



# Dr. N.G.P. ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)

Approved by Government of Tamil Nadu & Accredited by NAAC with A++Grade (3<sup>rd</sup> Cycle-3.64 CGPA)

Dr.N.G.P.- Kalapatti Road, Coimbatore-641048, Tamil Nadu, India

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## REGULATIONS 2025-26 for Post Graduate Programme

(Outcome Based Education model with Choice Based Credit system)

### M.Com(CA)Degree

(For the students admitted during the academic year 2025-26 and onwards)

#### PROGRAMME: M.Com(CA)

Eligibility A candidate who has passed any B.Com related UG Degree is eligible B.Com(CA) / B.Com / B.Com(IT) / B.Com(E-Commerce) / B.Com(PA) / B.Com(Finance) / B.Com (B&I) / BBM / B.C.S (C.A) / B.Com (C.S) / B.Com (C.S & C.A) shall be given preference, as per the norms set by the Government of Tamil Nadu or an Examination accepted as equivalent thereto by the Academic Council, subject to such conditions as may be prescribed thereto are permitted to appear and qualify for the Master of Commerce with Computer Applications Degree Examination of this College after a Course of study of Two Academic Years.

#### PROGRAMME EDUCATIONAL OBJECTIVES

The Curriculum is designed with the following objectives:

1. To educate the learners about the role of finance, technology and its social obligation in the globalized world.
2. To introduce the students to an engaging, analytical and creative approach towards business issues and encourage independent judgment and critical awareness.
3. To enable professional level competence in the managerial and entrepreneurial domains required to start and run, or play a significant and responsible role in a business.
4. To inculcate research aptitude in the minds of learners for pursuing research in academics and industry.
5. To equip learners with up to date skills to use the latest tools of computing essential in the technological world.

## PROGRAMME OUTCOMES

On the successful completion of the program, students will/will be:

PO Number	PO Statement
PO1	Possess professional level knowledge and skill over advanced concepts in commerce and computer application.
PO2	Exhibit a deep understanding and mastery over technical and quantitative aspects related to Finance, Information technology and marketing.
PO3	Demonstrate practical knowledge gained through industrial visits and rigorous training programmes.
PO4	Empowered to carry out action-oriented research in commerce and computer applications.
PO5	Enabled to work in challenging environments that require creativity, teamwork and proficient managerial skills. And remain focused on continuous professional development.

**Credit distribution:**

Subjects	No. of Papers	Credit	Semester No.
Core	14	55	I-IV
Extra Departmental Course (EDC)	1	4	II
Discipline Specific Elective (DSE)	4	16	I-IV
Core Practical	4	7	I-IV
Internship	1	2	III
Project Viva Voce	1	8	IV
<b>TOTALCREDITS</b>		<b>92</b>	



## CURRICULUM

## M.Com CA

Course Code	Course Category	Course Name	L	T	P	Duration		Exam (hours)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
First Semester												
25IBP1CA	Core-I	Strategic Human Resource Management	5	-	-	5	60	3	25	75	100	4
25COP1CA	Core-II	Managerial Economics	5	-	-	5	60	3	25	75	100	4
25CRP1CB	Core-III	Advanced Corporate Accounting	5	1	-	6	72	3	25	75	100	4
25CMP1CA	Core-IV	Python Programming for Business	5	1	-	6	72	3	25	75	100	4
25CMP1CP	Core Practical-I	Python Programming	-	-	4	4	48	3	40	60	100	2
25COP1DA	DSE-I	Consumer Behaviour	4	-	-	4	48	3	25	75	100	4
25CMP1DA		Software Design and Testing										
25CMP1DB		Financial Markets and Services										
Total			24	2	4	30	360				600	22



Course Code	Course Category	Course Name	L	T	P	Duration		Exam (hours)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Second Semester												
25CMP2CA	Core-V	Business Finance	5	-	-	5	60	3	25	75	100	4
25COP2CA	Core-VI	Direct Tax	5	1	-	6	72	3	25	75	100	4
25CMP2CB	Core-VII	Relational Database Management System	6	-	-	6	72	3	25	75	100	4
25CMP2CP	Core Practical-II	RDBMS	-	-	4	4	48	3	40	60	100	2
25DAP2EA	EDC	Business Analytics	5	-	-	5	60	3	25	75	100	4
25IBP2DB	DSE-II	Digital Marketing	4	-	-	4	48	3	25	75	100	4
25CMP2DA		Information Security										
25CMP2DB		Banking Services										
Total			25	1	4	30	360				600	22

Course Code	Course Category	Course Name	L	T	P	Duration		Exam (hours)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Third Semester												
25COP3CA	Core-VIII	Business Research Methods	5	-	-	5	60	3	25	75	100	4
25CMP3CA	Core-IX	Applied Cost Accounting	5	1	-	6	72	3	25	75	100	4
25CMP3CB	Core-X	Marketing Management	5	1	-	6	72	3	25	75	100	4
25CMP3CC	Core-XI	Software Project Management	5	-	-	5	60	3	25	75	100	5
25COP3CP	Core Practical-III	Statistical Tools for Research	-	-	4	4	48	3	40	60	100	2
25CMP3CT	IT	Internship	-	-	-	-	-	3	40	60	100	2
25COP3DA	DSE-III	Services Marketing	4	-	-	4	48	3	25	75	100	4
25CMP3DA		Data Mining and Data Interpretation										
25CMP3DB		Financial Derivatives										
Total			24	2	4	30	360				700	25

