

M.Com. C.A.

**LEARNING OUTCOME-BASED CURRICULUM
FRAMEWORK**

(LOCF)

SYLLABUS – 2022- 2023 onwards



DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS

J.J. COLLEGE OF ARTS AND SCIENCE (AUTONOMOUS),

(Re –accredited by NAAC – 4th Cycle)

(Affiliated to Bharathidasan University)

JJ Nagar, SivaPuram

PUDUKKOTTAI – 622 422

Programme Outcomes - PG

At the End of the Programme, Post Graduates will have

1. Adequate domain **knowledge** and **critical thinking** to enrich it further by self study.
2. Developed discipline **specific skills** in reasoning, analysis and communication.
3. Acquired an aptitude for **research** in mono-disciplinary and multi-disciplinary areas.
4. Become **employable** in specific areas involving expertise.
5. Developed a keen sense of **professional and social ethics**.

PROGRAMME SPECIFIC OUTCOMES – M.Com (CA)

On successful completion of the Programme M.Com (CA) students will

1. Have acquired adequate domain knowledge in key areas of Commerce and Computer Applications and developed habits of critical analysis and evaluation.
2. Demonstrated skills of oral and written communication to present their view points on specific issues related to the field.
3. Categorize define and work on socially relevant topics for pure and applied research using suitable tools for analysis interpretation and judgment.
4. Developed adequate employability skills to fit them for various jobs and professions involving expertise.
5. Acquired professional and social ethical values to function as responsible citizens concerned with the socio-political and business environment.

Knowledge levels for assessment of Outcomes based on Blooms Taxonomy

S. No.	Level	Parameter	Description
1	K1	Remembering	It is the ability to remember the previously learned
2	K2	Understanding	The learner explains ideas or concepts
3	K3	Application	The learner uses information in a new way
4	K4	Analysis	The learner distinguishes among different
5	K5	Evaluating	The learner justifies a stand or decision
6	K6	Creating	The learner creates a new product or point of view

J.J. COLLEGE OF ARTS AND SCIENCE (AUTONOMOUS), PUDUKKOTTAI
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
Course Structure under Choice Based Credit System
(Applicable for the Candidates Admitted From Academic Year 2022 – 2023 Onwards)
M.Com. C.A.

Sem	Course Code	Course Title	Hrs/ Week	Credit	Exam Hrs	Marks		
						Int	Ext	Total
I	P1R2CMCC1	Advanced Financial Management	6	5	3	25	75	100
	P1R2CMCC2	Financial Markets and Institutions	6	5	3	25	75	100
	P1R2CMCC3	Advanced in Computer Science	6	5	3	25	75	100
	P1R2CMCC4	International Business	6	5	3	25	75	100
	P1R2CMDSE 1:1/ 1:2/ 1:3/ 1:4	From List of Discipline Specific Electives I (1:1/ 1:2/ 1:3/ 1:4)	6	3	3	25	75	100
Total			30	23	-	-	-	500
II	P2R2CMCC5	Accounting For Management	6	5	3	25	75	100
	P2R2CMCC6	Applied Costing	6	5	3	25	75	100
	P2R2CMCC7	Data Science & Analytics Theory	6	5	3	25	75	100
	P2R2CMCC8P	Data Science & Analytics Practical	6	5	3	40	60	100
	P2R2CMDSE 2:1/ 2:2/ 2:3/ 2:4	From List of Discipline Specific Electives II (2:1/ 2:2/ 2:3/ 2:4)	6	3	3	25	75	100
Total			30	23	-	-	-	500
III	P3R2CMCC9	Business Research Methods	6	5	3	25	75	100
	P3R2CMCC10	Security Analysis and Portfolio Management	6	5	3	25	75	100
	P3R2CMCC11	Computer Applications in e-Business	6	5	3	25	75	100
	P3R2CMCC12P	Internship	6	5	3	40	60	100
	P3R2CMSEC 1:1/ 1:2/ 1:3/ 1:4	From List of Skill Enhancement Courses (1:1/ 1:2/ 1:3/ 1:4)	6	3	3	25	75	100
Total			30	23	-	-	-	500

IV	P4R2CMCC13	Tools in Web Applications (Theory)	6	5	3	25	75	100
	P4R2CMCC14P	Tools in Web Applications (Practical)	6	5	3	40	60	100
	P4R2CMGEC 1/ 2/ 3	From List of Electives (1/ 2/ 3)	6	3	3	25	75	100
	P4R2CMCC15PW	Project work	12	8	-	-	-	100
		Extra Credit Online Course - MOOCS	-	(4)				---
Total			30	21	-	-	-	400
Grand Total				90 (4)	-	-	-	1900

CC- Core Course, DSE – Discipline Specific Elective Courses, SEC – Skill Enhancement Courses, GEC–Generic Elective Courses, P – Practical

CIA Passing Minimum = 10, Ext. Passing Minimum = 30, Aggregate Mark for a Pass = 50

List of Electives

Semester I Discipline Specific Electives I 1. Business Intelligence 2. Advanced Computer Graphics 3. Capital Markets 4. Corporate Governance	Semester III Skill Enhancement Course 1. Cyber Laws 2. Web Technologies 3. Merchant Banking and Financial Services 4. Corporate Social Responsibility
Semester II Discipline Specific Electives II 1. Data Communication Networks 2. Enterprise Resource Planning 3. Indirect Taxation 4. Managerial Economics	Semester IV Generic Elective Courses 1. Application in Crypto currency and Block chain Technologies 2. e. Banking 3. G.S.T. Theory and Practices

SEMESTER I

Course Name	ADVANCED FINANCIAL MANAGEMENT					
Course Code	P1R2CMCC1		Ex. Hrs.	L	P	C
Category	CORE I		3	6		5
Nature of Course	Skill Development					
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100			
Passing Minimum	CIA: 10	End SEM: 30	Total Marks: 50			
Course objectives 1. To know and understanding the nature, functions, goal and scope of Financial Management. 2. To make an in-depth analysis of various sources of financing and financial planning 3. To impart knowledge of managing assets of the company 4. To acquaint the students with types of leverages 5. To enable the students to understand the capital structure and dividend theories						
UNIT I	Foundations of finance		14 Hours			
Financial management – Objectives, Scope, Uses and Functions of Financial management – Profit maximization vs Wealth maximization - Finance Functions – Role of Finance Manager – Liquidity vs Profitability- Risk and return trade off – Financial management & other functional areas – Methods & tools of Financial management-Time value of Money – Methods of analysis - Discounting and compounding techniques - Financial Information System – Financial Forecasting – Changing scenario of financial management in India(Theory).						
UNIT II	Sources of finance & financial planning		14 Hours			
Sources of Finance: short term finance & long term finance - Purpose – Sources - Security Financing, Internal Financing, Loan Financing and other Innovative sources of Financing – Factors determining the source of finance - Concepts of working capital –Types-Significance-adequacy- Dangers of redundant working capital – Factors –Determinants of working capital-issues and methods of estimating working capital – operating cycle method – regulation of bank credit – Tandon committee – working capital ratios(Theory).						
UNIT III	Management of assets: Receivables Management		14 Hours			
Objectives – Costs – Benefits – Credit policies – Credit Terms – Credit analysis - Collection policies –Decision tree Analysis of credit granting – monitoring & control of receivables - Inventory management: Objectives of inventory management – RISK & Cost of holding inventory- Techniques of Inventory management – EOQ – ABC analysis – Just in Time inventory system – VED analysis – FSN analysis – Min-Max Method – Perpetual Inventory system – Automatic Order system – Input- Output ratio analysis(Theory)						
UNIT IV	Leverages and Dividend Decision		15 Hours			
Leverage- Types - Operating leverage – degree of Operating leverage – Financial leverage – Degree of financial leverage- Combined leverage – EBIT/EPS Analysis - Cost of capital: Equity, Debt, Retained Earnings – Weighted Average Cost of Capital – Capital structure: designing capital structure – Factors determining capital structure - Capital structure Theories – Net income						

Net operating Income, MM and Traditional theories – Dividend policy (Case Study) and practices – Dividend policies – Factors determining Dividend policy – Dividend Theories – Graham, Walter, Gordon and Modigliani -Miller theories (Theory & Problems).		
UNIT V	Investment Decisions	15Hours
Capital Budgeting – Nature of capital budgeting Objectives – Process- factors influencing capital budgeting decisions - Identifying relevant cash flows – Evaluation Techniques: Payback, Net Present Value, Profitability Index, Internal Rate of Return, Accounting rate of return – Comparison of DCF techniques – Project selection under capital rationing – Inflation in capital budgeting – Risk analysis in capital budgeting(Theory & Problems).		
Question paper shall consist of 60% Theory and 40 % Problems		Total Hours: 72
Book for Study S.N. Maheswari, Financial Management Principles and Practice, Sultan Chand & Sons, New Delhi, 2013.		
Books for Reference 1. Khan M Y and Jain P K, (2014), Financial management, Text, Problems and cases, Tata McGraw Hill, New Delhi. 2. Pillai, R.S.N. and Bagavathi, Management Accounting, S.Chand& Co Ltd., 2010. 3. Murthy A, (2016), Financial Management, Margam Publications, Chennai 4. Periyasamy, (2015), Financial Management, Vijay Nicole Imprints, Chennai 5. Prasanna Chandra, (2014), Financial Management, 7th edition, Tata McGraw Hill, New Delhi		
Web Resources 1) http://icmai.in/studentswebsite/studymat.php 2) http://164.100.133.129:81/eCONTENT/Uploads/Advanced_Financial_Management.pdf 3) http://opentuition.com/acca/p4/acca-p4-lectures/ 4) https://www.cpaaustralia.com.au/documents/study-manual-management-accounting.pdf 5) http://management-accountant.com/ 6) www.learnerstv.com/Free-Management-Video-lectures-ltv638-Page1.htm 7) http://www.wiley.com//college/managerialvideos/		
Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Gain an understanding of the theoretical framework of financial management in business corporations.	K3
CO2	Understand various sources of financing and financial planning	K4
CO3	Describe management of assets of the company.	K6
CO4	Understand leverages	K6
CO5	Gain an understanding of the capital structure and dividend theories.	K4

Title of the Course: Advanced Financial Management							Course Code: P1R2CMCC1				
Course Outcomes (COs)	Programme Outcomes (Pos)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	2	3	3	2	3	3	2	3	3	2.7
CO2	3	3	1	3	3	2	3	3	3	3	2.7
CO3	2	3	3	3	3	3	3	1	3	2	2.6
CO4	3	2	2	2	3	3	2	3	2	3	2.5
CO5	3	3	3	3	1	2	3	3	3	3	2.7
	Mean Overall Score										2.64
	Result										High

Course Name	FINANCIAL MARKETS AND INSTITUTIONS				
Course Code	P1R2CMCC2	Ex. Hrs.	L	P	C
Category	CORE II	3	6		5
Nature of Course	Skill Development				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives					
1.To introduce the basic concepts of financial markets					
2.To impart knowledge on the working of commercial paper market, including bill market					
3.To teach the students on the evolution of capital market					
4.To acquaint the students with the knowledge on the functioning of various financial institutions such as NABARD, EXIM bank, etc					
5.To teach students on the working of various credit rating agencies such as CRISIL, etc					
UNIT I	Introduction: Financial markets		14 Hours		
Meaning-definition-role-functions-constituents - financial instruments - capital market instruments - Indian money and capital markets - global financial markets - Money market: meaning - characteristics - importance -general functions - segments - financial institutions - characteristics of developed money market - global money markets - Call money market: meaning - features - benefits – Indian call money market - call money rates - Commercial paper market: meaning - features –Satellite Dealers(SDs)					
UNIT II	Commercial paper market		14 Hours		
Meaning-importance-developed bill market-shortcomings of Indian bill market - Bill Market Scheme, 1952- Bill market Scheme, 1970 -IDBI Bill Rediscounting Scheme - Reasons for the failure of bill market scheme – revitalizing bill market - Certificate of Deposit (CD) market: meaning - features - time deposit Vs certificate of deposit- role of DFHI - Treasury Bill Market: meaning- Treasury Bills-general features - Indian TBs - Benefits - Gilt-edged securities market: meaning - features -Repos, government bonds-importance of gilt-edged market					
UNIT III	Capital Market		14 Hours		
Meaning –characteristics – evolution and growth – new financial instruments – major issues – Capital market instruments – meaning – types – preference shares – equity shares – non-voting equity shares – company fixed deposits – warrants –debentures and bonds – global debt instruments – New Issues Market (NIM) – meaning –NIM and secondary market– methods of marketing securities– intermediaries in NIM–Debtmarket–meaning–advantages–risksondebt–roleofbondmarket–pricedetermination–yield of bond (Case Study).					
UNIT IV	Financial service institutions		15 Hours		
Clearing Corporation of India Limited –settlement of risks – risk management system – benefits – CRISIL – range of services – CIBIL – credit information – credit assessment – mechanism – defaulted credit facility –access to CIBIL information–credit information report– DFHIL –ICRA–Moody’s investor Service– Standard &Poor –Fitch Ratings–OTCEI–NSDL–STCI					
UNIT V	Financial Institutions		15 Hours		

