RATHINAM COLLEGE OF ARTS AND SCIENCE (AUTONOMOUS)

Rathinam Tech Zone, Eachanari, Coimbatore – 641021.

DEPARTMENT OF COMMERCE

Syllabus for

M.COM (COMPUTER APPLICATION)

(I, II, III & IV Semester)

2024 – 2025 Batch onwards

Vision and Mission of the Institution

Vision

To emerge as a world-renowned Institution that is integrated with industry to impart Knowledge, Skills, Research Culture and Values in youngsters who can accelerate the overall development of India

Mission

To provide quality education at affordable cost, build academic and research excellence, maintain eco-friendly and robust infrastructure, and to create a team of well qualified faculty who can build global competency and employability among the youth of India

Motto

Transform the youth into National Asset

Vision and Mission of the Department

Vision

To be recognized by the Stakeholders as a leader to provide a student- centred environment that promotes academic excellence, professional and personal growth, research culture, ethical and professional conduct and train competent and innovative globally suitable human youngsters.

Mission

To impart knowledge through tutoring, teaching, research and extension, create quality and globally competitive in commerce professionals.

Program Educational Objectives (PEO)

PEO1	**:**	Pursue a career as a globally competent and universally employable professional in core and related fields in diverse sectors who accelerates the overall development of India.
PEO2	**:**	Pursue lifelong learning opportunities including graduate degrees to improve and expand domain specific and professional skills.
PEO3	**:**	Advance personally and professionally by accepting professional and societal responsibilities, and pursuing leadership roles.

Mapping of Institute's Mission to PEO

Institute's Mission	PEO's
Global competency and employability among the youth of India.	PEO1, PEO2
Build academic and research excellence, maintain eco-friendly and robust infrastructure, and to create a team of well qualified faculty	PEO2, PEO3

Mapping of Department Mission to PEO

Department Mission	PEO's
Tutoring, teaching, research and extension	PEO 1, PEO 2
Competitive in commerce professionals	PEO 2, PEO 3,
Create quality and globally	PEO 1. PEO 3

Program Outcomes (PO):

PO1	**:**	Demonstrate knowledge competency in core discipline

PO2	**:**	Apply the appropriate knowledge and suitable skills in solving the complex problems
PO3	**:**	Conduct investigations of complex problems through various scientific approaches
PO4	**:**	Design solutions for complex and open ended real-life or real-time problems
PO5	**:**	Use appropriate and advanced tools for wide range of practices with an understanding on its associated limitations
PO6	**:**	Work effectively and responsibly as a member or a leader in a team
PO7	**:**	Express complex concepts within the profession and with society at large
PO8	**:**	Understand the professional roles and responsibilities
PO9	**:**	Analyze social and environmental aspects of the professional practices
PO10	**:**	Practice higher moral and ethical standards during the discharge of professional duties
PO11	**:**	Incorporate finer finance and business practices in all professional engagements
PO12	**:**	Identify and address their professional development through lifelong learning

Program Specific Outcomes (PSO):

PSO 1	**:**	Stay vigilant on emerging technologies like AI, data analytics, and cybersecurity to anticipate industry shifts, ensuring businesses stay adaptable.
PSO 2	**:**	Develop a resilient mind set to tackle complex business challenges with clarity and creativity, leveraging critical thinking and technical skills for innovative solutions.
PSO 3	**:**	Develop the capability to forecast potential outcomes, enabling proactive strategies to navigate dynamic landscapes effectively.

Correlation between the PO/PSO and the PEOs

Program Outcomes		PEO 1	PEO 2	PEO 3
PO1	:	3	1	3
PO2	:	3	2	3
PO3	:	1	2	3
PO4	:	3	1	3
PO5	:	3	3	2
PO6	:	2	3	3
PO7	:	2	3	1
PO8	:	3	2	1
PO9	:	2	2	3
PO10	:	3	2	1
PO11	:	2	1	1
PO12	:	3	2	2
PSO1	:	2	3	1
PSO2	:	3	2	1
PSO3	:	2	2	3

3 – Strong correlation; 2-moderate correlation; 1-Less correlation; Blank-no correlation