Course Code	Course Category	Course Name	L	T	P	Duration		Exam (hours)	Max Marks			Credits
						Week	Total		CIA	ESE	Total	
Fourth Semester												
25CMP4CA	Core-XII	Accounting for Management	5	-	-	5	60	3	25	75	100	4
25CMP4CB	Core-XIII	Java Programming	3	-	-	3	36	3	25	75	100	2
25CMP4CC	Core-XIV	Setting Up of Business Entities	4	-	-	4	48	3	25	75	100	3
25CMP4CV	Project	Project and Viva-Voce	-	-	12	12	144	-	80	120	200	8
25CMP4CP	Core Practical-IV	Java Programming	-	-	2	2	24	3	40	60	100	1
25COP4DA	DSE-IV	International Marketing	4	-	-	4	48	3	25	75	100	4
25CMP4DA		Big Data Analytics										
25CMP4DB		Fin Tech Services										
Total			16	-	14	30	360				700	22
Grand Total											2500	92



**DISCIPLINESPECIFIC ELECTIVE**

Students shall select the desired course of their choice in the listed elective course during all the Semesters

**Semester I (Elective I)****List of Elective Courses**

S.No.	Course Code	Name of the Course
1	25COP1DA	Consumer Behavior
2	25CMP1DA	Software Design and Testing
3	25CMP1DB	Financial Markets and Services

**Semester II (Elective II)****List of Elective Courses**

S.No.	Course Code	Name of the Course
1	25IBP2DB	Digital Marketing
2	25CMP2DA	Information Security
3	25CMP2DB	Banking Services

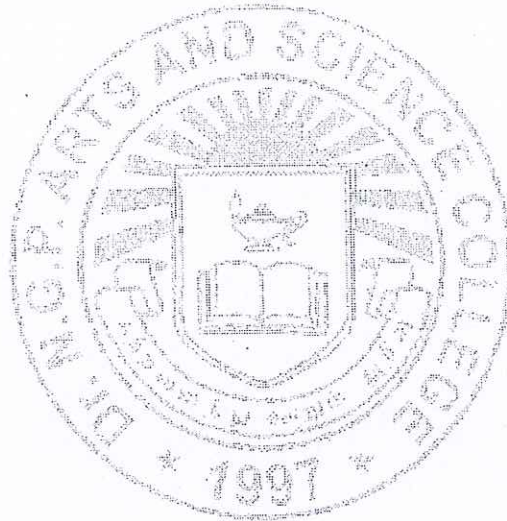
**Semester III (Elective III)****List of Elective Courses**

S.No.	Course Code	Name of the Course
1	25COP3DA	Services Marketing
2	25CMP3DA	Data Mining and Data Interpretation
3	25CMP3DB	Financial Derivatives

**Semester IV (Elective IV)****List of Elective Courses**

S.No.	Course Code	Name of the Course
1	25COP4DA	International Marketing

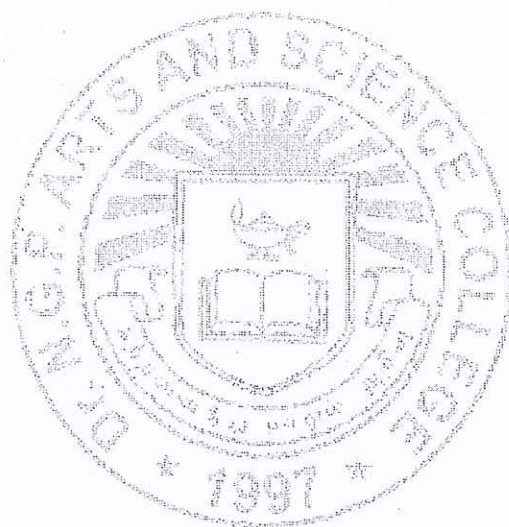
2	25CMP4DA	Big Data Analytics
3	25CMP4DB	FinTech Services



### EXTRA CREDIT COURSES

The following are the courses offered under self-study to earn extra credits: Semester III

S.No.	Course Code	Name of the Course
1	25CMPSSA	Retail Marketing
2	25CMPSSB	E-Commerce Technology





Semester - I							
CORE I: STRATEGIC HUMAN RESOURCE MANAGEMENT							
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	25IBP1CA	STRATEGIC HUMAN RESOURCE MANAGEMENT	Core	60	-	-	4

<b>Preamble</b>	<p>This course has been designed for students to learn and understand</p> <ul style="list-style-type: none"> <li>the relationship between strategic human resource management and corporate strategy</li> <li>the importance of effective human resource strategy and how to manage the workforce diversity.</li> <li>various strategic human resource management issues.</li> </ul>
<b>Prerequisite</b>	Knowledge on basic human resource management concepts and process

Course Outcomes (Cos)		
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	understand the importance of Strategic Human resource management in an organization.	K2
CO2	explain the concept of workforce diversity and changing employment relationship.	K2
CO3	interpret the importance of competency mapping and talent management.	K3
CO4	analyse the challenges in strategic human resource management.	K4
CO5	analyse the global factors influencing the adoption and implementation of Strategic Human Resource Management.	K4

Mapping with Program Outcomes:					
Cos/ POs	PO1	PO2	PO3	PO4	PO5
CO1	✓		✓		✓
CO2		✓	✓	✓	
CO3	✓	✓		✓	
CO4			✓	✓	✓
CO5	✓	✓			✓

25IBP1CA	STRATEGIC HUMAN RESOURCE MANAGEMENT
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### Syllabus

Unit	Content	Hrs	Resources
I	<b>Introduction to Strategic Human Resource Management</b> Meaning- Evolution- Need, importance and types of strategic human resource management- A shift from traditional HRM to strategic HRM- Relationship between strategic human resource management and Corporate strategy- Challenges of strategic HRM- HR architecture. Case study on HR strategy.	12	Text Book, e- Resource & Article
II	<b>Human Resource Strategy</b> Introduction- Components of a well-designed HR strategy- Key steps in formulating HR strategy - Strategic approach to human resources, planning, training and development, reward and compensation- Managing workforce diversity. Case study on Managing workforce diversity	12	Text Book & e- Resource
III	<b>Competency and Potential Development</b> HR Competencies- Competency mapping. Potential development: The concept and importance of talent management- Talent acquisition- Attracting and retaining talent- Career planning - Succession planning: Elements of succession planning- Challenges of succession planning. Case study on talent management	12	Reference Book & e- Resource & Article
IV	<b>Strategic Human resource management issues</b> Managing employee relations- Employee engagement- Investment in training and development- Learning organization- Skill based pay- Variable pay- HR outsourcing- Factors driving the need to outsource- Stages of outsourcing- Retrenchment and redundancy. Case study on HR outsourcing.	12	Text Book & e- Resource
V	<b>Global dimensions:</b> Cross cultural management- Global competitive advantage- Employer branding and employee value proposition- Benchmarking and balanced scorecard- HR audit- Global ethical environment. Case study on HR audit	12	e- Resource
	<b>TOTAL</b>	<b>60</b>	