Meaning–special characteristics– money market institutions – capital market institutions – cooperative banking institutions – National Housing Bank –functions and working – EXIM bank of India – functions and working – NABARD –functions and working – RBI – functions and working – NBFCs – FIIs – role and danger –IMF – World Bank – IFC – ADB – Stock exchange – meaning – functions traders – role of SEBI – stock trading – regulatory framework – Insider trading – speculation – Investor protection– listing– SBI – functions and working.		
(Theory 75 Marks)		Total Hours 72
Book for Study GURUSAMYS,(2015),“Financial Markets and Institutions”, Vijay Nicole Imprints, Chennai		
Books for Reference 1. Bholel Mand jitendra Mahakud, (2012), Financial Institutions and Markets, McGrawHill Education, NewDelhi 2. Rose, Peters And Fraser,Donaldr.(2002),‘Financial Institutions Understanding and Managing Financial Services, Tex Business Publications, NewYork 3. Kinsella, ray,(2010),‘New Issues in Financial Services, Powell's Books, Singapore 4. ANTHONY SAUNDERS AND MARCIAMILLAN CARNET, (2010), ‘Tata McGraw Hill Publishing Company, NewDelhi 5. MEIRKOHN, (2004), ‘Financial Institutions and Markets’, Oxford University Press, NewDelhi. 6. KhanMY, (2002), ‘Financial Services”, Tata McGrawHill, New Delhi.		
Web Resources 1)National Digital Library 2) https://www.himpub.com/documents/Chapter2398.pdf		
Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Understand the Basic Concepts of financial Markets	K3
CO2	Gain knowledge on the working of commercial paper market including bill market.	K4
CO3	Describe the evaluation of the capital market.	K5
CO4	Understand the functioning of various financial institutions such as NABARD, EXIM bank etc.,	K4
CO5	Know the working of various credit rating agencies such as CRISIL	K3

Title of the Course: Financial Markets and Institutions						Course Code:P1R2CMCC2					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	3	3	2	2	2	3	3	3	3	2.5
CO2	2	2	3	3	2	2	3	3	3	3	2.5
CO3	3	3	2	2	3	3	3	2	3	3	2.7
CO4	3	2	2	3	2	3	2	3	2	2	2.4
CO5	3	2	3	2	3	2	3	2	2	2	2.5
	Mean Overall Score										2.52
	Result										High

Course Name	ADVANCED IN COMPUTER SCIENCE				
Course Code	P1R2CMCC3	Ex. Hrs.	L	P	C
Category	CORE III	3	6		5
Nature of Course	Skill Development				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives					
1. It helps to prepare graduates for acquiring competence in software development and train human resources for computer education and research.					
2. This programme enrich the students with sound and comprehensive knowledge of widely known programming languages					
3. An ability to function effectively on teams to accomplish a common goal.					
4. An ability to analyze a problem and identify and define the computing requirements					
5. It helps students analyze the requirements for system development and exposes students to business software and information systems.					
UNIT I	Fundamental of Computer			15 Hours	
Introduction of computer-Computer generations-Characteristics of computer-basic application of computer-Computer memories system-concept of hardware and software-binary system-digital number system-computer virus and vaccines/anti-virus-network-ICET					
UNIT II	Artificial Intelligence			15 Hours	
Introduction to Artificial Intelligence-How Artificial Intelligence works?-types of AI-Prerequisites for AI-Applications of AI in Business-Career trends in AI.					
UNIT III	Processors and memory hierarchy			14 Hours	
Processors and memory hierarchy: Advanced processor technology-super scalar and vector processors-linear pipeline processors-nonlinear pipeline processors.					
UNIT IV	Virtualization			14 Hours	
Basics of virtualization-Types of virtualization-Implementation levels of virtualization-Virtualization structure-Tools and mechanisms-Virtualization of CPU, memory, I/O devices-Virtual clusters and management-Virtualization for data-Center Automation.					
UNIT V	Internet of Things			14 Hours	
IoT architecture M2M high-level ETSI architecture-IETF architecture for IoT-OGC architecture-IoT reference model-Domain model-Information model-Functional model-Communication model- IoT reference Architecture.					
(Theory 75 Marks)				Total Hours 72	
Book for Study					
1. Computer Fundamentals-8 th edition, Pradeep K.Sinha, Priti Sinha.					
2. A Textbook of Artificial Intelligence-Goyal brothers Prakashan.					
3. Gautam Shroff, Enterprise Cloud Computing, Cambridge University Press,2011.					
4. Kai Hwang “Advanced computer architecture” McGraw-Hill International Edn, Singapore 1993.					

5. Arshdeepn Bahga,Vijay Madisetti,” Internet of Things”-A hands-on approach”, Universities Press,2015.

Books for Reference

1. Computer Networks & Internets-Douglas Comer, Professor of Purdue University.
2. Kai Hwang and Faye A. Briggs,” computer architecture and parallel processing”, McGraw-Hill International Edn, Singapore 1985.
3. Artificial intelligence A Modern Approach, 3rd edition, Stuart J.Russell,Peter Norvig.

Web Resources

1. <https://justkiddie.com/doc/understanding-computer-science-for-advanced-level/>
2. <https://www.free-ebooks.net/computer-sciences-textbooks>
3. <https://www.e-booksdirectory.com/computer-science.php>
4. <https://freebookcentre.net/CompuScience/Free-Computer-Science-Books-Download.html>
5. <https://genialebooks.com/ebooks-cat/computer-science/>

Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	To use the techniques, skills, and modern technology.	K1&K2
CO2	To develop the different applications that mobile computing offers to people, employees, and businesses.	K3
CO3	To develop high levels of technical competence in the field of mobile technology.	K6
CO4	To identify, formulate, and develop solutions to computational challenges.	K2
CO5	To design, implement, and evaluate a computational system to meet desired needs within realistic constraints.	K5

Title of the Course: Advanced in Computer Science						Course Code:P1R2CMCC3					
	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	2	2	3	2	3	2	2	3	3	2.5
CO2	3	2	3	3	3	3	3	2	3	2	2.7
CO3	3	2	3	3	3	3	3	2	3	2	2.7
CO4	3	2	3	3	2	3	3	2	2	2	2.5
CO5	3	2	2	3	2	3	3	3	3	2	2.6
	Mean Overall Score										2.6
	Result										High

Course Name		INTERNATIONAL BUSINESS				
Course Code		P1R2CMCC4	Ex. Hrs.	L	P	C
Category		CORE IV	3	6		5
Nature of Course		Employability				
Maximum Marks		CIA: 25	End SEM: 75		Total Marks:100	
Passing Minimum		CIA: 10	End SEM: 30		Total Marks:50	
Course objectives						
1. To teach the basics of international business						
2. To acquaint students on the international trading environment						
3. To gain an understanding on the multinational enterprises						
4. To learn the various aspects of international financial management						
5. To enable the students to gain an understanding on the recent developments in international business.						
UNIT I	Introduction				15 Hours	
International business – Meaning – Features – Factors - International Operations Management - International Business Environment - Means of engaging in International Business – External Influences of International Business – The Human and Cultural Environments facing Business – Political influence on International Business.						
UNIT II	International Trading Environment				15 Hours	
International Trading Environment – WTO – TRIM – TRIP – IPR - Country Evaluation and Selection – Scanning for Alternative Influential Variable – Return on Investment on Country – International Economic Organizations.						
UNIT III	Multinational Enterprises				14 Hours	
Multinational enterprises – Meaning – Features - Impact of the Multinational Enterprise: Evaluating the Impact of the MNE – Economic Impact of the MNE – Operational and Political Impact of International Business – International Goods, Services and Financial Flows and Balance of Payments. (Case study)						
UNIT IV	International Financial Management				14 Hours	
International Financial Management – Meaning – Role - International Monetary System - Foreign Exchange Rates: Basics, Transaction and Economic Exposure – Foreign Direct Investment – Strategies: Export and Import Strategies, Collaborative Strategies, Sourcing and Production Strategies – Human Resource Management.						
UNIT V	Recent developments in International Business				14 Hours	
Recent developments in International Business – E-business Strategy – International Business Intelligence – International Product Decisions - Global Supply Chain Management: International Logistics and Distribution – Designing Organizations for International Environment.						
(Theory 75 Marks)					Total Hours 72	
Book for Study						
John D. Daniels & Lee H Radebough, (2009), International Business, Wesley Publishing Company, New Delhi						

Books for Reference

1. Anant K, Sundaram J, Steward Black, (2010, The International Business Environment – Text And Cases, Prentice Hall of India Private Limited, New Delhi
2. Apte, P.G, (2014), International Financial Management, Tata McGraw Hill, New Delhi
3. Francis Cherunilam, (2015), International Business Text and Cases, Eastern Economy Edition, New Delhi
4. Roger Bennett, (2011), International Business, Pearson Education, New Delhi

Web Resources

https://saylordotorg.github.io/text_international-business/

Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	1. Gain knowledge on the basics of international business.	K3
CO2	2. Get an acquaintance on the international trading environment.	K5
CO3	3. Understand the multinational enterprises.	K5
CO4	4. Get the description of various aspects of international business management.	K4
CO5	5. Gain an understanding on the recent developments in international business.	K4

Title of the Course: International Business						Course Code: P1R2CMCC4					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	2	3	3	3	3	3	3	3	2	2.8
CO2	2	3	2	2	2	3	2	3	2	2	2.3
CO3	3	3	3	3	3	2	3	2	3	3	2.8
CO4	3	3	3	2	3	3	2	2	2	2	2.5
CO5	2	2	3	2	3	3	3	3	3	3	2.7
	Mean Overall Score										2.62

Course Name	BUSINESS INTELLIGENCE					
Course Code	P1R2CMDSE1:1		Ex. Hrs.	L	P	C
Category	Discipline Specific Elective I		3	6		3
Nature of Course	Skill Development					
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100			
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50			
Course objectives						
1. To provide basic knowledge of business intelligence system. 2. To understand the modelling aspects behind Business Intelligence. 3. To acquire the knowledge of data warehousing architectures. 4. To develop the applications of data mining concepts. 5. To impart the skills of decision support system modelling.						
UNIT I	Introduction to Business Intelligence			14 Hours		
What is Business Intelligence?- Changing business environments and computerized decision support - Managerial decision making - Information Systems Support for Decision Making - Early Framework for Computerized Decision Support - Decision Support Systems - Framework for Business Intelligence (BI) - Business Analytics Overview.						
UNIT II	Foundations and Technologies for Decision Making			15 Hours		
Foundations and Technologies for Decision Making: Introduction - Phases of the Decision-Making Process–Intelligence phase – Design Phase – Choice phase – Implementation Phase – Components of Decision Support Systems (DSS).						
UNIT III	Data Warehousing& Business Reporting			15 Hours		
Data Warehousing: Concepts - Process Overview - Data Warehousing Architectures - Data Integration and the Extraction, Transformation, and Load (ETL) Processes. Business Reporting: Components - Data and Information Visualization – Different types of charts and graphs.						
UNIT IV	Online-line Analytical processing (OLAP)			14 Hours		
What is OLAP? OLAP and OLTP-operational data stores-OLAP applications and functionality. Data Mining: Concepts and Applications - Data Mining Process - Data Mining Methods – Classification - Accuracy of Classification Models - Cluster Analysis - Association Rule Mining.						
UNIT V	Decision Support Systems Modeling			14 Hours		
Decision Support Systems Modeling - Structure of Mathematical Models for Decision Support - Certainty, Uncertainty, and Risk - Decision Modeling with Spreadsheets - Multiple Goals.						

Sensitivity Analysis, What-If Analysis, and Goal Seeking - Decision Analysis with Decision Tables and Decision Trees - Automated Decision Systems.		
(Theory 75 Marks)		Total Hours 72
Book for Study Efraim Turban, Ramesh Sharda, DursunDelen, “Decision Support and Business Intelligence Systems”, Ninth Edition, Pearson 2013		
Books for Reference 1. Larissa T. Moss, S. Atre, “Business Intelligence Roadmap: The Complete Project Lifecycle of Decision Making”, Addison Wesley, 2003. 2. Carlo Vercellis, “Business Intelligence: Data Mining and Optimization for Decision Making”, Wiley Publications, 2009. 3. David Loshin Morgan, Kaufman, “Business Intelligence: The Savvy Manager’s Guide”, Second Edition, 2012. 4. CindiHowson, “Successful Business Intelligence: Secrets to Making BI a Killer App”, McGraw-Hill, 2007. 5. Ralph Kimball , Margy Ross , Warren Thornthwaite, Joy Mundy, Bob Becker, “The Data Warehouse Lifecycle Toolkit”, Wiley Publication Inc.,2007		
Web Resources 1. https://wciconsulting.com/tdwi-business-intelligence-ebook/ 2. https://www.ebooks.com/en-us/book/316905/business-intelligence/david-loshin/ 3. https://www.smartdatacollective.com/free-ebooks-on-big-data-business-intelligence/		
Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Acquire the knowledge of business intelligence system.	K2
CO2	Understand the modelling aspects behind Business Intelligence.	K3
CO3	Identify the modern uses of data warehousing architectures.	K5
CO4	Learn the data mining concepts.	K3
CO5	Facilitate the ideas and concept of decision support system modelling.	K5

Title of the Course: Business Intelligence						Course Code: P1R2CMDSE1:1					
	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	2	2	3	2	3	3	2	3	3	2.6
CO2	3	2	3	3	3	3	3	2	3	2	2.7
CO3	3	2	2	3	3	3	2	2	3	2	2.5
CO4	3	2	3	3	2	2	3	2	2	2	2.3
CO5	3	2	2	3	2	3	3	3	3	2	2.6
	Mean Overall Score										2.54
	Result										High

Course Name	ADVANCED COMPUTER GRAPHICS				
Course Code	P1R2CMDSE1:2	Ex. Hrs.	L	P	C
Category	Discipline Specific Elective I	3	6		3
Nature of Course	Skill Development				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives					
1. To Introduce various Graphics Applications in real world scenario.					
2. To be familiar with image fundamentals and animations.					
3. To be learn more about 2D, 3D and Curve applications.					
4. Applying efficient graphics technique to solve engineering problems.					
5. Design program for advanced animation methods.					
UNIT I	Three Dimensions		15 Hours		
Three Dimensions: 3D geometry- Primitives and transformations- Rotation about an arbitrary axis- Parallel and perspective projection- Viewing parameters-3D clipping and viewing transformation.					
UNIT II	Curves and Fractals		14 Hours		
Curves and Fractals: Polygon Meshes- Parametric Cubic curves: B-spline, Bezier, Hermite - Parametric Bicubic Surfaces- Quadric surfaces- Fractals: Fractal lines and surfaces Applications.					
UNIT III	Basic and advanced modeling		15 Hours		
Basic and advanced modeling: scan conversion for photorealistic rendering-ray tracing-particle based methods-physical modeling-water and fire.					
UNIT IV	Illumination and Shading		14 Hours		
Illumination and Shading: Surface detail- Shadows and Transparency - Inter object Reflections- Illumination Models- Extended Light Sources- Recursive Ray Tracing.					
UNIT V	Animation Basics		14 Hours		
Animation: Introduction- History of animation-Principles of animation- Morphing- character animation and facial animation-Introduction to visual studies-Theory of visual studies.					
(Theory 75 Marks)			Total Hours 72		
Book for Study					
Fundamentals of computer graphics, Forth edition –steve marschner, Peter shirley.					
Books for Reference					
1. “Computer Graphics”: principals and practice Foley, vanDam, Feiner Hughes Addision Wesley					
2. “Mathematical Elements of Graphics Roges”, Tata McGraw Hill					
3. Computer graphics output primitives, version c- MarwaK.U.Al-Rikaby Babylon University IT College.					
4. Programming 3D Applications with HTMLs and web GL-Tony Parisi, O’Reilly.					
5. Image processing for computer graphics & vision, Luiz Velho, Alejandro C. Frery, Jonas Gomes, Second edition.					

