In India									9	
4	Role of financial institution in support of women entrepreneurial activities: SIDO, DIC, EDI, NAYE, NISIET, SIDBI, SEF, WCFC and commercial banks, Long term and Short term finance.									9	

	NIESBUD, SEWA, ALEAP - Institutional Infrastructure. Obstacles in Getting Financial Assistance by Institutions	
5	Self Help Group and Micro Finance: SHGs and different schemes, SHG and Poverty Alleviation Programs, SHG and Special Programs/ Schemes, Benefit of SHGs to women, Microfinance – An Introduction, Demand and Supply of Microfinance, Microfinance – A Development Strategy and an Industry, Role of Grameen Banks in Microfinance, Microfinance Approaches and Financial Inclusion, Impact of Microfinance on Empowerment of Women	9

CO	Course Outcomes After Completing the course, students will be able to
CO1	Acquire the students to understand the basic concepts of Women Entrepreneurship.
CO2	Insight into the pragmatical process of business plan execution, product development and sources of funding.
CO3	Understand the concepts of women entrepreneurship
CO4	Attempts to provide exposure of the Micro Finance, SHGs and Governmental support to Women Entrepreneurs
CO5	Analyse the practices of SHG and Micro finance available to Women Entrepreneurs.

Textbooks:	
1	C. B. Gupta and S. S. Khanka; Entrepreneurship and Small Business Management; Sultan Chand & Sons, New Delhi.
2	C. B. Gupta and N. P. Srinivasan; Entrepreneurial Development in India; Sultan Chand & Sons, New Delhi
Reference Books:	
1	S. S. Kanka; Entrepreneurship Development; Sultan Chand & Sons, New Delhi.
2	C. S. V. Murty; Small Scale Industries and Entrepreneurial Development; Himalaya Publishing House, Mumbai.
3	Aruna Kaulgud; Entrepreneurship Management; Vikas Publications, New Delhi. 11. Chetan Kal(ed) Women and Development Discovery Publishing Home, New Delhi, 12. Journal of Women's Entrepreneurship and Education
4	Chetan Kal(ed) Women and Development Discovery Publishing Home, New Delhi,

1.	https://gacbe.ac.in/pdf/ematerial/18BCO62C-U5.pdf
2.	https://vidyaprasar.dei.ac.in/wp-content/uploads/2022/03/Lesson-14.pdf
3.	https://www.sdcollegeambala.ac.in/wp-content/uploads/2023/02/EDJUNE2022-P-27.pdf

Mapping with Programme Outcomes and Programme Specific Outcomes

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

3 – Strong, 2- Medium, 1- Low