Note: Case Studies related to the above topics to be discussed. Examined externally. (Section D : Compulsory question for case studies.)
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<b>Text book</b>	1.	Ananda Das Gupta, 2021, "Strategic Human Resource Management", 1st edition, Taylor and Francis group, New York
	2.	Charles R. Greer, 2022, "Strategic Human Resource Management", 2nd edition, Pearson Education India.
<b>Reference Books</b>	1.	Aswathappa K, 2017, "Human Resource Management: Text and Cases", 8th edition, Tata McGraw Hill Education, New York, United States.
	2.	Gary Rees, Paul Smith, 2021, "Strategic Human Resource Management", 3rd edition, SAGE Publications Ltd, New Delhi.
	3.	Jeffrey A. Mello, 2019, "Strategic Human Resource Management", 5th edition Cengage Learning, United States.
	4.	Garry Dessler & Varkey, 2009, "Human Resource Management", 15th edition, Pearson, New Delhi.

<b>Journal and Magazines</b>	<ul style="list-style-type: none"> <li>Strategic human resource management: Employee involvement, diversity, and international issues by Gary C. McMahan, Myrtle P. Bell, Meghna Virick, Human Resource Management Review Volume 8, Issue 3, Autumn 1998, Pages 193-214.</li> <li>McKinsey article on Winning-with-your-talent-management-strategy The Power of Strategic Human Resource Management: Building a Thriving Workforce by Praveen Putti (Talent Acquisition Specialist)</li> </ul>
<b>E-Resources and Website</b>	<ol style="list-style-type: none"> <li><a href="https://ebooks.inflibnet.ac.in/mgmt01/chapter/history-and-environment-of-hrm-challenges-of-hrm-hrm-environment-strategic-hrm/">https://ebooks.inflibnet.ac.in/mgmt01/chapter/history-and-environment-of-hrm-challenges-of-hrm-hrm-environment-strategic-hrm/</a></li> <li><a href="https://www.hpuniv.ac.in/hpuniv/upload/uploadfiles/files/Strategic%20Human%20Resource%20Management%20MC-311(1).pdf">https://www.hpuniv.ac.in/hpuniv/upload/uploadfiles/files/Strategic%20Human%20Resource%20Management%20MC-311(1).pdf</a></li> <li><a href="https://www.otaru-uc.ac.jp/~js/downloads/SP2005-PDF/SP2005-Chapter2SHRM.pdf">https://www.otaru-uc.ac.jp/~js/downloads/SP2005-PDF/SP2005-Chapter2SHRM.pdf</a></li> <li><a href="https://symbiosiscollege.edu.in/assets/pdf/TYBCOM/tybcom%20syllabus%20pdf%20files/Strategic%20Human%20Resource%20Management%20Special%20Paper%205.pdf">https://symbiosiscollege.edu.in/assets/pdf/TYBCOM/tybcom%20syllabus%20pdf%20files/Strategic%20Human%20Resource%20Management%20Special%20Paper%205.pdf</a></li> </ol>

<b>Learning Method</b>	Lecture method using PPT, Blended learning, Gamification, Article discussion, Case study.
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<b>Focus of the Course</b>	Entrepreneurial development, Skill development and employability
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Semester – I CORE II: MANAGERIAL ECONOMICS							
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	25COP1CA	MANAGERIAL ECONOMICS	CORE	60	-	-	4

Preamble	<p>This course has been designed for students to learn and understand</p> <ul style="list-style-type: none"> <li>the importance of managerial economist.</li> <li>demand and take decision on production and price.</li> <li>the influence of macroeconomic factors in managerial decision making.</li> </ul>
Prerequisite	Knowledge on cost, production and international trade

Course Outcomes (Cos)		
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Execute well the role of a managerial economist.	K3
CO2	Identify the concept of demand and consider them in business decision making.	K2
CO3	Relate cost, production and price.	K4
CO4	Examine the relationship between National indicators and corporate enterprises.	K3
CO5	Analyze international trade considerations in business decisions.	K4

Mapping with Program Outcomes:					
Cos / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓	✓		✓
CO2	✓				
CO3		✓		✓	✓
CO4	✓	✓	✓		✓
CO5	✓		✓	✓	✓



25COP1CA	MANAGERIAL ECONOMICS
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## Syllabus