Web Resources 1. https://www.kobo.com/us/en/ebook/advanced-methods-in-computer-graphics 2. https://freebookcentre.net/CompuScience/Free-Computer-Graphics-Books-Download.html 3. https://newz-media.com/open/advanced-computer-graphics/		
Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Compare various graphics algorithm used in 2D and 3D.	K4
CO2	Explain the range of surface and subsurface material models.	K5
CO3	Understand fundamentals of graphics used in various real-life applications.	K2
CO4	Understand and identify the performance characteristics of graphics algorithms.	K2
CO5	Employ algorithm to model engineering problems, when appropriate.	K3

Title of the Course: Advanced Computer Graphics						Course Code: P1R2CMDSE1:2					
	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	2	2	3	3	3	3	2	3	2	2.6
CO2	2	2	2	2	3	2	2	2	3	2	2.2
CO3	3	2	3	3	3	3	3	3	3	2	2.8
CO4	3	2	2	3	3	3	2	3	2	2	2.5
CO5	3	2	3	2	3	3	2	3	3	2	2.6
	Mean Overall Score										2.54
	Result										High

Course Name	CAPITAL MARKETS				
Course Code	P1R2CMDSE1:3	Ex. Hrs.	L	P	C
Category	Discipline Specific Elective I	3	6		3
Nature of Course	Skill Development				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives					
1. To introduce the student’s concept of financial markets 2. To teach the various aspects of regulation of Indian capital market 3. To teach the working mechanism of primary market 4. To enable the students to learn the working mechanism of Stock exchanges 5. To enable the students to learn the concept of underwriting and IPO					
UNIT I	Introduction		15 Hours		
Financial markets - Definition - Role - functions - Constituents - Financial Instruments - Indian Financial Market - Global Financial Market - Capital Market - Evolution and growth - Constituents - Capital Market Instruments - Types - Preference shares- Equity Shares - Non - voting equity shares - Company fixed deposits - Warrants - Debentures and Bonds					
UNIT II	Regulation of Indian Capital Market		15 Hours		
Regulatory Framework - Committees on Regulatory Framework - SEBI - Objectives - Management - Powers and functions - Regulatory role - Investor Protection - Insider Trading - Rationale - Insiders - Insider information - Connected persons.					
UNIT III	Primary Market		14 Hours		
Meaning - NIM Vs Secondary Market - Methods of New Issue - Intermediaries in the new issues market - SEBI Guidelines on Primary Market - Listing - Agreement - Benefits - Consequences of Non-listing					
UNIT IV	Stock Exchange		14 Hours		
History - Meaning - Functions - Stock Exchange Vs Commodity Exchange - Stock Exchange Traders - Regulation of Stock Exchanges - Steps in Stock Trading - BSE and NSE - World Stock Exchanges - New York, London, Hong Kong and Tokyo Stock Exchanges.					
UNIT V	Underwriting and IPO		14 Hours		
Underwriting - Definition - Types - Mechanics - Benefits - Book Building - Concept - Characteristics - Process - IPO including e-IPO - Reverse book – building – Depository services - Demat Account - Electronic Settlement of Trade - Role of CDSL and NSDL - Online Stock Trading. (Case Study).					
(Theory 75 Marks)		Total Hours 72			
Book for Study					
The Capital Markets by Gary Strumeyer, Sarah Swammy, Released January 2017 Publisher(s): Wiley Publishers ISBN: 9781119220541					

Books for Reference

1. Frank J, Fabozzi, Franco Modigliani, (2000), “Capital Markets Institutions and Instruments” Prentice Hall, New Delhi
2. Gurusamy, (2014), “Capital Markets”, Vijay Nicole Imprints, Chennai.
3. Moorad Choudhry, (2000), “Capital Market Instruments, Analysis and Valuation”, FT Press, New York.
4. Mahesh Kulkarni & Dr. Suhas Kulkarni, (2001), “Capital Markets and Financial Services” Nirali Publications, Mumbai.
5. Rajesh Chakraborty, Sankar D.E, (2011), “Capital Markets in India”, Sage Publications, New Delhi

Web Resources

- 1) <https://www.pdfdrive.com/capital-markets-financial-management-and-investment-management-e33414495.html>
- 2) <https://www.yumpu.com/en/document/view/64138725/e-book-download-capital-markets-fifth-edition-institutions-instruments-and-risk-management-the-mit-press-full-books>
- 3) https://ns.mstatic.in/LS/The_Capital_Market.pdf
- 4) http://www.columbia.edu/~sgd2002/pdf/Inside_the_Book.pdf
- 5) https://vinodkothari.com/wp-content/uploads/2014/01/Notes-on-Indian-Financial-Markets-final-_np_.pdf

Course Outcomes**K Level****After completion of the course the student will be able to**

CO1	Understand the role and importance of the Indian financial market	K2
CO2	Apply and analyze the Concepts relevant to Indian financial markets and financial institutions.	K4
CO3	Understand and analyze the mechanics and regulation of financial instruments and determine how the value of stocks, bonds, and securities are calculated.	K5
CO4	Evaluate empirical evidence of the market performance and accordingly the role of regulatory authorities to develop the financial market.	K6
CO5	Research and analyze specific problems or issues related to financial markets and institutions.	K4

Title of the Course: Capital Markets						Course Code: P1R2CMDSE1:3					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	2	3	2	3	3	3	2	3	2	2.5
CO2	3	2	3	3	2	3	2	2	3	3	2.6
CO3	3	3	2	2	3	3	2	3	2	3	2.6
CO4	3	2	2	2	2	2	3	3	3	3	2.5
CO5	2	2	3	2	3	2	2	2	3	2	2.3
	Mean Overall Score										2.5
	Result										High

Course Name	CORPORATE GOVERNANCE					
Course Code	P1R2CMDSE 1:4		Ex. Hrs.	L	P	C
Category	Discipline Specific Elective I		3	6		3
Nature of Course	Skill Development					
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100			
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50			
Course objectives						
1. To develop better and most efficient management of business organization.						
2. To develop more applicable criteria towards performing the task,						
3. Holding balance between social and economic goals.						
4. To encourage the efficient use of scarce resources.						
5. To ensure perspective work place management.						
UNIT I	Introduction of Corporate Governance		15 Hours			
Corporate Governance-Introduction, need, scope, and issues; Evolution of Corporate Governance; Genesis of Corporate Governance, Key features of Corporate Governance in the companies.						
UNIT II	Theories of corporate Governance		15 Hours			
Agency Theory, stewardship Theory, The Stakeholder Theory, Political Theory; Models of Corporate Governance: Regional Models: Indian Models: Principles of Corporate Governance and Organization for Economic Co-operation and Development (OECD) Principles.						
UNIT III	Personal & Politics Action		14 Hours			
Personal Action-Politics-Action Politics in Firm-Time Management; Corporate governance and the stakeholders - The business scene; Profit , Bottom line-Corporate styles; Leadership styles; essential components of leadership, understanding team work and leadership.						
UNIT IV	Poor Corporate Governance		14 Hours			
Meaning, consequences, effects and impact of poor Corporate Governance, Ways to improve Corporate Governance.						
UNIT V	Evaluation & Reporting		14 Hours			
Corporate Governance - Accountability issues - Board objective –Training and Development of directors-Performance evaluation of board –Corporate scandals, Whistle Blowing, Insider trading-Administering &Reporting of Corporate Governance. (Case study)						
(Theory 75 Marks)			Total Hours 72			
Book for Study						
Corporate Social responsibility: Philip Kotler, Wiley India. Pvt ,Ltd.						
Books for Reference						
1. Corporate Governance-Company Secretary of India, Taxman, New Delhi						
2. Business Ethics and Corporate Governance-S.K. Bhatia-Deep and Deep publications New Delhi.						
Web Resources						
https://esource.dbs.ie/handle/10788/4196						
Course Outcomes				K Level		
After completion of the course the student will be able to						

SEMESTER II

Course Name	ACCOUNTING FOR MANAGEMENT				
Course Code	P2R2CMCC5	Ex. Hrs.	L	P	C
Category	CORE V	3	6		5
Nature of Course	Skill Development				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives					
1. To acquaint the students with the applicability of financial statements for decision making 2. To develop the skills for preparation, analysis and interpretation of financial statements 3. To enable the students to take decisions using management accounting tools 4. To teach the mechanics of preparation of cash flow and funds flow statements 5. To understand standard costing and variance analysis.					
UNIT I	Introduction		14 Hours		
Introduction to Financial, Cost and Management Accounting Generally accepted accounting principles, Conventions and Concepts-Preparation of Trading, Profit and Loss account and Balance sheet with adjustment entries – Management accounting Vs Financial Accounting – Management Accounting Vs Cost Accounting – Utility of accounting for management					
UNIT II	Analysis of financial statements		14 Hours		
Concepts of Financial Statements – Nature - Analysis & Interpretations of financial statements – Tools - Comparative Financial statements - Common size statements — Trend analysis - Ratio analysis – Short term financial ratios- Long term financial ratios – Profitability ratios – Proprietary & Yield ratios – Turnover ratios – DUPont analysis – Financial Reporting & analysis					
UNIT III	Funds flow statement and cash flow statement		14 Hours		
Funds Flow Analysis – Funds from Operation, Sources and Uses of Funds, Preparation of Schedule of Changes in Working Capital – Construction of Funds Flow Statement – Marginal Uses of fund flow analysis and its Limitations - Cash Flow Analysis – Cash from Operation – Preparation of Cash Flow Statement – Uses and Limitations – Distinction between Funds Flow and Cash Flow. (Case study)					
UNIT IV	Standard Costing and Variance analysis		15 Hours		
Standard Costing – Advantage and Limitations of standard costing – Standard Hour – Standard cost card – Variance analysis – Relevance of standard cost for variance analysis – Significance of variance analysis – Computation of Material Variances – Labour					

Variances – Overhead Variances – Sales Variances – Accumulation & Disposal of Variances.		
UNIT V	Budget and budgetary control	15 Hours
Concept of Budget & Budgetary control – Nature and objectives of budgetary control – Establishing a system of Budgetary control - Advantages & limitations –Types of Budgets - Preparation of sales budget, selling & distribution cost budget, Production budget, purchases budget, Cash budget, Fixed and Flexible budgets –Master budget - Zero base budgeting.		
(Theory 75 Marks)		Total Hours: 72
Book for Study		
Khan M Y & Jain P K (2014), Management Accounting, Tata McGraw Hill, New Delhi		
Books for Reference		
1. Murthy A and Gurusamy S, (2017), Management Accounting, Vijay Nicole Imprints, Chennai 2. Jain SP and Narang K.L, (2012), Cost Accounting, Kalyani Publishers, Mumbai 3. Sharma and Shashi K. Gupta, Management Accounting, Kalyani Publishers 4. Reddy, T.S. & Dr. Hariprasad Reddy, Y, Management Accounting, Margham Publications, Chennai. 5. Maheswari S N, (2014), Management Accounting, Sultan Chand & Sons, New Delhi.		
Web Resources		
1. https://www.icsi.edu/media/webmodules/publications/FULL_BOOK_PP-CMA-2017-JULY_4.pdf 2. http://www.untag-smd.ac.id/files/Perpustakaan_Digital_1/ACCOUNTING%20Accounting%20For%20Managers.pdf 3. https://openstax.org/details/books/principles-managerial-accounting 4. https://www.tce.edu/sites/default/files/PDF/Accounting-and-Finance.pdf 5. https://mdu.ac.in/UpFiles/UpPdfFiles/2021/Apr/4_04-01-2021_16-43-02_Management%20Accounting_MCom-2%20(2).pdf		
Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Have a good understanding of the applicability of financial statements for decision making.	K3
CO2	Gain knowledge of preparation, analysis and interpretation of financial statements.	K4
CO3	Describe the usage of management accounting tools.	K5
CO4	Prepare cash flow and funds flow statements.	K4
CO5	Gain mastery over the preparation of variance analysis.	K3

Title of the Course: Accounting for Management						Course Code: P2R2CMCC5					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	3	2	2	3	3	2	3	2	2.6
CO2	2	3	2	3	3	2	3	3	3	1	2.5
CO3	2	3	3	3	3	3	2	3	3	3	2.8
CO4	2	1	3	1	3	2	3	3	2	3	2.3
CO5	3	2	3	3	2	2	2	3	3	2	2.5
	Mean Overall Score										2.54
	Result										High