Components considered for Course Delivery is listed below:

a. Class room Lecture
b. Laboratory class and demo
c. Assignments
d. Mini Project
e. Project
f. Online Course
g. External Participation
h. Seminar
i. Internship

Mapping of POs with Course Delivery:

Program Outcome	Course Delivery								
	a	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**

PO1	3	3	1	1	2	1	3	3	1
PO2	3	3	2	3	3	1	1	2	3
PO3	3	3	1	3	1	1	1	2	3
PO4	2	3	2	3	3	1	1	3	1
PO5	3	2	1	3	1	3	3	3	3
PO6	2	3	1	3	3	1	2	3	3
PO7	2	3	1	3	1	1	2	3	3
PO8	2	2	1	2	3	3	2	3	3
PO9	1	1	2	3	3	3	2	3	3
PO10	2	1	2	3	2	2	2	2	2
PO11	1	1	2	2	2	3	3	3	3
PO12	1	2	3	2	2	2	3	3	3
PSO1	**2**	**2**	**1**	**2**	**3**	**3**	**2**	**3**	**3**
PSO2	**1**	**1**	**2**	**3**	**3**	**3**	**2**	**3**	**3**
PSO3	**2**	**1**	**2**	**3**	**2**	**2**	**2**	**2**	**2**

3 – Strong correlation; 2-moderate correlation; 1-Less correlation; Blank-no correlation

RATHINAM COLLEGE OF ARTS AND SCIENCE (AUTONOMOUS)

M.COM (COMPUTER APPLICATION) DEGREE PROGRAMME

(For students admitted from 2024-2025 and onwards)

S. No	Sem	Part	Sub Type	Course Code	Course Name	Credits	Hours	INT	EXT	Total
1	I	3	C1		Core – I	4	5	50	50	100
2	I	3	C2		Core-II	4	5	50	50	100
3	I	3	C3		Core-III	4	5	50	50	100
4	I	3	C4		Core-IV	4	5	50	50	100
5	I	3	SEC 1		Skill - I (Practical / Training)	4	5	50	50	100
6	I	3	ELE 1		Elective-1	4	5	50	50	100
						20	**25**	**350**	**350**	**700**
7	II	3	C5		Core-V	4	5	50	50	100
8	II	3	C6		Core-VI	4	5	50	50	100
9	II	3	C7		Core-VII	4	5	50	50	100
10	II	3	C8		Core-VIII	4	5	50	50	100
11	II	3	SEC 2		Skill - II (Practical / Training)	4	5	50	50	100
12	II	3	ELE 2		Elective-2	4	5	50	50	100
						24	**30**	**250**	**250**	**500**
13	III	3	C9		Core-IX	4	6	50	50	100
14	III	3	C10		Core-X	4	6	50	50	100
15	III	3	C11		Core – XI	4	6	50	50	100
16	III	3	SEC 3		Skill - III (Practical / Training)	4	6	50	50	100
17	III	3	ELE 4		Elective-3	4	6	50	50	100
18	III	3	ITR		Internship / Industrial Training (Summer vacation at the end of II semester activity)	2		50	0	50
						22	**30**	**300**	**250**	**550**
19	IV	3	C12		Core-XII	4	6	50	50	100
20	IV	3	SEC 4		Skill - IV (Practical / Training)	4	6	50	50	100
21	IV	3	ELE 5		Elective-4	4	6	50	50	100
22	IV	3	PRJ		Project with Viva-Voce	8	12	100	100	200
						20	**30**	**250**	**250**	**500**
	TOTAL					**86**	**115**	**1150**	**1100**	**2250**

Certificate on Minor Discipline

S.No.	Sem	Part	Sub Type	Sub Code	Subject	Credit	Hours	INT	EXT	Total
1	2	6	MD		Course - I	5	2	0	100	100
2	3	6	MD		Course - II	5	2	0	100	100
3	4	6	MD		Course - III	5	2	0	100	100
4	5	6	MD		Course - IV	5	2	0	100	100