Unit	Content	Hrs	Resources
I	<b>Managerial Economics</b> Nature and Scope of Managerial Economics – Managerial Economics in Relation with other Disciplines – Goals of Corporate Enterprises – Social Responsibility – Decision Making in Business – Roles and Responsibilities of a Managerial Economist – Value of Enterprise. Case study on Goals of Corporate Enterprises.	9	Text Book
II	<b>Demand Analysis</b> Demand Function – Demand Function for a Business Manager – Demand Distinctions - Law of Demand – Elasticity of Demand – Application of Price Elasticity of Demand – Overseas Demand Analysis: Need, Estimating Market Potential and Factors Affecting Overseas Demand – Demand Forecasting: General Considerations and Methods. Case study on Law of Demand.	11	Text Book
III	<b>Production and Price Analysis</b> Cost Concepts – Cost-output Relation in Short-run and Long-run – Cost Control – Revenue - Break-Even-Point (BEP) Analysis and its Application – Production Function and Managerial Use of Production Function – Pricing Policies – Indian Knowledge System: Role of Panyadhyaksha in fixing prices - Pricing over Life Cycle of a Product - Export Pricing Strategy and Decisions. Case study on gold pricing.	12	Text Book & e-Resource Article
IV	<b>National Indicators</b> National Income - Role of Artificial Intelligence in improving National Income Accounting, Inflation and Deflation, FDI and Balance of Payments (BoP) – Fiscal Policy and Monetary Policy - Consumer Price Index (CPI), Wholesale Price Index (WPI), Inflation Rate and Exchange Rate. Case study analysis on changes in Monetary policy instruments by RBI.	14	Text Book & e-Resource
V	<b>International Trade and Institutions</b> International Trade: Features, Advantages and Disadvantages - International Trade Theories: Absolute Cost Advantage theory, Comparative Cost Theory and H.O. Theory – Gains from Trade – Terms of Trade – IMF, World Bank, WTO and UNCTAD. Case study based on WTO World Economic Outlook Databases.	14	Textbook & e-Resource
<b>Total</b>		<b>60</b>	

<p><b>Note:</b> Case Studies related to the above topics to be discussed. Examined externally. (Section D: Compulsory question for case studies.)</p>
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<b>Text book</b>	1.	Sundharam.K.P.M. & Sundharam. E. N., 2022, "Business Economics", Sultan Chand and Sons, New Delhi
		M L Jhingan, 2025, "International Economics", Vrinda Publications (P) Ltd., New Delhi.
<b>Reference Books</b>	1.	E Narayanan Nadar & S Vijayan, 2023, "Managerial Economics", PHI Learning Pvt. Ltd. New Delhi.
	2.	Sankaran. S., 2024, "Business Economics", Margham Publications, Chennai.
	3.	Ahuja. H. L., 2021, "Business Economics", S. Chand and Company Pvt. Ltd., New Delhi.
	4.	Mehta P L, 2016, "Managerial Economics: Analysis, Problems, Cases", Sultan Chand and Sons, New Delhi.

<b>Journal and Magazines</b>	Economic and Political Weekly, The Economic Times
<b>E-Resources and Website</b>	<a href="http://rguir.inflibnet.ac.in/bitstream/123456789/16820/1/9781978962514">http://rguir.inflibnet.ac.in/bitstream/123456789/16820/1/9781978962514</a> . PDF

<b>Learning Method</b>	Lecture with PPT, Case study, Seminar, Flexitime Open Book Test & Flip Chart Presentation
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<b>Focus of the Course</b>	Critical thinking / Analytical skills and employability
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Semester - I							
CORE - III: ADVANCED CORPORATE ACCOUNTING							
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	25CRP1CB	ADVANCED CORPORATE ACCOUNTING	CORE	60	12	-	4

<b>Preamble</b>	<p>This course has been designed for students to learn and understand</p> <ul style="list-style-type: none"> <li>• Concepts, principles and practices of company accounts in accordance with statutory requirements.</li> <li>• The financial statements of Joint Stock Companies, Banking and Insurance companies</li> <li>• The emerging Accounting Practices</li> </ul>
<b>Prerequisite</b>	Knowledge on Corporate Accounting Practices and Accounting Standards

Course Outcomes (Cos)		
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Extend the principles, concepts and provisions relating to amalgamation of companies	K3
CO2	Illustrate the Accounting concepts of holding and subsidiary companies	K3
CO3	Analyze insurance and banking company accounts with due regard to the requirements	K4
CO4	Summarize the final accounts of companies	K5
CO5	Categorize the concept of consolidated inflation accounting statement.	K5

Mapping with Program Outcomes:					
Cos / POs	PO1	PO2	PO3	PO4	PO5
CO1		✓			✓
CO2	✓	✓	✓		✓
CO3	✓		✓	✓	✓
CO4	✓	✓		✓	
CO5	✓	✓	✓		✓

25CRP1CB

## ADVANCED CORPORATE ACCOUNTING

## Syllabus

Unit	Content	Hrs	Resources
I	<b>Amalgamation, Absorption and Reconstruction</b> Amalgamation and Absorption - Calculation of Purchase Consideration under various methods - Realization of Assets and Liabilities - Methods of accounting for Amalgamation - Reconstruction - Internal Reconstruction - Reduction of share capital - External Reconstruction - Inter-company holdings. Case study: External Reconstruction.	14	Reference Book
II	<b>Consolidated Balance Sheet as Per AS 21</b> Consolidated Balance Sheet as per AS 21 in the books of holding companies - Calculation of Goodwill - Capital Reserve - Minority Interest - Unrealized Profit - Capital and Revenue Profits - Mutual Owings - Bonus Share and Treatment of Dividend - Inter Company Owings. Case study: Holding companies.	15	Text Book
III	<b>Accounts of Banking and Insurance Companies</b> Accounts of Banking Companies - Final accounts and Balance Sheet. Accounts of Insurance Companies - Final Accounts and Balance sheet of Life Insurance and General Insurance Businesses. Case study: Banking Companies.	15	Reference Book
IV	<b>Final Accounts of Companies</b> Preparation and Presentation of Final accounts of Companies - Form and Contents of Balance sheet and profit and loss account - Managerial remuneration. Case study: Final Accounts of Companies.	14	Text Book
V	<b>Inflation and Emerging Accounting Practices</b> Inflation Accounting - CPP - CCA - COSA - MWCA - Gearing method - Hybrid method - Summaries of International Accounting Standards (IAS) 1, 2, 7, and 8 - Introduction to IFRS. Case study: IFRS.	14	Text Book
<b>Total</b>		<b>72</b>	

**Note:** Distribution of Marks Problems 80% and Theory 20%.

Case Studies related to the above topics to be discussed. Examined externally.

(Section D: Compulsory question for case studies.)