Course Name	APPLIED COSTING				
Course Code	P2R2CMCC6	Ex. Hrs.	L	P	C
Category	CORE VI	3	6		5
Nature of Course	Skill Development				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives					
1. To familiarize the students with the various cost concepts, and elements of cost					
2. To enable the students to prepare cost sheets					
3. To apply different methods and techniques of cost control					
4. To gain knowledge of different methods of payment of wages and incentives					
5. To acquaint the students in the application of Marginal costing for Business decision making.					
UNIT I	Introduction		12Hours		
Costing - Cost Accounting – Meaning and Definition – Financial Accounting Vs Cost accounting – Relationship of cost accounting with management accounting - Nature and significance of Cost Accounting – Implementation of costing system – Practical difficulties in implementation – Essentials of good costing system - Elements of cost – Cost concepts and preparation of cost sheet – Methods of Costing -job order Costing – Process Costing- Materials – Issue of materials – Pricing of material issued.					
UNIT II	Labour Costing		15 Hours		
Labour – types of labour cost – Methods of time keeping – Idle time - overtime – labour turnover - Preparation of Pay Roll – Wage payment and incentive system – Overhead – meaning and classification of overheads – Departmentalization of Overheads – - Allocation - Apportionment – Re-apportionment- Absorption of Overhead cost – Difference between cost allocation and apportionment and Reapportionment – treatment of over and under absorbed overheads.					
UNIT III	Process Costing		15 Hours		
Process costs – Comparison between joint costing and process costing – costing procedure under process costing- Process Losses – Inter process profit – Equivalent production – methods of computing equivalent units- Evaluation of equivalent production– Joint product and by products costing – accounting for joint products & byproducts.					
UNIT IV	Marginal Costing		15 Hours		
Marginal costing – Salient features – Marginal costing and absorption costing - Break – Even analysis – Cost – Volume-profit analysis – Application of Marginal costing for Business decision making ---Determination of sales mix- Exploring new markets- Make or buy decisions- Change versus status quo -expand or contract – shut down or continue - Inflation Accounting – Human Resource Accounting. (Case study)					
UNIT V	Cost Management		15 Hours		

Course Name	DATA SCIENCE AND ANALYTICS THEORY					
Course Code	P2R2CMCC7		Ex. Hrs.	L	P	C
Category	CORE VII		3	6		3
Nature of Course	Skill Development					
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100			
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50			
Course objectives						
1. To understand the applications for the efficient use of Excel software in Data analytics						
2. To understand the design and development of database for data science with analytical features.						
3. Provide you with the knowledge and expertise to become a proficient data scientist						
4. Demonstrate an understanding of statistics concepts that are vital for data science						
5. Produce R code to statistically analyze a dataset						
UNIT I	Fundamentals of Excel			14 Hours		
Features of MS-Excel, Excel Program Screen, the Ribbon, Office button and Quick Access tool bar, Worksheets, rows, columns, cells.						
UNIT II	Worksheet basics and Editing a worksheet			14 Hours		
Creating a new workbook, opening a Workbook, Saving a Workbook, Entering labels, values, and formulas in worksheet - Editing cell contents - cutting, copying and pasting cells – Find and Replace - Undo, Inserting rows and columns, Deleting rows and columns, Adjusting row height and column width - Formatting cell values, conditional formatting						
UNIT III	Structured Query Language			14 Hours		
Introduction, SQL literals, Data types in SQL, SQL operators, Commands in SQL, Data Definition Language (DDL) commands, creating tables, Table Modification, Table Truncation, Creating Tables with constraints, dropping tables, Data Manipulation Language (DML) commands: Inserting data into tables, updating data in tables and deleting data in tables. Transaction Control commands in SQL						
UNIT IV	Introduction to Data Science			15 Hours		
Definition, benefits and uses of data science and big data. Facets of Data: Structured data, unstructured data, natural language, machine generated data, network data, audio, images and video streaming data.						
Data science process: overview of data science process, defining the goal, Retrieving data, data preparation, data exploration, build the models, cleaning and transforming data, presentation and automation.						
UNIT V	The Data Science Fundamentals			15 Hours		
DATA: Definition, characteristics of data, classification of digital data. Distributed file system, data integration frame work, machine learning framework, system deployment, security.						

Data Mining: definition, languages for data science, collection data –hunting, logging, scraping, cleaning data –error vs. artifacts, data compatibility, dealing with missing values, outlier detection.

(Theory 75 Marks)

Total Hours 72

Book for Study

Introducing Data Science by Davy Cielen, Arno D.B.Meysman and Mohamed Ali, Published by Manning.

Books for Reference

1. Elimasri / Navathe, Fundamentals of Database Systems, Fifth Edition, Pearson Addison Wesley (2007).
2. SQL, PL/SQL the Programming Language of Oracle, Ivan Bayross, BPB publications.
3. Steven S.Skiena, the Data Science Design Manual, Published by Springer. Nature.
4. Database Management Systems by Raghu Ramakrishnan, McGrawhill
5. Microsoft Excel 2007, Custom Guide Inc, 2007
6. Fundamentals Of Computers by ReemaThareja from Oxford University Press
7. Jure Leskovek, Anand Rajaraman and Jeffrey D. Ullman. Mining of Massive Datasets. v2.1, Cambridge University Press.
8. Microsoft Office 2007 Fundamentals, 1st Edition - Laura Story, Dawna Walls
9. Working in Microsoft Office – Ron Mansfield - TMH.

Web Resources

1. http://www.johndcook.com/R_language_for_programmers.html.
2. <http://bigdatauniversity.com/>
3. <http://home.ubalt.edu/ntsbarsh/statdata/topics.htm#rintroduction>.
4. NPTEL
5. e.pathasala

Course Outcomes

**K
Level**

After completion of the course the student will be able to

CO1	Have Exposure to Excel software Package	K3
CO2	Learn SQL as best analysis tool for extract data in different ways	K4
CO3	Able to construct SQL queries to Store, Retrieve data in database	K5
CO4	Explain how data is collected, managed and stored for data science.	K5
CO5	Understand the key concepts in data science, including their real-world applications and the toolkit used by data scientists	K3

Title of the Course: Data Science and Analytics Theory						Course Code:P2R2CMCC7					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	3	3	2	2	2	3	3	3	3	2.5
CO2	2	2	3	3	2	2	3	3	3	3	2.5
CO3	3	3	2	2	3	3	3	2	3	3	2.7
CO4	3	2	2	3	2	3	2	3	2	2	2.4
CO5	3	2	3	2	3	2	3	2	2	2	2.5
	Mean Overall Score										2.52
	Result										High

Course Name	DATA SCIENCE AND ANALYTICS PRACTICAL				
Course Code	P2R2CMCC8P	Ex. Hrs.	L	P	C
Category	Core VIII	3		6	5
Nature of Course	Skill Development				
Maximum Marks	CIA: 40	End SEM: 60	Total Marks:100		
Passing Minimum	CIA: 16	End SEM: 24	Total Marks:50		
Course objectives					
1) Introduce the design and development of databases for data science with analytical features in relational databases. 2) Introduce the concepts of computer fundamental & their applications for the efficient use of Excel software in data analysis. 3) Provide the knowledge and expertise to become a proficient data scientist. 4) Demonstrate an understanding of statistics and machine learning concepts that are vital for data science. 5) 5) Produce R code to statistically analyze a dataset.					
Practical Exercise		72 Hours			
I) Data analysis using Excel 1) Prepare your class time table using different Text formatting 2) Create a pay slip with details of employee salary 3) Prepare excel sheet to calculate students result and grades based on their marks 4) Prepare excel sheet to enter some strings and perform the following text functions a) Find length of strings b) Convert strings into uppercase and lower case c) Remove extra space in the strings d) Extract substrings from the strings 5) Prepare excel sheet to perform the following statistical analysis i. Find mean of the value ii. Find mode of the values iii. Calculate standard deviation iv. Find largest and smallest values					
II) Data analysis using SQL 1. Draw ER diagram for inventory control system 2. Draw ER diagram for hospital administration 3. Illustrate the creation of a table with constraints 4. Creation of college database and establish relationships between tables a. 5. Employee database b. i. List out all employee’s details c. ii. Display emp.no, e name, job and salary columns of all employees d. iii. Display employee details who are working as ‘CLERK’ e. iv. Find out number of employees working in each department f. v. Find out job wise total salaries and number of employees.					

g. vi. Calculate HRA as 30% and DA as 65% of salary

An enterprise wishes to maintain a database to automate its operations. Enterprise divided into certain departments and each department consists of employees.

The following two tables describes the automation schemas

Dept. (deptno, dname, loc)

h. Emp. (empno, ename, job, mgr, hiredate, sal, comm, deptno) Generate the following queries using data of above tables.

III) Data analysis using Data Science

1. Write Steps to Installation of R language
2. Write a program in R to draw scatter chart for data visualization.
3. Write a program in R to draw pie chart for data visualization.
4. Write program in R to import the data from outside of the sources

Book for Study

- 1) Fundamentals of Computers by ReemaThareja from Oxford University Press

Book for Reference

- 1) 1)Steven S.Skiena, The Data Science Design Manual, Published by Springer. Nature.
- 2) Microsoft Excel 2007, Custom Guide Inc, 2007.
- 3) Peter Rob, Carlos Coronel, Database Systems Design, Implementation and Management, Seventh Edition, Thomson (2007)
- 4) SQL, PL/SQL the Programming Language of Oracle, Ivan Bayross, BPB publications
- 5) 4) Introducing Data Science by Davy Cielen , Arno D.B. Meysman and Mohamed Ali, Published by Manning .

Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Have exposure to Excel software package	K1&K2
CO2	Create a small database using SQL.	K3
CO3	Learn SQL as best analysis tool for extract data in different ways	K6
CO4	Able to construct SQL queries to Store, Retrieve data in database	K2
CO5	Explain how data is collected, managed and stored for data science.	K5

Title of the Course: Data Science and Analytics Practical						Course Code: P2R2CMCC8P					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	2	3	3	3	3	3	3	3	2	2.8
CO2	3	3	3	3	3	3	2	3	3	3	2.9
CO3	3	3	2	2	3	3	2	3	3	2	2.6
CO4	3	2	3	2	2	3	3	2	2	2	2.4
CO5	3	3	2	3	3	3	3	2	2	3	2.7
	Mean Overall Score										2.68
	Result										High

Course Name	DATA COMMUNICATION NETWORKS				
Course Code	P2R2CMDSE2:1	Ex.Hrs.	L	P	C
Category	Discipline Specific Elective II	3	6		3
Nature of Course	Skill Development				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives					
1. To understand the basic concepts of data communication, protocols and OSI /TCP/IP model.					
2. To familiarize the transmission medium and error correction and detection					
3. To impart the knowledge of routing the data.					
4. To understand the functions of transport layer and the protocols.					
5. To inculcate the functions of application layer.					
UNIT I	Data communication		15 Hours		
Data communication – Networks – Protocols and standards – Basic concepts: Line configuration –Topology– Transmission mode – Categories of Networks. The OSI Model –Functions of the Layers –TCP/IP protocol suite					
UNIT II	Physical Layer & Data link layer		14 Hours		
Transmission Media – Guided media – Unguided media – Transmission Impairment. Error detection and correction Types of errors – Detection – Vertical redundancy check (VRC) – Longitudinal Redundancy check (LRC) – Cyclic redundancy check (CRC) – Checksum – Error correction.					
UNIT III	Network Layer		15 Hours		
Switching – Circuit Switching – Packet Switching – Message Switching –Networking and internetworking devices – Repeaters – Bridges Routers –Gateways – Other devices – Routing algorithms – Distance vector routing –Link state routing.					
UNIT IV	Transport Layer		14 Hours		
Client Server paradigm – Connectionless vs. Connection oriented services – User Datagram protocol – Transmission Control Protocol					
UNIT V	Application Layer		14 Hours		
Name space – Domain Name System – Remote Logging – Electronic mail – File Transfer.					
(Theory 75 Marks)		Total Hours 72			
Book for Study					
Data Communications and Networking, Behrouz A Forouzan, fourth Edition, Tata McGraw Hill, New Delhi,2006					
Books for Reference					
1. “Computer Networks”, S.Tanen Baum, Pearson Education, 5th Edition, 2011.					
2. “Data and Computer Communications”, William Stallings Pearson Education, 8th Edition, 2013.					
Web Resources					

<http://eti2506.elimu.net/Introduction/Books/Data%20Communications%20and%20Networking%20By%20Behrouz%20A.Forouzan.pdf>

Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Learn the concepts of data communication, protocols and OSI /TCP/IP model.	K2
CO2	Understand the transmission medium and error correction and detection.	K2
CO3	Analyze the routing of data.	K4
CO4	Know functions of transport layer and the protocols.	K2
CO5	Explore the functions of application layer.	K2

Title of the Course: Data Communication Networks						Course Code: P2R2CMDSE2:1					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	3	2	3	3	2	2	2	3	2.6
CO2	2	2	3	3	3	2	3	3	3	2	2.6
CO3	3	3	3	2	2	3	2	2	2	3	2.5
CO4	2	2	2	2	3	2	3	3	3	2	2.4
CO5	3	3	2	3	2	3	2	3	2	3	2.6
	Mean Overall Score										2.54
	Result										High

Course Name	ENTERPRISE RESOURCE PLANNING (ERP)				
Course Code	P2R2CMDSE2:2	Ex. Hrs.	L	P	C
Category	Discipline Specific Elective II	3	6		3
Nature of Course	Skill Development				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives					
1. To know the evaluation of ERP, systems, technology and the background of ERP					
2.To teach the various aspects of business processes					
3. To enable the students to learn about BPR					
4. To teach the ERP system implementation					
5. To know about SCM and CRM					
UNIT I	Introduction of enterprise			18 Hours	
Enterprise resource planning - evolution of ERP systems - material requirement planning - manufacturing requirement planning – Trends - Systems and technology background - ERP systems background – Objectives - Benefits and challenges in ERP - ERP data input - ERP output capabilities - Technology-enables vs. clean sheet reengineering - Specialties in ERP systems - Tangible and intangible benefits - Major ERP vendors.					
UNIT II	Business processes			18 Hours	
Business processes - ERP software changes - Designing ERP systems - choosing standard models – art effects and processes for ERP systems - client-server architecture for ERP - Application architectures - cross functionalities - application integration.					
UNIT III	Introduction to BPR			18 Hours	
Definition and principles BPR - role of IT in BPR - IT support for BPR - strategic alignment of IT and BPR - Process engineering - enterprise business processes - BPR and organizational restructuring - organizational systems - business process integration					
UNIT IV	Choosing an ERP system implementation			18 Hours	
Big bang vs phased-identification of modules -developing guiding principles and detailed project plan - legacy system analysis - as is picture -mapping into ERP - Project team training - To Be design - user acceptance - detailed design - customization - construction and testing, production system development. (Case Study)					
UNIT V	Introduction to SCM & CRM			18 Hours	
Meaning - Need - Origin - Elements of SCM - Future trends in SCM Purchasing issues in SCM - The role of purchasing in an organization - The purchasing process - Sourcing decisions - Roles of supply base - Supplier selection - CRM - CRM definition - Components of CRM - CRM concepts - Goals of CRM - CRM functions - Customer Experience Management - Back office and front office functions. Post implementation issues and development SCM and CRM.					
(Theory 75 Marks)		Total Hours 72			
Book for Study					
1. Alexis Leon (2012), Enterprise Resource Planning, 2nd Edition, McGraw Hill.					