CORE

S.No.	Sem	Pre-requisite	Course Code	Course Name	Offering Department	Type Theory / Practical
1				Advanced Accounting	Commerce I	Theory
2				Financial Management	Commerce I	Theory
3				Marketing Management	Commerce I	Theory
4				Database Management System	Commerce I	Theory
5				Advanced Cost Accounting	Commerce I	Theory
6				Object Oriented Programming with C++	Commerce I	Theory
7				Business Research Methods	Commerce I	Theory
8				Human Resource Management	Commerce I	Theory
9				Management Accounting	Commerce I	Theory
10				Direct Tax	Commerce I	Theory
11				Python Programming	Commerce I	Theory
12				Visual Basic	Commerce I	Theory

Skill Enhancement Course						
S.No.	**Sem**	**Pre-requisite**	**Course Code**	**Course Name**	**Offering Department**	**Type Theory / Practical**
1				Advanced Excel and DBMS	**Commerce I**	**Practical**
2				Object Oriented Programming with C++	**Commerce I**	**Practical**
3				Computerized Accounting Using Software & Python Programming	**Commerce I**	**Practical**
4				Visual Basic Practical	**Commerce I**	**Practical**

Elective Course						
S.No.	**Sem**	**Pre - requisite**	**Course Code**	**Course Name**	**Offering Department**	**Type Practical / Training**
1				E Commerce	Commerce I	Theory
2				Cyber Security	Commerce I	Theory
3				Block Chain for Business Fundamentals	Commerce I	Theory
4				Web Designing	Commerce I	Theory
5				Business Finance	Commerce I	Theory
6				Financial Markets and Institution	Commerce I	Theory
7				Investment Management	Commerce I	Theory
8				Enterprise Resource Planning	Commerce I	Theory
9				Management Principles and Business Ethics	Commerce I	Theory
10				International Marketing	Commerce I	Theory
11				Entrepreneurship Development	Commerce I	Theory

Core

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Advanced Accounting	4	5	-	-	**Core Theory**

Course Introduction: This subject is a comprehensive study of Banking, Insurance, Investments and Farm Accounting and preparation of consolidated financial statement of the mentioned fields.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	Determine appropriate accounting method required under various share ownership scenario
CO 2:	Determine Goodwill and prepare a consolidated balance sheet at the date of acquisition for business combinations.
CO 3:	Translate the financial statements of a foreign subsidiary using the appropriate method.
CO 4:	Prepare consolidated financial statements.
CO 5:	Differentiate between not- for-profit and for-profit accounting.

Unit I:	**COMPANY ACCOUNTS - SHARE CAPITAL**	**[12 Periods]**

Classification of Share Capital - Types of shares - Issue of Shares - Issue of shares at par, at premium at Discount - Forfeiture and Reissue - Over-subscription – Pro-rata allotment – Presentation of information in Balance Sheet of a company

Unit II:	**COMPANY ACCOUNTS – DEBENTURES**	**[12 Periods]**

Types of debentures - Difference between shares and debentures - Issue of debentures - Redemption of debentures - Sinking fund method of Redemption of Debentures – Insurance Policy method of Redemption of Debentures.

Unit III:	**COMPANY FINAL ACCOUNTS**	**[12 Periods]**

Trading and Profit and Loss Account and Balance Sheet as per Schedule VI – Managerial Remuneration

Unit IV:	**ACCOUNTS OF HOLDING COMPANIES**	**[12 Periods]**

Concept of holding company – Cost of control - Minority interest – Goodwill – Capital and revenue profits – Intercompany transactions – Contingent liabilities – Consolidated Balance Sheet.

Unit V:	**INVESTMENT ACCOUNTING**	**[12 Periods]**

Meaning – Need for separate Investment Accounts – Classification of Scrip's – Ex – Interest, Cum –Interest- Treatment of Bonus Shares and Rights Shares. **GOODWILL & SHARES**: Valuation of Goodwill – Valuation of Shares.

Text Books:

1. S.N. Maheswari, Advanced Accountancy, Vikas Publishers, 2021.

Reference Books:

1. Advanced Accounting (Vol-1) Tata McGraw - Hill Publishing Limited – New Delhi,Edition 2020.
2. Joe Ben Hoyle, Timothy Doupnik, Thomas Schaefer McGraw, Hill Education Publishing Year 2019.