Text book	1.	Maheswari. S. N and Suneel. K. Maheshwari, 2020, "Corporate Accounting", 5th Edition, Vikas Publishing House, New Delhi.
	2.	Wilson. M, 2020, "Advanced Corporate Accounting" [Revised Edition], Scitech Publications India Pvt Ltd, Chennai.
Reference Books	1.	Shukla. M .C, Grewal. T. S and Gupta. S. C, 2021, "Advanced Accounts", 18th Edition, Volume II, S. Chand and Company Ltd., New Delhi.
	2.	Gupta R. L. and Radhasamy, 2020, "Advanced Accountancy", Volume I and II, Sultan Chand and Sons, New Delhi.
	3.	Jain. S. P. and Narang. K. L, 2020, "Advanced Accountancy", Volume I and II, Kalyani Publishers, New Delhi.
	4.	Reddy T.S. and Murthy. A, 2020, "Corporate Accounting", Margham Publications, Chennai.

Journal and Magazines	<ol style="list-style-type: none"> <li>1. Journal of Accounting and Finance, Volume 24, No 1, 2024</li> <li>2. Journal of Corporate Accounting and Finance,</li> <li>3. Accounting Today Magazine - 2024</li> </ol>
E-Resources and Website	<ol style="list-style-type: none"> <li>1. <a href="https://www.accountingtoday.com/magazine/accounting-today-april-2024">https://www.accountingtoday.com/magazine/accounting-today-april-2024</a></li> <li>2. <a href="https://onlinelibrary.wiley.com/doi/full/10.1002/jcaf.22710">https://onlinelibrary.wiley.com/doi/full/10.1002/jcaf.22710</a></li> <li>3. <a href="https://onlinelibrary.wiley.com/doi/full/10.1002/jcaf.22371">https://onlinelibrary.wiley.com/doi/full/10.1002/jcaf.22371</a></li> <li>4. <a href="http://www3.interscience.wiley.com/journal/60500170/home">http://www3.interscience.wiley.com/journal/60500170/home</a></li> </ol>

Learning Method	Chalk and Talk Method, Assignment, Seminar, PPT and Article Discussion
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Focus of the Course	Entrepreneurial development, Skill development and employability.
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Semester – I CORE IV: PYTHON PROGRAMMING FOR BUSINESS							
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	25CMP1CA	PYTHON PROGRAMMING FOR BUSINESS	CORE	60	12	-	4

<b>Preamble</b>	<p>This course has been designed for students to learn and understand</p> <ul style="list-style-type: none"> <li>the OOPs Concepts through Python</li> <li>the emerging applications of relevant field using Python</li> <li>advanced programming features in Python to solve industry standard problems.</li> </ul>
<b>Prerequisite</b>	Students with a good grounding in programming

Course Outcomes (Cos)		
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Understand the principles of Python and acquire skills in programming in Python.	K2
CO2	Illustrate the process of structuring the data using lists, dictionaries, tuples and sets.	K2
CO3	Make use of Class, Inheritance, Method overriding, Data Encapsulation	K3
CO4	Analyzing the usage of packages and Dictionaries.	K4
CO5	Categorize and cleaning dataset and using the visualization techniques.	K4

Mapping with Program Outcomes:					
Cos/POs	PO1	PO2	PO3	PO4	PO5
CO1	✓			✓	✓
CO2	✓			✓	
CO3		✓	✓	✓	✓
CO4	✓	✓		✓	
CO5	✓	✓	✓		✓



25CMP1CA	PYTHON PROGRAMMING FOR BUSINESS
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### Syllabus

Unit	Content	Hrs	Resources
I	<b>Introduction to Python</b> Python Basic: Introduction - Python Overview - Getting Started with Python: Comments- Identifier Keywords- Data Types- Operators- Statement and Expression- String - Control Structure. Case Study on Decision Making using Python.	14	Text Book
II	<b>Functions and Data types</b> Functions: Built In Function - User Defined Function - Parameters and Arguments - Function Calls - Return Statement - Anonymous Function - Writing Python Script - List - Tuples and Dictionary. Arrays in python: Array- Creating an Array-Types of Arrays. Case Study on Arithmetic Calculator using Functions.	14	Text Book/ Reference Book
III	<b>OOPS Concepts</b> Features of Object-Oriented Programming System Classes and Objects- Encapsulation- Abstraction- Inheritance- Polymorphism. Creating a Class-The Self Variable - Constructor. Files in Python: Files-Types of Files in Python - Opening a File-Closing a File. Case Study on Banking application using Inheritance.	14	Text Book
IV	<b>Python Packages for Business Applications</b> Essential Python Libraries: Numpy - Pandas Matplotlib - Ipython And Jupyter -Scipy -Scikit. Installation and Setup. Ipython Basics: Executing code from clipboard. Getting Started with Pandas: Series. Data Frames: Creating frames- operations on rows and columns - GroupBy: Aggregation - Transformation - Filtration- Merging and Joining Manipulating Dates Case Study on solving real-world data science tasks with Python Using Pandas.	15	Reference Book
V	<b>Visualization</b> Introduction to Data Visualization-Key elements of Data Visualization-Variou Data Visualization Elements and Tools- Plotting and Visualization: matplotlib configuration. Plotting functions in Pandas: Line Plots - Bar Plots- Scatter Plots Histogram Plot. Case Study on Bank Customer Data Analysis Using Pandas and Matplotlib.	15	Reference Book / E-Resources
<b>Total</b>		<b>72</b>	

Note; Case Studies related to the above topics to be discussed. Examined externally.
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(Section D : Compulsory question for case studies.)
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Text book	1.	E.Balagurusamy, 2018, "Problem Solving and Python Programming", First Edition, Tata Mc-Graw Hill Publication.
	2.	Kalilur Rahman, 2021,"Python Data Visualization Essentials Guide", First Edition, BPB Publications, India
Reference Books	1.	Wes Mckinney, 2018, "Python for Data Analysis", First Edition, O'Reilly Publication.
	2.	Anurag Gupta, G.P Biswas, 2020," Python Programming", First Edition, Tata Mc-Graw Hill Publication .
	3.	Timothy A. Budd, 2018, "Exploring Python" Reprint, Tata Mc Graw Hill Publication..
	4.	Joel Murach, Michael Urban, 2021,"Murach's Python Programming" Second Edition, Mike Murach & Associates, Incorporated.