Books for Reference

- 1 Monk (2011), Enterprise Resource Planning, Thomson.
- 2 Micheql Hammer and Champy James, (2012), Reengineering the corporation, A
manifesto for business revolution, Harper Business NY
- 3 Daniel E. O’Leary, (2000), Enterprise Resource Planning Systems, Life Cycle,
Electronic commerce, University of Southern California.
- 4 Davenport Thomas H, (1993), Process Innovation, reengineering work through
information technology, Harvard Business School Press, Boston Tamilnadu State
Council for Higher Education 24
- 5 Jylldyche, (2014), ERM Hand Book, Pearson Publishers

Web Resources

1. <https://link.springer.com/book/10.1007/978-3-319-05927-3>
2. https://www.academia.edu/2238178/Enterprise_Resource_Planning_Systems

Course Outcomes

K Level

After completion of the course the student will be able to

CO1	Students would have understood the concepts of Enterprise resource planning.	K2
CO2	Students would have learnt to design the ERP systems.	K3
CO3	Students would have become familiar with the ideas and concepts of business process.	K4
CO4	Students would have been exposed to design and test modules	K5
CO5	Students would have learnt the art of creating and managing the project	K6

Title of the Course: Enterprise Resource Planning (ERP)						Course Code: P2R2CMDSE2:2					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	2	3	3	3	2	3	3	2	2.7
CO2	2	2	3	3	2	2	2	3	2	3	2.4
CO3	3	3	3	3	2	2	3	2	3	3	2.7
CO4	2	3	2	3	2	2	2	2	3	2	2.3
CO5	3	3	2	2	2	2	3	3	2	3	2.5
	Mean Overall Score										2.52
	Result										High

Course Name	INDIRECT TAXATION					
Course Code	P2R2CMDSE2:3		Ex. Hrs.	L	P	C
Category	Discipline Specific Elective II		3	6		3
Nature of Course	Skill Development					
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100			
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50			
Course objectives						
1. To teach the features, and benefits of GST						
2. To enable students to learn important definitions on GST						
3. To learn the registration procedure relating to GST						
4. To teach the various aspects of assessment of GST						
5. To learn the important provisions of GST						
UNIT I	Indirect Taxes		19 Hours			
Introduction - Features - Objectives of Taxation- Types of taxes Direct and Indirect taxes - Indirect Tax Structure-Merits and Demerits of Indirect Taxes Recent Developments in Indirect Taxes- Goods and Services Tax Act 2016 - Introduction – Features – Benefits of GST Act.						
UNIT II	Goods and Service Tax		15 Hours			
Important Definitions - Taxable persons – Time of supply of goods and services – Administrative set up – Classes of officers under Central and State goods and services Tax Act - Appointment of Officers – Powers of officers – Levy and collection of GST – Powers to grant exemption from tax. (Case Study)						
UNIT III	Registration		15 Hours			
Procedure for registration under Schedule III – Special provisions relating to casual taxable person and non-resident taxable person – Amendment of registration – Cancellation of registration – Revocation of cancellation of registration.						
UNIT IV	Assessment of GST		14 Hours			
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 – Payment of Tax – Tax Deducted at Source – Electronic Commerce – Definitions - Collection of Tax at source.						
UNIT V	Customs Act 1962		14 Hours			
Important Definitions – Basics – Importance of Customs Duty – Constitutional authority for levy of Customs Duty – Types of Customs 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. (Case study)						
(Theory 75 Marks)			Total Hours 72			
Book for Study						
1. Dr. V. Balachandran, (2014), Indirect Taxation”, Sultan Chand & Sons, New Delhi						
Books for Reference						
2. Parameswaran and Viswanatha, Indirect Taxes - GST and Customs Law, (2018), Kavin Publications, Coimbatore						

3. Radhakrishnan, (2013), Indirect Taxation, Kalyani Publishers
4. Background Material for Goods and Service Tax. July, 2016. National Academy Of Customs Excise and Narcotics.
5. Mehrotra & Goyal (2015), Indirect Taxes, SahityaBhavan Publications, Agra

Web Resources

- 1) <https://cleartax.in>
- 2) www.cbic.gov.in
- 3) <https://corporatefinanceinstitute.com>

Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Get a better understanding of the features, and benefits of GST	K3
CO2	Master the important definitions on GST	K1
CO3	Appreciate the registration procedure relating to GST	K2
CO4	Understand the various aspects of assessment of GST	K6
CO5	Gain a better knowledge on the important provisions of GST	K3

Title of the Course: INDIRECT TAXATION						Course Code: P2R2CMDSE2:3					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	3	3	2	2	3	3	2	2	3	2.5
CO2	3	3	2	2	2	2	3	2	2	2	2.3
CO3	2	2	3	3	3	2	3	3	2	2	2.5
CO4	2	3	2	2	3	3	3	2	2	3	2.5
CO5	3	2	2	2	2	3	2	3	2	3	2.4
	Mean Overall Score										2.44
	Result										High

Course Name	MANAGERIAL ECONOMICS				
Course Code	P2R2CMDSE2:4	Ex. Hrs.	L	P	C
Category	Discipline Specific Elective II	3	6		3
Nature of Course	Skill Development				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives					
1. To present and developing a microeconomic approach to business decisions. 2. To learn to use the concepts and problems to analyse from the perspective of the firm and the managers' decisions. 3. To help analyse the economic environments in which business entities operate and understand how managerial decisions can vary under different constraints that each economic environment places on a manager's pursuit of his/her goals. 4. To analysis the functioning of markets, the economic behaviour of firms and other economic agents under various market structures, and the economic and social implications of the outcomes 5. To emphasis on the study of the production process and the analysis of interactions in Markets, both with the customers and the rival firms.					
UNIT I	Introduction to Managerial Economics and Demand analysis			12 Hours	
Nature and significance of Managerial Economics - Economic Approach - Circular Flow of Activity – consumer preference – consumer surplus-Nature of the Firm - Objectives of Firms - Demand Analysis and Estimation - Individual, Market and Firm demand - Determinants of demand - Elasticity measures and Business Decision Making - Demand Forecasting					
UNIT II	Production Laws and Cost Analysis			24 Hours	
Production laws - Law of Variable Proportions - Theory of the Firm - Production Functions in the Short and Long Run - Cost Functions – Determinants of Costs – Cost Forecasting - Cost behavior in short run and long run –Type of Costs- cost-output relationship - Analysis of Risk and Uncertainty.					
UNIT III	Market structure and Price determination:			21 Hours	
Price Determination Under Different Market Conditions: Characteristics of different market structures - Price determination and firm's equilibrium under perfect competition - monopoly & discriminating monopoly - monopolistic competition and oligopoly. (Case Study)					
UNIT IV	National Income and Business Cycles			19 Hours	
Introduction to National Income – National Income Concepts - Models of National Income Determination - Economic Indicators - Technology and Employment - Issues and Challenges – Business Cycles – Phases – Management of Cyclical Fluctuations - Fiscal and Monetary Policies-Inflation: Definition, characteristics and types; Inflation in terms of demand-pull and cost-push factors; Effects of inflation.					
UNIT V	Macro-Economic Environment			20 Hours	

Macro-Economic Environment - Economic Transition in India – Monterey and Fiscal policies- A quick Review - Liberalization, Privatization and Globalization - Business and Government - Public-Private Participation (PPP) - Industrial Finance - Foreign Direct Investment (FDIs) – FIIs. (Case study)		
(Theory 75 Marks)		Total Hours 72
Book for Study Brigham & Pappas, (2013), Managerial Economics, Dried & Press		
Books for Reference 1. Geetika, Ghosh & Choudhury (2011), Managerial Economics, Tata McGraw-Hill, New Delhi 2. Gupta G.S (2010), Managerial Economics, Tata McGraw-Hill, New Delhi 3. Mehta, P.L (2014), Managerial Economics, Sultan Chand, New Delhi 4. Moyer & Harris (2005), Managerial Economics, Cengage Learning, New Delhi, 5. Peterson, Lewis, (2010), Managerial Economics, Prentice Hall of India, New Delhi 6. Yogesh Maheswari (2005), Managerial Economics, PHI Learning, New Delhi. 7. Diwedi, D.N (2014), Managerial Economics, Vikas Publishing House, New Delhi		
Web Resources 1) https://www.academia.edu/34707649/Managerial_Economics_Textbook		
Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Understand the nature and applications of managerial economics in the business decision making.	K3
CO2	Understand production laws and these are delivering inputs and facilitating to the managers in short and long run.	K5
CO3	Know as to how the organization attains equilibrium under different market.	K5
CO4	Understand different phases of business cycle and what decision shall be made by the organization to stand in the competitive business world.	K4
CO5	Understand macroeconomics environment to compete the global business competition.	K4

Title of the Course: Managerial Economics						Course Code: P2R2CMDSE2:4					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	2	2	3	3	3	3	3	2	2	2.5
CO2	2	3	2	2	2	3	2	3	2	2	2.3
CO3	3	3	3	3	3	2	2	2	3	3	2.7
CO4	3	3	3	3	3	3	2	2	2	2	2.6
CO5	2	2	3	3	3	3	3	3	3	2	2.7
	Mean Overall Score										2.56
	Result										High

SEMESTER III

Course Name	BUSINESS RESEARCH METHODS				
Course Code	P3R2CMCC9	Ex. Hrs.	L	P	C
Category	CORE IX	3	6		5
Nature of Course	Skill Development				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives					
1. To provide basic knowledge about the concept, tools and techniques of business research					
2. To help develop the skills of students to be able to apply research techniques for business decision making					
3. To teach the preparation of questionnaire and Interview Schedule and formulate & Test the Hypothesis					
4. To help adopt appropriate statistical tools for drawing Inference					
5. To teach students as to write a Research Report					
UNIT I	Introduction to Research			15 Hours	
Meaning and Definition of Social Research – Objectives of Research–Types of Research–Research process–Criteria of Good Research–Maintaining Objectivity in Research					
UNIT II	Problem Formulation			15 Hours	
Problem Formulation – Identifying Research Problem –Sources of Research Problem – Techniques Involved in Defining a Research Problem–Research Design: Meaning and Importance; Types of Research Designs – Exploratory –Descriptive– Case Study Design.					
UNIT III	Data Collection			14 Hours	
Methods of Data Collection –Observation – Questionnaire &Interviewing – Guidelines for Constructing Questionnaire and Interview Schedule – Sample Design: Defining Universe and Sampling Unit – Determining Sampling Frame – Probability and Non-Probability Sampling Methods – Sample Size Determination – Sampling and Non-sampling Errors – Scaling Methods – Hypothesis; Hypothesis Formulation and Hypothesis Testing. (Case study)					
UNIT IV	Data analysis and Interpretation using SPSS			14 Hours	
Descriptive statistics – FactorAnalysis–Reliabilitytest–ParametricAnalysis–T-test–ANOVA–Correlation–Regression – Non-Parametric Analysis – Chi-square – Sign Test – Wilcoxon – McNemar –Kolmogorou Smirnov test – Mann-Whitney Utest – Kruskal Wallis H test.					
UNIT V	Report Writing			14 Hours	
Report Writing – Kinds of Research Reports – Steps in Report Writing–Layout of Research Report–Mechanics in Writing a Research Report–Precautions in Writing a Research Report					

(Theory 50 Marks , Problem 25Marks)		Total Hours 72
Book for Study		
Kothari C.R., “Research Methodology Methods and Techniques”, New Age International, New Delhi.		
Books for Reference		
1. Gupta SP (2009), Statistical Methods, S. Chand & Sons Publisher, New Delhi. 2. Martyn Denscombe, (2003), The Good Research Guide for Small Scale Research Projects, Viva Books Pvt. Ltd 3. Krishnaswamy O.R. & Renganathan M. “Methodology of Research in Social Sciences”, Himalaya Publishing House, New Delhi. 4. Donald R cooper, Pamela S Schindler, J K Sharma (2012), Business Research, Methods, McGraw Hill Education (India) New Delhi. 5. Pauline V. Young, “Scientific Social Surveys and Research” Prentice Hall of India Pvt. Ltd, New Delhi 6. Saravanavel P, “Research Methodology” Kidap Mahal, Agra		
Web Resources		
1) National Digital Library 2) https://www.academia.edu/41925027/Book_Research_Methodology 3) https://www.euacademic.org/BookUpload/9.pdf		
Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Understand the Concepts Relating to Business Research, Types and Process.	K3
CO2	Identify the Research Problem and Draw the Design.	K4
CO3	Prepare Questionnaire and Interview Schedule and Formulate & Test the Hypothesis.	K5
CO4	Adopt Appropriate Statistical Tools for the Inferences.	K4
CO5	Write a Research Report.	K6