Web Resources:

https://www.sultanchandandsons.com/book/149/advanced-accountancy-volume-ii

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	1	1	1	2	1	1	1	2	3	1
CO2	3	2	3	1	1	3	2	1	2	1	1	1	3	2	2
CO3	3	3	2	1	2	2	1	3	2	1	2	1	2	3	3
CO4	1	1	3	3	1	3	2	3	1	2	2	2	3	2	2
CO5	3	1	3	1	3	2	2	3	1	2	2	1	1	2	3

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Marketing Management	4	5	-	-	**Core Theory**

Course Introduction: This course helps to attain basic skills of Marketing Management strategies and conditions choosing target markets and getting, keeping, and growing customers through creating, delivering, and communicating superior customer value.

Course Focus on: Skill Development / **Entrepreneurship** / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To offer a comprehensive introduction to the management of marketing functions, structures.
CO 2:	It helps to understand the role in the contemporary economic and social development.
CO 3:	To formulate a marketing plan including marketing objectives, strategies, budgeting .
CO 4:	To know marketing mix that take into account perceived value, competitive pressure.
CO 5:	To Know the Information System in marketing Concepts to helpful in the Future.

Unit I:	**INTRODUCTION TO MARKETING**	**[12 Periods]**

Introduction to Marketing Management: Nature of marketing management, Scope of Marketing. Organization of marketing functions. Marketing concepts and philosophy: Product, Production, Selling, Marketing and Societal. Selling and Marketing differences, Marketing environment-micro and macro environment.

Unit II:	**MARKET SEGMENTATION AND TARGETING**	**[12 Periods]**

Market Segmentation and Targeting: Concept of segmentation and targeting, Basis for segmentation. Segmentation for consumer and industrial products, product positioning, Consumer and business buyer behaviour and buying roles, buying process models.

Unit III:	**MARKETING MIX**	**[12 Periods]**

Marketing Mix: Elements-Product, Price, Promotion, Place, Product Mix and Product Line-levels of product, new product development, product life cycle strategies, branding, packaging, labelling. Pricing-General pricing approaches, New product pricing strategies, Public and pricing.

Unit IV:	**PROMOTION AND PLACE MIX**	**[12 Periods]**

Promotion and Place Mix: Components of promotion mix, Marketing communication, publicity, Advertising and public relations, Personal selling and sales promotion, Direct and online marketing, Distribution channels and logistics management, Channel design and administration, Public policy and distribution decisions.

Unit V:	**MARKETING AND INFORMATION SYSTEMS**	**[12 Periods]**

Marketing Information Systems: Concept of marketing information system, Marketing research process, Marketing intelligence system, Components of marketing information Systems-Internal records system, Marketing decision support systems.

Text Books:

1. Marketing Management-Philip Kotler, Prentice Hall India,(New edition)

Reference Books:

2. Philip Kotler, Marketing Management Sultan Chand and Sons, New Delhi.
3. Marketing Management-Zickmund & Ramesh Kumar

Web Resources:

https://www.pearsoned.co.in/prc/book/philip-kotler-marketing-management-15e--789332587403

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	1	1	1	2	1	1	1	2	3	1
CO2	3	2	3	1	1	3	2	1	2	1	1	1	3	2	2
CO3	3	3	2	1	2	2	1	3	2	1	2	1	2	3	3
CO4	1	1	3	3	1	3	2	3	1	2	2	2	3	2	2
CO5	3	1	3	1	3	2	2	3	1	2	2	1	1	2	3

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Database Management System	4	6	-	-	**Core Theory**

Course Introduction: A database management system (DBMS) refers to the technology for creating and managing databases. DBMS is a software tool to organize (create, retrieve, update and manage) data in a database. The main aim of a DBMS is to supply a way to store up and retrieve database information that is both convenient and efficient.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To learn the concepts of database management system.
CO 2:	To analyse an information storage and model expressed in the form of an entity relation diagram and other optional analysis forms such as data glossary.
CO 3:	To demonstrate the relational data model, transform an information model into a relational database schema.
CO 4:	To formulate using relational algebra & give solutions to a broad range of query problems using SQL.
CO 5:	To demonstrate an understanding of normalization theory and apply such knowledge to the normalize the database.