Journal and Magazines	<u>International Research Journal of Modernization in Engineering Technology and Science, PYTHON PROGRAMMING: A COMPREHENSIVE STUDY and Magazine-Codemotion</u>
E-Resources and Website	<u>www.learnpython.org, www.python.org, Geeks for Geeks</u>

Learning Method	PPT, Lecture, Group Discussion, Seminar
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Focus of the Course	Skill Development, Entrepreneurial Development, Employability and Innovations
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Semester - I CORE PRACTICAL-I: PYTHON PROGRAMMING							
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	25CMP1CP	PYTHON PROGRAMMING	CORE PRACTICAL	-	-	48	2

Preamble	<p>This course has been designed for students to learn and understand</p> <ul style="list-style-type: none"> <li>• Python Functions and String Operations</li> <li>• NumPy and Pandas Library</li> <li>• Data Visualization.</li> </ul>
Prerequisite	Problem solving skills

Course Outcomes (Cos)		
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Implement Decision Making process using Python	K2
CO2	Interpret the User Defined Functions.	K3
CO3	Describe the types of Files in Python	K3
CO4	Analyze Data science tasks using Pandas.	K4
CO5	Classify types of Plotting functions in Pandas	K4

Mapping with Program Outcomes:					
Cos / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓	✓	✓	✓
CO2			✓	✓	
CO3		✓	✓		✓
CO4	✓	✓	✓	✓	✓
CO5	✓			✓	

25CMP1CP	PYTHON PROGRAMMING
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S.No.

## List of Programs

- 1 Develop a Python Program to calculate Depreciation.
- 2 Develop a Python Program to calculate the Payroll of employees.
- 3 Python program to create Bank account class with deposit, withdraw function.
- 4 Create a Class and calculate budget using Python.
- 5 Build a Basic Python Cash Flow Model for a Loan Using NumPy.
- 6 Create a Receipt Calculator using Python.
- 7 Build a Python Program for String Operation.
- 8 Calculate Economic Order Quantity using NumPy.
- 9 Create an Employee dataset using pandas and perform the operations (i) Adding a new row to the data frame and append to the existing data frame (ii) Adding a new row at a specific location (iii) Deleting a row from the data frame
- 10 Create a Dataset using python visualize the dataset using Matplotlib.
- 11 Import a CSV File into Python, use Pandas for perform Sorting, Slicing records, Filtering.
- 12 Import financial dataset, use Line chart and scatter plot for Visualization.

Text Books	1.	E.Balagurusamy, 2018, "Problem Solving and Python Programming", First Edition, Tata Mc-Graw Hill Publication.
	2.	Kalilur Rahman, 2021, "Python Data Visualization Essentials Guide", First Edition, BPB Publications, India

Learning Method	Demonstration/ Hands on Experiments
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Focus of the Course	Skill Development/ Employability
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Semester – I							
DSE I: CONSUMER BEHAVIOUR							
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	25COP1DA	CONSUMER BEHAVIOUR	DSE	48	-	-	4

Preamble	<p>This course has been designed for students to learn and understand</p> <ul style="list-style-type: none"> <li>the concept of consumer buying behaviour.</li> <li>the theories of motivation and perception as applied in consumer behaviour.</li> <li>the process of consumer decision making.</li> </ul>
Prerequisite	Knowledge on basic consumer behaviour, decision making process.

Course Outcomes (Cos)		
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Understand the concept of consumer behaviour and decision-making process.	K2
CO2	Know about marketing implications on consumer behavioural decision.	K3
CO3	Analyse psychographic factors of buying behaviour.	K4
CO4	Examine consumer strategy towards store choice and shopping behaviour.	K4
CO5	Sketch out the Global consumer behaviour.	K4

Mapping with Program Outcomes:					
Cos / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓	✓		✓
CO2		✓	✓	✓	✓
CO3	✓	✓		✓	✓
CO4	✓	✓	✓	✓	
CO5	✓	✓			✓

25COP1DA	CONSUMER BEHAVIOUR
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## Syllabus

Unit	Content	Hrs	Resources
I	<b>Consumer Behaviour</b> Theories of consumer behaviour - Consumer Behaviour and Marketing Action - An overview - Consumer involvement - Decision-making processes - Purchase behaviour and Marketing implications - Consumer behaviour models. Case study on Purchase Behaviour.	10	Text Book e-Resource & Article
II	<b>Buying Behaviour</b> Personality - Psycho-analytical Neo-Freudian and social approaches to personality, understanding consumer diversity, Brand personality, Self and self-image. Psychological and Sociological influence on consumer decision making, imaginary risk, digital consumer behaviour - Cultural influences - Social class - Reference groups and family influences - Opinion leadership and the diffusion of innovations. Case study on influencing factors of buying behaviour.	10	Text Book e-Resource
III	<b>Consumer Attitude</b> Attitude formation & change - Tricomponent and structural models of attitudes, sources of attitude formation, strategies of attitude change, cognitive dissonance, attribution, self-perception theories, Foot in the door phenomenon. Groups - types, Celebrities, Family, Socialization of family members, Function of family, Family decision-making and consumption - related roles, Family life cycle. Case study on consumer attitude.	8	Text Book e-Resource & Article
IV	<b>Strategic Implementation</b> Strategic marketing applications - Market segmentation strategies - Positioning strategies for existing and new products, Re-positioning, Perceptual Mapping - Marketing communication - Store choice and shopping behaviour - In-Store stimuli, store image and loyalty - Consumerism - Consumer rights and Marketers' responsibilities. Case study on store choice strategy.	10	Text Book e-Resource
V	<b>Consumer buying habits</b> The Global Consumer Behaviour and Online buying behaviour - Consumer buying habits and perceptions of emerging non-store choices - Research and applications of consumer responses to direct marketing approaches - Issues of privacy and ethics. Case study on buying habits.	10	e-Resource
Total		48	