Title of the Course: Business Research Methods						Course Code:P3R2CMCC9					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	3	3	2	2	2	3	3	3	3	2.5
CO2	2	2	3	3	2	2	3	3	3	3	2.5
CO3	3	3	2	2	3	3	3	2	3	3	2.7
CO4	3	2	2	3	2	3	2	3	2	2	2.4
CO5	3	2	3	2	3	2	3	2	2	2	2.5
	Mean Overall Score										2.52
	Result										High

Course Name	SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT				
Course Code	P3R2CMCC10	Ex. Hrs.	L	P	C
Category	Core X	3	6		5
Nature of Course	Skill Development				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives 1. To introduce the fundamentals of investment decision making including fundamental and technical analysis. 2. To impart knowledge on the basics of measuring risk and return. 3. To develop the skills required to make portfolio decision making. 4. To teach the uses of CAPM and APM. 5. To gain an understanding about the process of constructing a portfolio.					
UNIT I	Investment-an overview		15 Hours		
Investment-an overview – Meaning, economic investment, financial investment, investment practice, features of investment, Savings Vs Investment, Factors and constrains of investment, Investment objectives, rules of stock investment, and sources of investment information. Financial securities: meaning, features of financial instruments, types of financial instruments, equity shares, non-voting equity shares, convertible cumulative preference shares, company fixed deposits, warrants, global debt instruments, importance and drawbacks of bonds and debentures					
UNIT II	Risk and Return		15 Hours		
Risk and Return: Certainty, uncertainty, risk, types and sources of risk – Return: measurement of return, risk-return relationship, historical return, historical risk, expected rate of return and expected risk. Time value of money: Meaning, objectives, importance, TVM as a losing proposition, TVM as a gaining proposition, time preference for money, dimensions of time preference for money, discounting and compounding techniques – solving problems on time value of money – effective rate of interest – implicit rate of interest true rate of interest – doubling period. Time value of money and resource allocation: borrowing – lending – types of investment – market interest rates and prices – shifting resources across time – computing present value and future value – real asset investing – NPV – IRR – Calculating spot rates with forward rate – interest rate futures – bond duration					
UNIT III	Valuation of financial securities		14 Hours		
Valuation of financial securities: Financial security, valuation, types of valuation, valuation of bonds, preferred stock and equity share – Derivatives and stock index futures: meaning of derivatives, factors of growth, function and limitations of derivatives market, categories of derivatives, benefits of derivatives, stock index futures. Fundamental analysis: meaning, features, analytical framework –Technical analysis: meaning, mechanism, importance					
UNIT IV	Portfolio Management		14 Hours		
Portfolio – meaning – types of portfolio – portfolio management: meaning, need, types and importance – portfolio management Vs wealth management –Portfolio management					

framework – Portfolio performance. Portfolio theory: portfolio analysis, portfolio theory, objectives, Markowitz portfolio analysis, Random Walk Theory		
UNIT V	Efficient Market Hypothesis	14 Hours
Efficient Market Hypothesis: Assumptions – three levels –CAPM and APM: meaning, risk-free an risky securities – risk averse investor, objectives, assumptions, validity, components and criticism of CAPM – Capital market line – risk –return trade-off theory – determining market risk-return trade-off – components of risk-return trade-off, value additivity and CAPM – slope of CML – security market line – implications and limitations – Average Pricing Model (APM) – arbitrage - CAPM Vs APM – Portfolio return and risk: portfolio theory – diversification – Sharpe index model portfolio selection model – Sharpe optimal portfolio – alternative investment: meaning, features, alternative investment assets – wealth management – an overview		
(Theory: 75 Marks)		Total Hours 72
Book for Study Kevin S, (2011), ‘Security Analysis and Portfolio Management’ Prentice Hall of India, New Delhi		
Books for Reference 1. Russell J Fuller And J L Farrell Jr, (1995), ‘Modern Investment and Security Analysis’, McGraw-Hill Book Company, Delhi 2. Donald E Fisher And Ronald J Jordon, (1995), ‘Security Analysis and Portfolio Management’, Pearson, Delhi 3. Graham, Benjamin And David L Dodd, (1987), ‘Security Analysis’, McGraw-Hill, Delhi 4. Elton Edwin J And M J Gruber, (1998), ‘Modern Portfolio Theory and Investment Analysis’, John Wiley and Sons 5. Sunil Parameshwaran, (2013), ‘Interest Rates and Time Value of Money’, Tata McGraw Hill, Delhi 6. Francis J C, (1992), ‘Investment Analysis and Management’, McGraw-Hill, Delhi 7. Gurusamy S, (2017), ‘Security Analysis and Portfolio Management’, Vijay Nicole Imprints Ltd		
Web Resources 1. http:// 164.100.133.129:81 /e content/ Uploads/ Security _ Analysis_ &_ Portfolio_ Management. pdf 2. http://www.ucipfg.com/Repositorio/MATI/MATI-08/BLOQUE-ACADEMICO /Unidad-4/lecturas/4.pdf		
Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Get good understanding of the techniques of investment analysis	K2
CO2	Gain good understanding of different models of valuation of securities	K2

Course Name	COMPUTER APPLICATIONS IN E-BUSINESS				
Course Code	P3R2CMCC11	Ex. Hrs.	L	P	C
Category	Core XI	3	6		5
Nature of Course	Entrepreneurship				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives					
1. This course is to introduce concepts, tools and approaches to electronic business to the post-graduate and under-graduate students. 2. The subject will help the students to develop skills to manage businesses in the digital world. 3. The primary goal of e-commerce is to reach maximum customers at the right time to increase sales and profitability of the business. 4. Functions of e-commerce include buying and selling goods, transmitting funds or data over the internet. 5. This is a platform that allows ventures to sell their products or services worldwide using online mode.					
UNIT I	Introduction		16 Hours		
Concept of e-business: Nature, scope and impact of e-business-Difference between e-business and e-commerce-History and development of e-business-Advantages of e-business-Business models for e-products and e-services-Contribution of e-business to economic growth, market, competitiveness, and productivity.					
UNIT II	E-business network technology		12 Hours		
Basic knowledge to computer network-intranet\extranet\intranet-webpage-website-security and e-payment systems.					
UNIT III	Digital marketing		15 Hours		
Concept: effects of e-business technologies on marketing strategy-Customer retention and e-CRM-Measuring the extent of digital marketing activity-market analysis-digital marketing tools-viral marketing.					
UNIT IV	Payment system for E-commerce		14 Hours		
Traditional payment model-Characteristics of payment system-SET protocol for credit card payment-E-cash, E-check, smart cards.					
UNIT V	Security in e-commerce		15 Hours		
Threats in computer system-virus, cybercrime network security-Encryption, protecting web server with a firewall-firewall and the security policy-network firewalls and application firewalls-proxy server.					
(Theory: 75 Marks)		Total Hours 72			
Book for Study					
1. The complete E-commerce book-2 nd edition, Janice Reynolds.					
Books for Reference					

1. E-commerce for Entrepreneurs - Dr. Sudeshna Chakraborty, Priyanka Tyagi.
2. E-commerce Second Edition, Sarikagupta, Gaurav gupta.
2. E-business and E-commerce management, 2nd edition, Dave Chaffey.
3. Fundamentals of e-commerce, Dr.Shivani Arora, shaheed Bhagatsingh college, University of Delhi.
4. Digital marketing 2021-Michael branding, narrated by Jim Rising.
5. E-Commerce Market - Dr.Arпита Baijal.
6. E-Business security-edited by Joao manuel R.S Tavares, Noor zaman, Manjukhari, Raghvendra kumar, Brojo Kishore Mishra.

Web Resources

1. <https://www.bing.com/news/search?q=Web+Source+For+Computer+Applications+In+E-Business&qpv=web+source+for+computer+applications+in+e-business&FORM=EWRE>
2. <https://mindster.com/ecommerce-applications/>

Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Analyze the impact of e-commerce on business models and strategy.	K1&K2
CO2	Describe the major types of e-commerce.	K4
CO3	Explain the process that should be followed in building an e-commerce presence.	K2
CO4	Identify the key security threats in the e-commerce environment.	K5
CO5	Describe how procurement and supply chains relate to B2B e-commerce.	K3

Title of the Course: Computer Application in e-Business						Course Code: P3R2CMCC11					
	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	2	3	3	3	3	2	3	3	2.8
CO2	2	2	2	3	3	3	3	3	2	3	2.6
CO3	3	2	3	3	3	3	3	2	3	3	2.8
CO4	3	2	2	3	3	3	3	2	3	2	2.6
CO5	3	2	2	2	3	3	3	2	2	3	2.5
	Mean Overall Score										2.66
	Result										High

Course Name	CYBER LAWS					
Course Code	P3R2CMSEC1:1		Ex. Hrs.	L	P	C
Category	Skill Enhancement Course		3	6		3
Nature of Course	Employability					
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100			
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:40			
Course objectives						
1.To gain through knowledge on the basic concepts which lead to the formation and						
2.To execution of electronic contracts						
3. To Study the Technical aspects of Cyber Security and Evidence Aspects						
4. To acquire knowledge on Information Technology Act and EDI						
5. To understand the concept of global trends						
UNIT I	Cyber Law		10 Hours			
Information Technology Bill 2000, UNO resolutions concerning cybercrime, provisions under law and scope of various cyber laws. Legal amendments in the Evidence Act concerning cyber crime						
UNIT II	Security Aspects		20 Hours			
Security Aspects: Introduction-Technical aspects of Encryption-Digital Signature-Data Security. Intellectual Property Aspects: WIPO-GII-ECMS-Indian Copy rights act on soft Propriety works Indian Patents act on soft propriety works..						
UNIT III	Security and Evidence Aspects		12 Hours			
Security and ethical challenges of E-Business: Breach in security - Evidence Aspects: Evidence as part of the law of procedures-Evidence as part of the law of procedures						
UNIT IV	Cyberspace		10 Hours			
Introduction- Concept of Cyberspace-E-Commerce in India-Privacy factors in E Commerce- cyber law in E-Commerce-Contract Aspects.						
UNIT V	Global Trends		20 Hours			
Global Trends- Legal frame work for Electronic Data Interchange: EDI Mechanism- Electronic Data Interchange Scenario in India						
(Theory: 75 Marks)			Total Hours 72			
Book for Study						
The Indian Cyber Law : Suresh T. Viswanathan, Bharat Law House, New Delhi						
Books for Reference						
1. Understanding Laws Cyber Laws and Cyber Crimes by Garima Tiwari,2011						
2. Cyber law for by Justice Vatindra Singh,2014 2nd edition						
3. James A.O'Brien Tal Mc Graw hill edition. Fifth edition,2006						
Web Resources						
1. National Digital Library						
2. https://www.bharat-law-house-indian-cyber-laws-glossary-suresh-t-viswanathan-n-chandrababu-naidu-higher-education/p/itmcd2970dfb06f						

Course Name	WEB TECHNOLOGIES				
Course Code	P3R2CMSEC1:2	Ex. Hrs.	L	P	C
Category	Skill Enhancement Course	3	6		3
Nature of Course	Skill Development				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:40		
Course objectives					
1. Students can familiar with Web pages and Web sites					
2. Students can understand forms, video, audio and canvas					
3. Students are able to learn the latest technology in Web (HTML 5.0 and Java Script)					
4. Students can develop their own web technology					
5. Students can understand the web data					
UNIT I	Introduction to Internet and HTML 5.0			10 Hours	
Introduction to Internet- World Wide Web: History –Web browsers- Web Servers- Uniform Resource Locator. Html 5.0 : Main Structure – Structural elements- HTML 5with CSS Text- Structuring main content areas – Adding blog posts and comments- WAI- ARIA- Redefined elements- Global Attributes- Removed attributes					
UNIT II	Forms, Video –Audio and Canvas			20 Hours	
Forms-New input types -New attributes -Backwards compatibility -form fields and error messages -Overriding browser defaults -Using JavaScript for DIY validation -Avoiding validation Video and Audio -Native multimedia –Codecs -Rolling custom controls - Multimedia accessibility - Synchronizing media tracks Canvas -Canvas basics -Drawing paths -Using transformers -Capturing Images Pushing pixels -Animating your canvas paintings					
UNIT III	Data storage and additional features			20 Hours	
Data Storage -Storage options -Web storage -Web SQL Database –Indexed DB Offline -Pulling the plug -The cache manifest -Network and fallback -The manifest -The browser-server process -Application Cache -Debugging tips -Using the manifest to detect connectivity -Killing the cache Drag and Drop -Getting into drag -Interoperability of dragged data -Drag any element -Adding custom drag icons –Accessibility					
UNIT IV	Geo location and Messaging			10 Hours	
Geo location- Sticking a pin in your user- API methods Messaging and Workers- Chit chat with the Messaging API – Threading using Web Workers.					
UNIT V	Representing Web Data			12 Hours	
XML - Documents and Vocabularies - Versions and Declaration –Namespaces; Event - oriented parsing: SAX -transforming xml documents; Selecting XML data: xpath; Template based transformations : xml-displaying xml documents in browser					
(Theory 75Marks)				Total Hours 72	
Book for Study					
Deitel and deitel and Goldberg, Internet and world wide web: How to program (third edition), Pearson prentice hall,2003.					