Unit I:	**Database System Architecture Basic concepts:**	**[12 Periods]**

Data system, operational data, data independence, Architecture for a database system, Distributed databases. Storage Structures: Representation of Data. Data Structures and corresponding operators: Introduction, Relation Approach, Hierarchical Approach, Network approach.

Unit II:	**Relational Approach**	**[12 Periods]**

Relational Data Structure: relation, Domain, attributes keys. Relational Algebra: Introduction, Traditional set operation. Attribute names for derived relations, special relational operations.

Unit III:	**Embedded SQL**	**[12 Periods]**

Introduction – Operations not involving cursors involving cursors – Dynamic statements. Query by Example – Retrieval operations, Built-in functions, update operations, QBE Dictionary. Normalization: Functional dependency, First, Second, third normal forms, Relations with more than one candidate key, Good and bad decomposition.

Unit IV:	**Hierarchical Approach**	**[12 Periods]**

IMS data structure. Physical database, Database description, Hierarchical sequence. External level of IMS: Logical Databases, the program communication block. IMS Data manipulation: Defining the program communication Block: DL/I Examples.

Unit V:	**Network Approach**	**[12 Periods]**

Architecture of DBTG system. DBTG Data Structure: The Set construct, Singular sets, sample schema, the external level of DBTG – DBTG Data manipulation.

Text Books:

1 Database Systems concepts by Abraham Silberschatz, Henry F Korth, Mcgraw Higher Ed., 6th Edition, 2000.

Reference Books:

2 Data Base Management System by Rahurama Krishnan and Johannes, Second Edition

Web Resources:

https://xuanhien.wordpress.com/wp-content/uploads/2011/04/database-management-systems-raghu-ramakrishnan.pdf

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	1	1	1	2	1	1	1	2	3	1
CO2	3	2	3	1	1	3	2	1	2	1	1	1	3	2	2
CO3	3	3	2	1	2	2	1	3	2	1	2	1	2	3	3
CO4	1	1	3	3	1	3	2	3	1	2	2	2	3	2	2
CO5	3	1	3	1	3	2	2	3	1	2	2	1	1	2	3

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Advanced Cost Accounting					

Course Introduction: This course are to provide knowledge of cost accounting and cost sheet, Make learners to understand the costing aspects on material and labor, and Equip advanced knowledge on costs and their impact on value creation in the manufacturing and non- manufacturing companies.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	Recall the classification of cost, methods and techniques
CO 2:	Evaluate cost sheet and material and labor control
CO 3:	Analyze cost control and cost reduction tools and techniques
CO 4:	Solve labor, overhead and process costing methods
CO 5:	Reconciliation of operating costing

Unit I:	**INTRODUCTION**	**[12 Periods]**

Cost Accounting – Meaning – Definition – Difference between Financial and Cost Accounting –Importance of Cost Accounting – Relationship between Cost and management Accounting – Methods of Costing – Elements of Cost – Cost Concepts – preparation of Cost Sheet – Material Control –Fixation of Stock levels – E.O.Q - Pricing of material issues – inventory Control.

Unit II:	**LABOUR**	**[12 Periods]**

Time rate- Piece rate-points to be noted in wage fixation. Incentives: meaning & importance- Taylor's Differential piece rate- Halsey and Rowan plans. Labour turnover: meaning- Causes – effects- methods of reduction of labour turnover. Overtime and Idle time: meaning-causes-techniques of Control.

Unit III:	**OVERHEADS**	**[12 Periods]**

Meaning – Classification – Allocation-Absorption- Apportionment of Overheads – Methods of Re-apportionment (Simultaneous equation and Repeated distribution method only)- Computation of Machine Hour Rate-Over absorption and Under absorption – Meaning and causes.

Unit IV:	**Process Costing**	**[12 Periods]**

Process Costing – Normal loss – Abnormal loss- Abnormal Gain – Inter Process Profit Equivalent Production-Joint product and By-product costing. Contract costing: Treatment of profit on Incomplete Contract- Cost plus contract- Escalation Clause.

Unit V:	**Operating Costing**	**[12 Periods]**

Operating Costing: Meaning-Objectives-Ascertainment of cost. Reconciliation of cost and financial accounts-need for reconciliation –reasons for disagreement in profit.