	Note: Case Studies related to the above topics to be discussed. Examined externally. (Section D: Compulsory question for case studies.)
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<b>Text book</b>	1.	Leon G Shiffman, 2022, Consumer Behaviour, Pearson Education, New Delhi.
	2.	David L. Mothersbaugh, 2022, Consumer Behaviour: Building Marketing Strategy (Indian Edition), McGraw Hill Education, New Delhi
<b>Reference Books</b>	1.	David L Mothersbaugh, 2022, Consumer Behaviour: Building Marketing Strategy Special Indian Edition Mc Graw Hill, New Delhi.
	2.	Sarmistha Sarma, 2019, Consumer Behaviour, Wiley India, New Delhi.
	3.	Sangeetha Sahney, 2018, Consumer Behaviour, Oxford University Press Publishing House, New Delhi.
	4.	Joseph Wisenblit, S. Ramesh Kumar, 2017, Consumer Behaviour, Pearson, New Delhi.

<b>Journal and Magazines</b>	Academic Journal - Journal of Consumer Research - <a href="https://academic.oup.com/jcr">https://academic.oup.com/jcr</a> International Journal - Journal of Consumer Behaviour (Wiley) - <a href="https://onlinelibrary.wiley.com/journal/14791838">https://onlinelibrary.wiley.com/journal/14791838</a>
<b>E-Resources and Website</b>	<a href="https://www.slideshare.net/prashantmehta">https://www.slideshare.net/prashantmehta</a> (PDF) Consumer Attitude towards Online Shopping (researchgate.net)

<b>Learning Method</b>	Lecture method using PPT, Group learning, Article discussion.
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<b>Focus of the Course</b>	Entrepreneurial development / Skill development/employability.
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Semester -I							
DSE I: SOFTWARE DESIGN AND TESTING							
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	25CMP1DA	SOFTWARE DESIGN AND TESTING	DSE	48	-	-	4

<b>Preamble</b>	<p>This course has been designed for students to learn and understand</p> <ul style="list-style-type: none"> <li>• The software development process.</li> <li>• The process of software requirement analysis</li> <li>• The concept of software design and different types of software testing techniques.</li> </ul>
<b>Prerequisite</b>	Knowledge on Software Development

Course Outcomes (Cos)		
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Outline the software development life cycle process.	K2
CO2	Summarize the Software requirements and specifications.	K2
CO3	Build the Software Design using DFD.	K3
CO4	Analyze the Object Modeling using UML diagram.	K4
CO5	Categorize the various software testing.	K4

Mapping with Program Outcomes:					
Cos / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓		✓		✓
CO2	✓	✓	✓	✓	
CO3	✓		✓		✓
CO4	✓	✓	✓	✓	✓
CO5	✓		✓	✓	✓



25CMP1DA	SOFTWARE DESIGN AND TESTING
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### Syllabus

Unit	Content	Hrs	Resources
I	<b>Introduction to Software Engineering:</b> The Evolving role of a Software - The changing nature of a Software - Evolution - From an Art Form to an Engineering Discipline - Software Development projects - Emergence of Software Engineering. Software Life cycle models: Waterfall model - Rapid Application Development - Agile Model - Spiral Model. Case study Comparative study of Software life cycle model.	12	Text Book
II	<b>Requirement Analysis</b> Requirement Analysis and Specification - Gathering and Analysis - SRS - Formal System Specification. Case study Functional requirement for a Banking System	10	Reference Book
III	<b>Software Design</b> Software Design - Overview - Characteristics - Cohesion & Coupling - Layered design - Approaches Function Oriented Design - Structured Analysis - DFD - Structured Design - Detailed design. Case study Design DFD for a software application	10	Text Book
IV	<b>Object Modeling</b> Object Modeling using UML - OO concepts - UML - Diagrams - Use Case-Class- Interaction- ActivityState Chart - Postscript. Case study Determine the objects required to implement the system	8	Reference Book
V	<b>Testing</b> Coding & Testing - coding - Review - Documentation - Testing: Black-box- White boxIntegration- OO Testing- Smoke testing. Case study Prepare various test cases for a login page	8	E-Resources
<b>Total</b>		<b>48</b>	

Note: Case Studies related to the above topics to be discussed. Examined externally. (Section D: Compulsory question for case studies)
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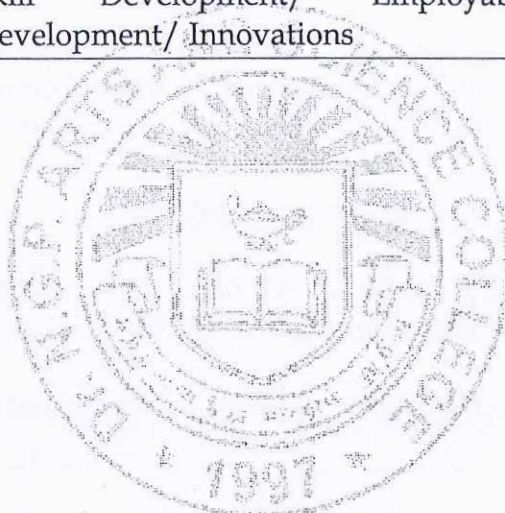
<b>Text book</b>	1.	Rajib Mall, 2018, "Fundamentals of Software Engineering", Fifth Edition, PHI.
	2.	Pankaj Jalote, 2011, "An Integrated Approach to Software Engineering", Third Edition Narosa Publishing House.
<b>Reference Books</b>	1.	David Budgen, 2015, "Software Design ", Second Edition, Pearson India Education Services Pvt Ltd.
	2.	Srinivasan desikan and Gopalswamy Ramesh, 2019, "Software Testing Principles and practices", First Edition, Pearson India Education

		Services Pvt Ltd.
	3.	K.K. Aggarwal and Yogesh Singh, 2014, "Software engineering", Third Edition, New Age International (p) Limited, New Delhi.
	4.	Ian Sommerville, 2017, "Software Engineering", Tenth Edition, Pearson Education.