Books for Reference

1. Richard Clark, Christopher Murphy, Divyamanian, Oliver Studholme, Beginning HTML5 and CSS3: The Web Evolved, Apress, 2008
2. Douglas Crockford, JavaScript : The Good Parts, , “O’ Relly, 2008.
3. Robert w. Sebesta, Programming the WWW, Third edition, , Pearson Prentice hall, 2005.
4. Bruce Lawson , Remy Sharp, Introducing HTML 5.0, Pearson, Second Edition, 2012.
5. David Flanagan, JavaScript: The Definitive Guide, O’ Relliy, Fifth edition, 2006.

- ### Web Resources
1. National Digital Library
 2. <https://ptgmedia.pearsoncmg.com/images/9780321784421/samplepages/0321784421>
 3. <http://auhd.edu.ye/upfiles/elibrary/Azal2020-01-22-01-38-51-40850>

1. National Digital Library
2. <https://ptgmedia.pearsoncmg.com/images/9780321784421/samplepages/0321784421>
3. <http://auhd.edu.ye/upfiles/elibrary/Azal2020-01-22-01-38-51-40850>

Course Outcomes	K Level
-----------------	---------

After completion of the course the student will be able to

CO1	Familiar with web pages.	K2 &K3
CO2	Understand how the browser and web pages are working.	K4
CO3	Familiar with latest web programming skills.	K5
CO4	Get a job with their own web Programming skills.	K6
CO5	Became a freelance web page developer.	K5

Title of the Course: WEB TECHNOLOGIES						Course Code: P3R2CMSEC1:2					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	3	2	3	2	2	3	2	3	2	2.4
CO2	3	3	3	2	3	2	3	2	3	2	2.6
CO3	2	3	2	3	3	2	2	2	2	3	2.4
CO4	2	3	3	2	3	3	2	3	3	3	2.7
CO5	3	2	3	3	3	3	3	2	3	2	2.7
	Mean Overall Score										2.56
	Result										High

Course Name	MERCHANT BANKING AND FINANCIAL SERVICES				
Course Code	P3R2CMSEC1:3	Ex. Hrs.	L	P	C
Category	Skill Enhancement Course	3	6		3
Nature of Course	Employability				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives					
1.To familiarize the students on the various merchant banking services					
2.To enable students to understand public issue management, underwriting of securities, etc					
3.To teach post-issue activities of merchant bankers					
4.To describe the underwriting activities of merchant bankers					
5.To make the students understand the functions and working of stock exchanges					
UNIT I	Merchant Banking – An Overview			10 Hours	
Merchant Banking – merchant bankers –corporate counseling – project counseling – pre-investment studies – capital restructuring services – credit syndication – issue management – portfolio management – working capital finance – mergers and acquisition – foreign currency financing – brokering fixed deposits –project appraisal – merchant banking– regulatory framework – SEBI guidelines					
UNIT II	Public Issue Management			20 Hours	
Public issue management – functions – categories of securities issue–issue manager–role of issue manager–activities involved Issue management – marketing of new issue – pure prospectus method – offer for sale method –private placement method – IPO method – rights issue method – bonus issue method – book-building– ESOP– OTCEI (Case Study)– Credit Syndication Services.					
UNIT III	Post-issue activities			10 Hours	
Post-issue activities – major activities – steps – factors in public issue proposal–pricing of issues–law relating to issue management–SEBI regulations – Prospectus – information – abridged prospectus – misstatement in prospectus –golden rule – types of prospectus – red-herring prospectus – shelf prospectus – M & A services– Portfolio Management Services					
UNIT IV	Underwriting of securities:			20 Hours	
Underwriting – meaning – types – mechanism –benefits and functions–Indian Scenario–underwriting agencies–underwriter–underwriting agreement – SEBI guidelines – Bought-out deals– grey market – capital market instruments – types – preference shares – equity shares – CCPS – company deposits –warrants–debentures and bonds–SEBI guidelines– global debt instruments–indexed bonds– floating rate Bonds– ECBs					
UNIT V	Stock exchange			12 Hours	
History – functions – Indian stock exchanges – SEBI regulations –mechanics of settlement – margin trading – stock trading system -dealer trading system –NSMS – ISE – INDONEXT – NSE – Financial Services – leasing – hire-purchase finance –bill financing – factoring – consumer finance – real estate financing – credit cards – credit rating venture capital.					

Course Name	CORPORATE SOCIAL RESPONSIBILITY				
Course Code	P3R2CMSEC1:4	Ex. Hrs.	L	P	C
Category	Skill Enhancement Course	3	6		3
Nature of Course	Skill Development				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50		
Course objectives					
1.To enable the students to gain and understand the significance and importance of corporate social responsibility and its principles and practice in Indian context 2. To teach students the implementation of CSR policy under the Companies Act 2013 3. To gain knowledge on governance of CSR activities 4.To learn as to how to monitor CSR activities 5.To know about CSR standards and audit					
UNIT I	Concept and Meaning of Corporate Social Responsibility(CSR)			14 Hours	
Meaning and Definition of CSR - Evolution of CSR - CSR in Indian Legislation from global perspective -Principles of CSR - Theories of CSR - CSR and Sustainable Development goals. CSR andCorporateGovernance-DriversofCSR-ConceptofCharity-CorporateCitizenship-CorporatePhilanthropy					
UNIT II	Implementation of CSR Policy under Sec. 135 of the Companies Act 2013			15 Hours	
CSR Policy - Constitution of CSR committee and its composition - CSR Design - CSR Budget -Implementation of CSR - CSR Process - CSR Activities - Provision of CSR in Companies Act, 2013 - CSR Committee; CSR Policy - CSR Expenditure; CSR Activities- Boards Responsibilities towards CSR Regulatory requirement of CSR Compliance in India- Guidelines and notifications issued by the Ministry from time to time - Penalty for non-compliance of section 135					
UNIT III	Governance of CSR Activities			14 Hours	
Meeting of the CSR Committee - Preparation of CSR Report - Placing CSR Report in Board meeting - Board’s responsibility towards CSR – CSR project management approach-Evaluation of CSR projects-CSR stakeholder communication, dialogue and engagement-CSR and risk Management-CSR as Organizational Brand Building.					
UNIT IV	Monitoring of CSR Activities			15 Hours	
CSR process monitoring; Situation monitoring –beneficiary monitoring; organizational monitoring-financial monitoring; compliance monitoring ;result monitoring-Internal Monitoring and Evaluation of CSR Activities-External Monitoring and Evaluation of CSR Activities; - CSR Committee and Board level review of CSR performance -CSR Reporting (Case Study)					
UNIT V	CSR Audit and Standards			14 Hours	

CSR Audit; various issues relating to CSR Audit -Preparing and filing of annual CSR report - Sustainability of CSR Audit -Developing a CSR Audit programme-CSR audit checklist; benefits of CSR audit -Review of successful corporate initiatives and challenges of CSR –CSR Ratings, CSR awards. Social Accountability 8000(SA8000)- Indian Standard Organization (ISO-26000-2010)-GST component in CSR.		
Theory 75 Marks		Total Hours 72
Book for Study Corporate Social Responsibility, Kamal Garg, Bharat.		
Books for Reference 1. Christopher(2014),SustainableValue:Howtheworld'sleadingcompaniesdoitngwellbydoinggood, Stanford University Press, USA 2. IlangoVanDandDurgadossR,(2016),CorporateGovernance–AnInsight,TheUnitedPublishers,Mangalore, Karnataka 3. NancyLeeandPhilipKotler(2011),corporatesocialResponsibility:doingthegoodforyour company and your cause, John Wley & Sons, Delhi 4. Sanjay K. Agarwal (2010), Corporate Social Responsibility in India, Sage Publications, Delhi 5. Wayne Visser (2017), CSR 2.0 Transforming Corporate Sustainability and Responsibility, Kaleidoscope Futures, London		
Web Resources 1. https://libguides.rutgers.edu 2. https://goodwin.libguides.com 3. https://journals.sagepub.com 4. https://www.researchgate.net 5. https://directory.trainingindustry.com		
Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Have gained all essential and fundamental knowledge on the principles and practices of CSR in India	K2
CO2	Acquire the skill of implementing the same in their own enterprises as and when they bring up their start-ups	K4
CO3	Appreciate governance of CSR activities	K5
CO4	Have knowledge of monitoring CSR activities	K1
CO5	Know about CSR standards and audit	K3

Title of the Course: Corporate Social Responsibility						Course Code:P3R2CMSEC1:4					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	2	3	3	3	3	3	3	3	2	2.8
CO2	3	3	3	3	3	3	2	3	3	3	2.9
CO3	3	3	2	2	3	3	2	3	3	2	2.6
CO4	3	2	3	2	2	3	3	2	2	2	2.4
CO5	3	3	2	3	3	3	3	2	2	3	2.7
	Mean Overall Score										2.68
	Result										High

SEMESTER IV

SEMESTER IV						
Course Name	TOOLS IN WEB APPLICATIONS-THEORY					
Course Code	P4R2CMCC13		Ex. Hrs.	L	P	C
Category	CORE XIII		3	6		3
Nature of Course	Employability					
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100			
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:40			
Course objectives						
1.To develop full-fledged knowledge in .NET Framework 4.5 and VS 2012, 2.understand the dynamic programming concepts in C#, 3.working with Graphic Rich desktop application in WPF, 4.Functioning of Various ASP.NET 4.5Web Controls 5. To understand the concept of web forms						
UNIT I	GETTING STARTED WITH .NET FRAMEWORK 4.5			10 Hours		
Evolution of .NET Framework- Benefits of .NET framework- Architecture of the .NET framework 4.5- New Features of .NET framework 4.5- Introducing visual studio 2012: Exploring New features of Visual studio 2012- Exploring the visual Studio 2012 Ultimate IDE- Performing Basic IDE Operations.						
UNIT II	INTRODUCING C# 5.0 IN VS 2012			20 Hours		
Need of C# - C# preprocessor Directives – New Features of C# 5.0 – Identifiers and Keywords – Data types, Variables and Constants – Expressions and operators – POINTERS, DELEGATES AND EVENTS: Pointers – Delegates – Events						
UNIT III	WORKING WITH WPF 4.5 (Windows Presentation Foundation)			12 Hours		
CONTROLS, RESOURCES, STYLES, TEMPLATES AND COMMANDS: Adding WPF Controls – Introducing Different Types of Controls in WPF – Using WPF Controls – Understanding Triggers – DATA ACCESS WITH ADO.NET: Understanding Databases – Understanding SQL – Understanding ADO.NET – Data Reader – Creating Connection Strings – Creating a Connection to a Database – Creating a Command Object – Working with Data Adapter.						
UNIT IV	ASP.NET 4.5 ESSENTIALS			10 Hours		
Introducing New Features of ASP.NET 4.5 – Describing the ASP.NET Technologies – Describing ASP.NET Life Cycle – DEVELOPING A WEB APPLICATION: File Types in ASP.NET 4.5 – ASP.NET 4.5 Coding Models – Understanding ASP.NET 4.5 Page Directives – Working with Server Controls						
UNIT V	WEB FORMS STANDARD CONTROLS			20 Hours		

The Control Class – Web Control Class – Standard Controls – User Controls and Custom Controls – VALIDATION CONTROLS: Validation in ASP.NET Web Forms – The Base Validator Class – The Required Field Validator Control – The Range Validator Control – The Regular Expression Validator Control – The Compare Validator Control – The Custom Validator Control – The Validation Summary Control		
(Theory: 75 Marks)		Total Hours 72
Book for Study		
1. Kogent Learning Solutions Inc., “.NET 4.5 Programming - Black Book” (6-in-1 covers .Net 4.5 Framework, Visual Studio 2012, C# 2012, ASP.NET 4.5, VB 2012, and F# 3.0), 2013, Comprehensive Problem Solver, Dreamtech Press, New Delhi.		
Books for Reference		
1. MridulaParihar, —ASP.NET Bible”, 2004, Wiley Dream tech India (P) Ltd., New Delhi		
2. Matt J. Crouch, “ASP.NET and VB.NET Web Programming”, 2002, Pearson Education Publishing Ltd., New Delhi		
3. Chris Payne, “SAMS Teach Yourself ASP.NET”, 2005, Pearson Education Publishing Ltd., New Delhi		
4. Oberg Robert J., “Introduction to C# using .NET”, 2002, Pearson Education Publishing Ltd., NewDelhi.		
5.Kogent Learning Solutions Inc., “ASP.NET 4.0 Programming – Black Book”, 2010, Comprehensive Problem Solver, Dream tech Press, New Delhi		
Web Resources		
1. National Digital Library		
2. https://www.wileyindia.com/net-4-5-programming-6-in-1-black-book.html		
3. https://www.gbl.bbau.ac.in:8090/cgi-bin/koha/opac-search.pl?q=ccl=Provider:Pearson,&offset=250&sort_by=relevance_dsc		
Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Get a clear picture about the .NET Framework.	K2 &K3
CO2	Gain the insight of the Assemblies, Namespaces and Web Application	K4
CO3	Accumulate the knowledge about Web Controls	K5
CO4	Get a fair idea about the statement and Rich, validation controls	K6
CO5	Get idea for various web forms controls	K6

Title of the Course: TOOLS IN WEB APPLICATIONS -THEORY						Course Code:P4R2CMCC13					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	2	3	3	2	2	2	3	3	3	2.5
CO2	3	3	2	2	3	3	3	2	3	2	2.6
CO3	3	3	2	3	2	2	3	3	2	2	2.5
CO4	3	3	2	2	2	2	2	3	3	2	2.4
CO5	3	2	3	3	3	2	3	3	2	3	2.7
	Mean Overall Score										2.54
	Result										High