<b>Journal and Magazines</b>	Journal of Software Testing, Verification and Reliability (JSTVR), IEEE Transactions on Software Engineering and Software Testing, Verification and Reliability (STVR)
<b>E-Resources and Website</b>	<a href="https://softwaretestingfundamentals.com">https://softwaretestingfundamentals.com</a>

<b>Learning Method</b>	Chalk and Talk/Assignment/Seminar/ Group Discussion/Case Study
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<b>Focus of the Course</b>	Skill Development/ Employability/ Entrepreneurial Development/ Innovations
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Semester – I DSE I: FINANCIAL MARKETS AND SERVICES							
Semester	Course Code	Course Name	Category	L	T	P	Credits
I	25CMP1DB	FINANCIAL MARKETS AND SERVICES	DSE	48	-	-	4

<b>Preamble</b>	<p>This course has been designed for students to learn and understand</p> <ul style="list-style-type: none"> <li>the Intricacies of Indian financial system for better financial decision making</li> <li>functioning of various segments of the financial markets</li> <li>various instruments traded in the financial markets</li> </ul>
<b>Prerequisite</b>	Knowledge on Indian Financial System

Course Outcomes (Cos)		
CO Number	Course Outcomes (COs) Statement	Bloom's Taxonomy Knowledge Level
CO1	Understand the financial system in India.	K2
CO2	Describe various concepts of money markets.	K2
CO3	Analyse the activities undertaken in stock-exchange and SEBI Guidelines	K4
CO4	Interpret various innovative financial services and instruments	K3
CO5	Evaluate the performance of mutual funds and venture capital.	K4

Mapping with Program Outcomes:					
Cos / POs	PO1	PO2	PO3	PO4	PO5
CO1	✓	✓	✓	✓	✓
CO2	✓				
CO3	✓	✓	✓	✓	✓
CO4	✓			✓	
CO5	✓	✓	✓		✓



25CMP1DB	FINANCIAL MARKETS AND SERVICES
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### Syllabus

Unit	Content	Hrs	Resources
I	<b>Financial System in India</b> Functions of Financial system- Financial concepts Financial assets- Financial Intermediaries-Financial markets- Foreign Exchange Market- Financial instruments - Development of financial system in India - Financial system and Economic Development. Case Study on Indian Financial System.	10	Text Book
II	<b>Money Market</b> Definition - Money market Vs. Capital Market - Features, Types- Importance & Composition of Money market - Call money market - Treasury bill markets - commercial papers - Certificates of Deposits-Deficiencies of Indian money market. Case Study on Money Market Operations.	10	Reference Book
III	<b>Capital Market</b> New Issue Market - Distinction between new issue market and Stock Exchange Functions of New Issue Market - Methods of Floating New Issues - Guidelines for new issue market- Instruments of Issue - Players in the New Issue Market. Secondary Market: Introduction - Functions of Stock Exchanges - Listing of Securities - Listing procedure - Registration of stock Brokers- Functions- Kinds of brokers- Methods of trading in stock exchange- Online Trading-BSE-BOLT system- BSE and NSE - OTCEI. Case Study on Capital Market Operations.	10	Text Book
IV	<b>Merchant Banking and Depositories</b> Merchant banking in India - Merchant Banking Services - Guidelines (SEBI) for merchant bankers: Depository Meaning- Objectives- Functions of Depository- SEBI (Depositories and Participants) Regulations Act 1996 - National Securities Depository Limited (NSDL) - Central Depository Services Limited (CDSL) - Custodial Services. Case Study on Indian Merchant Banking System.	8	Reference Book
V	<b>Mutual Fund, Venture Capital and Credit Rating Services</b> Mutual Funds - Classification and types of Mutual Funds - Advantages and Limitations of Mutual Funds -Evaluation of Mutual Fund performance - Guidelines for Mutual Funds - SEBI (Mutual Funds) Regulation. Venture Capital Financing: Definition - Venture capital Financing Vs. Conventional Financing - Characteristics of Venture capital - Stages of Venture Capital Financing. Credit Rating Agencies: Process of Credit Rating - Advantages and Limitations of Credit Rating - Credit Rating Agencies in India. Case Study on Operations of Mutual Funds.	10	Text Book/E-Resources
<b>Total</b>		48	



Note: Case Studies related to the above topics to be discussed. Examined externally. (Section D: Compulsory question for case studies.)
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Text book	1.	E.Gordon , K. Natarajan, 2024, "Financial Markets and Services", Twelfth Edition, Himalaya Publishing House Pvt Ltd , Mumbai..
	2.	M. Y. Khan, 2023, "Financial Services", Eleventh Edition, McGraw Hill Education, New Delhi.
Reference Books	1.	N.K Gupta, Monika Chopra, 2021,"Financial Market Institutions and Services", First Edition, Himalaya Publishing House Pvt Ltd, New Delhi.
	2.	Shashi K Gupta, Nisha Aggarwal and Neeti Gupta, 2017, "Financial Institutions and Markets", sixth Edition, Kalyani Publishers, New Delhi.
	3.	L.M Bhole, 2015," Financial Institutions and Markets" Sixth Edition, Mcgraw Hill education.
	4.	Dr.L. Natarajan,2016,"Financial Markets and Services", First Edition, Margham publications, Chennai.

Journal and Magazines	Journal of Finance, Review of Financial Studies, The Financial Times and Outlook money
E-Resources and Website	Financial Markets and Services Notes, PDF   (geektonight.com)

Learning Method	Chalk and Talk/ Assignment/ Seminar
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Focus of the Course	Skill Development, Employability and Entrepreneurial Development
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