Course Name	TOOLS IN WEB APPLICATIONS PRACTICAL				
Course Code	P4R2CMCC14P	Ex. Hrs.	L	P	C
Category	CORE XIV	3		6	5
Nature of Course	Employability				
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100		
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:40		
Course objectives					
1.To Learn about ASP.NET and ADO.NET 2.To Understand .Net Framework in the Integrated Development. 3.To Understand the Concept Of database and forms 4.To understand the basic design for application using Grid view in a web page 5.To learn how to upload files using controls					
Practical Exercises					
1. Write a Program to convert temperature from degree Centigrade to Fahrenheit. 2. Write a Program to find whether given number is Even or Odd. 3. Write a Program to find greatest of three numbers. 4. Write a Program to using switch statement to display Monday to Sunday. 5. Write a Program to display first Ten Natural Numbers and their sum. 6. Write a Program to find Multiplication of Two Matrices. 7. Write a Program to find the maximum number in Array using pointer. 8. Write a Program to reverse a number using pointer. 9. Write a Program to solve Quadratic Equation using functions. 10. Write a Program to find factorial of a number using Recursion. 11. Write a Program to show Call by Value and Call by Reference. 12. Write a Program to add two numbers using pointer. 13. Write a Program to create a file containing Student Details. 14. Write a Program to update the details of student’s information using various file modes.					
(Total Marks-60), (Total Hours 72)					
Course Outcomes				K Level	
After completion of the course the student will be able to					
CO1	Create application using Microsoft visual studio windows.			K2 & K3	
CO2	Working various ASP.NET and ADO.NET controls.			K4 & K6	
CO3	Install, configure and interact with database system			K5	
CO4	To design web page controls using ADO.NET and ASP.NET			K6	
CO5	To work with files and validation web forms			K3	

Title of the Course: TOOLS IN WEB APPLICATION - PRACTICAL						Course Code: P4R2CMCC14					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	3	2	3	2	2	3	2	3	2	2.4
CO2	3	3	3	2	3	2	3	2	3	2	2.6
CO3	2	3	2	3	3	2	2	2	2	3	2.4
CO4	2	3	3	2	3	3	2	3	3	3	2.7
CO5	3	2	3	3	3	3	2	2	2	2	2.5
	Mean Overall Score										2.52
	Result										High

Course Name	APPLICATIONS IN CRYPTO CURRENCY AND BLOCK CHAIN TECHNOLOGY					
Course Code	P4R2CMGEC1		Ex. Hrs.	L	P	C
Category	Generic Elective Course		3	6		3
Nature of Course	Skill Development					
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100			
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:50			
Course objectives						
1. Students can have basic set of skills to understand crypto currencies and block chain/DLT 2. students can understand Block Chain applications in Various Sectors 3. Students are able to learn the Current state of the crypto currency 4. Students can develop their Investment in alt coins and mining 5. students can understand ICO Regulation						
UNIT I	Block Chain Fundamentals			10 Hours		
Block Chain Overview – Basis of Cryptography in the Block chain – Decentralized digital identity- transactions – block Building and Consensus mechanism – coding with solidity on Ethereum Block chain.						
UNIT II	Enterprise Applications of Block Chain			20 Hours		
Pros and cons of using Block Chain - Block Chain applications in Various Sectors – notable block Chain consortium- Business decisions about Block Chain						
UNIT III	Block Chain and Crypto Currency overview			20 Hours		
What is crypto currency and Block chain? - History of crypto currency - How is it different from fiat currency? - Current state of the field						
UNIT IV	Practical Use of Crypto Currency			10 Hours		
The crypto currency ecosystem – Crypto currency and anonymity – Crypto currency wallets -Investment in alt coins and mining - Tax and inheritance						
UNIT V	Token Offering			12 Hours		
What is an Initial Coin Offering? - Advantage and Disadvantage of ICO - ICO Regulation - Securities Token Offering – Regulated ICOs - Trends in Token Offering						
(Theory 75 Marks)				Total Hours 72		
Book for Study						
Bitcoin and Crypto currency Technologies. Princeton University Press -Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller, Steven Goldfeder.						
Books for Reference						
1. Mastering Bitcoin. -Andreas M. Antonopoulos 2. The Age of Crypto currency: How Bitcoin and Digital Money Are Challenging the Global Economic Order (by <i>Wall Street Journal</i> writers Paul Vigna and Michael J. Casey, explains crypto currency)						
Web Resources						
1) Untraceable Electronic Cash (Chaum, Fiat and Naor 1990)						

- 2) SEC Release No. 81207 (The DAO)
- 3) <https://github.com/bitcoinbook/bitcoinbook>
- 4) *The Truth Machine: The Block chain and the Future of Everything.*

Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	Have exposure to Basis of Cryptography in the Block chain	K2 &K3
CO2	Create a block Chain consortium.	K4
CO3	Learn Current state of the crypto currency	K5
CO4	Able to construct Crypto currency wallets and investments	K6
CO5	Assess the Trends in Token Offering	K5

Title of the Course: Application in Crypto currency and Block chain Technologies						Course Code: P2R2CMGEC1					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	2	3	3	3	3	3	3	3	2	2.8
CO2	3	3	3	3	3	3	2	3	3	3	2.9
CO3	3	3	2	2	3	3	2	3	3	2	2.6
CO4	3	2	3	2	2	3	3	2	2	2	2.4
CO5	3	3	2	3	3	3	3	3	3	3	2.9
	Mean Overall Score										2.98
	Result										High

Course Name	GST THEORY AND PRACTICE					
Course Code	P4R2CMGEC1:2		Ex. Hrs.	L	P	C
Category	Employability		3	6		5
Nature of Course	GEC					
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100			
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:40			
Course objectives						
1. To understand the concepts of Goods and Services and Tax Act.						
2. To gain knowledge on Levy collection and tax and time and place of supply.						
3. To understand the basic concepts related to GST.						
4. To acquaint with the latest amendments made in connection with indirect taxation.						
5. To update the procedural part of GST.						
UNIT I	Introduction, Overview and Evolution of Goods and Services Tax			15 Hours		
Introduction – Direct tax and Indirect tax – meaning - Stages of Evolution of Goods and Services Tax - Subsuming of taxes - constitutional background - Structure of GST – CGST, SGST, UTGST and IGST – Benefits of implementing GST – GSTN – Structure, features and functions – HSN Code – SAC code – GST council and its structure – power and functions of GST Council – Important concepts and definitions under CGST Act and IGST.						
UNIT II	Levy Collection and Tax and Time and place of Supply			20 Hours		
Levy and collection of tax – Rates of GST – Scope of Supply – Composite and mixed supplies and E-Commerce – under GST regime – Liability to pay tax – Reverse charge Mechanism and Composition scheme – Time of supply of goods – place of supply- Cascading Effect of Taxation – Input Tax Credit – Manner of claiming input tax credit in different situations – Tax Invoice – credit and debit notes – Electronic ledger.						
UNIT III	Registration and Payment of Tax			15 Hours		
Registration – persons liable for Registration – Compulsory registration – Deemed registration – Procedure for registration – GSTIN and its structure – Amendment of registration – Revocation of cancellation – Returns – finishing details of supplies – Payment of Tax, Interest, Penalty – Tax Deduction at Source – Collection of tax at source – Refunds.						
UNIT IV	Assessment and Audit			12 Hours		
Assessment – Meaning – Types of Assessment – Self Assessment – Provisional Assessment – Scrutiny Assessment – Types of Assessment – Audit – Search and Seizure – Inspection of goods in movement – Power of Authorities – Demands and Recovery – Fraud and Suppression of facts – Liabilities – Provisional.						
UNIT V	Appeals			15 Hours		

Appellate Authorities – powers – Procedure for appeal – Appeals before Tribunal – Appeals by the Department (CGST/SGST) before the AA/ Tribunal – Revision to high court – Supreme court – Offences and Penalties.		
100% Theory		Total Hours: 72
Book for Study H.C Mehrotra, Indirect Taxes, Sahitya Bhavan Publications, New Delhi, 2018.		
Books for Reference 1. Vinod K Singania, Indirect Taxes, Taxmann’s Publications, New Delhi, 2018 2. Rakesh Kumar, Goods and Services Tax, Diamond Pocket Books Pvt Ltd. 3. Indirect Taxes: V.S. Datey – Taxman Publication. 4. Bare Act SGST 5. Bare Act IGST		
Web Resources Website of Custom Department, Website of Excise Department, Website of Sales Tax Department.		
Course Outcomes		K Level
After completion of the course the student will be able to		
CO1	To acquire knowledge about the GST.	K2
CO2	To enable the students to Levy Collection and Tax and Time and place of Supply.	K3
CO3	To gain the knowledge in Registration and Payment of Tax.	K5
CO4	To familiarize the students with the concepts of Assessment and Audit.	K4
CO5	To know the techniques of Appeals.	K6

Title of the Course: GST Theory and Practices						Course Code: P4R2CMGEC1:2					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	2	3	3	3	1	3	3	3	2.7
CO2	3	3	3	2	3	2	3	1	2	1	2.3
CO3	2	3	3	3	3	3	2	3	3	3	2.8
CO4	3	1	3	2	3	3	3	3	2	3	2.6
CO5	3	2	3	3	1	3	3	3	3	2	2.6
	Mean Overall Score										2.60
	Result										High

Course Name	E-BANKING					
Course Code	P4RCMGEC1:3		Ex. Hrs.	L	P	C
Category	GEC		3	6		5
Nature of Course	Employability					
Maximum Marks	CIA: 25	End SEM: 75	Total Marks:100			
Passing Minimum	CIA: 10	End SEM: 30	Total Marks:40			
Course objectives						
1. Describe fundamental concepts behind modern e-banking/mobile banking technologies 2. Perform a risk assessment of an existing e-banking/mobile banking solution 3. Test controls in an e-banking/mobile banking environment 4. Recommend possible solutions/procedures to enhance e-banking/mobile banking security controls 5. Assess the vendor management program to identify required controls that meet financial institution policies and standards						
UNIT I	Basic concepts of E-Banking			12 Hours		
Electronic Banking: Traditional Banking Vs E-Banking-Facets of E-Banking – e-Banking transactions - truncated cheque and Electronic cheque.						
UNIT II	Advances of E-Banking			12 Hours		
Models for E-banking-complete centralized solution- features-CCS-Cluster approach-Hi tech. Bank with in Bank Advances of E-Banking-Constraints in e-Banking.						
UNIT III	ATM & EFT		12 Hours			
Online Banking: Introduction – concept and meaning - the electronic delivery channels- need for computerization-Automatic Teller Machine (ATM) at home –Electronic Fund Transfer (EFT)-uses – computerization in clearing houses Telebanking- Banking on home computers –Electronic Money Transfer -uses of EMT.						
UNIT IV	FTT & MICR			20 Hours		
Updating Bank saving accounts –Computer bank branches-Financial Transaction Terminals- (FTT) - E-Cheque-Magnetic Ink Character Recognition (MICR) and Cheques						
UNIT V	E-Banking with & Cyber crimes			16 Hours		
E-Banking Security- Introduction need for security –Security concepts-Privacy –Survey. Findings on security-Attack-Cyber crimes-Reasons for Privacy						
Total Hours 72						
Book for Study E – Business and E- Commerce – C.S. Rayudu – Himalaya Publications, Mumbai, 2010						
Books for Reference 1. E-banking in India: Challenges & Opportunities by R K Uppal, Rimpi Jatana 2. Banking Awareness by Rakesh Kumar Roshan 3. E-Banking Management by Rabi Narayana Misra 4. E-BANKING IN INDIA (CONTEMPORARY ISSUES IN CUSTOMER SATISFACTION)by Dr. Vinod Kumar (Author). Dr. Amit Juneja (Author)						

5. E-Banking: Prospects and Problems by Lohana Ponnamm

Web Resources

1. <https://www.paisabazaar.com/banking/internet-banking-e-banking/>
2. <https://www.toppr.com/guides/business-economics-cs/money-and-banking/e-banking/>
3. https://www.amity.edu/gwalior/ajm/pdf/ajm_v7n1_part2.pdf
4. https://bankofmaharashtra.in/internet_banking
5. <https://www.imf.org/external/pubs/ft/pdp/2002/pdp06.pdf>

Course Outcomes

K Level

After completion of the course the student will be able to

CO1	Acquire the basic knowledge of E-Banking transactions, models for ebanking, mobile banking and Findings on security	K1
CO2	Understanding the importance of Automatic teller machine (ATM), Mode of payments (NEFT, EFT, RTGS, SWIFT, E-WALLET) and ePayment proposition.	K2
CO3	Familiarize bank with in bank advances of E-banking, E-Cheque and truncated Cheque	K3
CO4	Analyze the facets of E-banking, Tele banking	K4
CO5	Gain practical knowledge in the process of online banking.	K5

Title of the Course: E- BANKING						Course Code: P4RCMGEC1:3					
Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	3	2	2	3	2	2	2	3	2.5
CO2	2	2	2	3	2	2	3	3	2	2	2.3
CO3	3	2	3	3	3	3	3	2	3	3	2.8
CO4	3	3	3	2	2	2	2	2	3	2	2.4
CO5	2	2	2	3	3	2	3	2	2	2	2.3
	Mean Overall Score										2.46
	Result										Medium

Course Name	Project work				
Course Code	P4R2CMCC15PW	Ex. Hrs.	L	P	C
Category	Core XV	3	12		3
Nature of Course	Employability				
Maximum Marks			Total Marks:100		
Passing Minimum			Total Marks:50		

Course Name	Internship				
Course Code	P3R2CMCC12P	Ex. Hrs.	L	P	C
Category	Core XII	3	12		3
Nature of Course	Employability				
Maximum Marks			Total Marks:100		
Passing Minimum			Total Marks:50		