Text Books:

1. Reddy T.S. and Reddy Y.H.P "Cost and Management Accounting" Fourth Edition, Chennai, Margham Publishers, 2017.

Reference Books:

1 Pillai.R.S.N. and Bagavathi. V "Cost Accounting", Seventh Edition, New Delhi, Sultan Chand and Sons, 2016.

2 Jain.S.P, Narang. K.L. and Agarwal.S "Advanced Cost Accounting (Cost Management)" Eleventh Edition, Ludhiana, Kalyani Publishers, 2015.

Web Resources:

https://onlinecourses.nptel.ac.in/noc24_mg71/preview

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	1	1	1	2	1	1	1	2	3	1
CO2	3	2	3	1	1	3	2	1	2	1	1	1	3	2	2
CO3	3	3	2	1	2	2	1	3	2	1	2	1	2	3	3
CO4	1	1	3	3	1	3	2	3	1	2	2	2	3	2	2
CO5	3	1	3	1	3	2	2	3	1	2	2	1	1	2	3

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Object Oriented Programming with C++					

Course Introduction:

Course Focus on: Skill Development / **Entrepreneurship** / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	Able to Create simple programs using classes and objects in C++.
CO 2:	Able to Implement Object Oriented Programming Concepts in C++.
CO 3:	Develop applications using stream I/O and file I/O.
CO 4:	Develop applications using stream I/O and file I/O.
CO 5:	Implement Object Oriented Programs using templates and exceptional handling concepts.

Unit I:	**THE OBJECT MODEL**	**[12 Periods]**

The Evolution of the Object Model – Elements of the Object Model – Applying the Object Model. Classes and Objects: The Nature of an Object – Relationship among Objects.

Unit II:	**CLASSES AND OBJECT**	**[12 Periods]**

Nature of Class – Relationship Among classes – The Interplay of classes and Objects. Classification: The importance of Proper Classification –identifying classes and objects –Key Abstractions and Mechanism.

Unit III:	**C++ INTRODUCTION**	**[12 Periods]**

Introduction to C++ - Input and output statements in C++ - Declarations -control structures – Functions in C++

Unit IV:	**INHERITANCE AND OVERLOADING**	**[12 Periods]**

Classes and Objects –Constructors and Destructors –operators overloading –Type Conversion- Inheritance – Pointers and Arrays

Unit V:	**POLYMORPHISM AND FILES**	**[12 Periods]**

Memory Management Operators- Polymorphism – Virtual functions – Files – Exception Handling – String Handling -Templates

Text Books:

1. "Object Oriented Analysis and Design with Applications", Grady Booch, Second Edition, Pearson Education.

Reference Books:

1. "Object -Oriented Programming with ANSI & Turbo C++", Ashok N.Kamthane, First Indian Print -2003, Pearson Education
2. Balagurusamy "Object Oriented Programming with C++", TMH, Second Edition, 2003.

Web Resources:

https://onlinecourses.nptel.ac.in/noc24_cs125/preview

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	3	1	2	2	1	1	1	2	1	1	1	2	3	1
CO2	1	2	2	1	2	3	2	1	3	1	3	1	1	2	3
CO3	3	3	2	1	2	2	1	3	2	1	2	1	2	1	3
CO4	1	3	1	3	1	3	2	1	1	2	2	2	3	2	1
CO5	2	1	3	1	3	2	2	3	1	2	2	1	1	2	3

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Business Research Methods					

Course Introduction:

Managing business and industrial enterprises entails essential functions aimed at achieving organizational objectives through strategic decision-making across various business domains. Research plays a vital role in generating information about diverse business areas, thereby aiding managerial decision-making. This course covers research methodology concepts, practical applications, and familiarization with data analysis software to enhance understanding and proficiency in these areas.

Course Focus on: Skill Development / Entrepreneurship / Employability / **Research**

Course Outcomes	On completion of this course, students will
CO 1:	To know about the concept of research and methods of research design.
CO 2:	To know about the methods of sampling
CO 3:	To understand about the measurement and scaling techniques.
CO 4:	To learn about the measurement of statistical techniques
CO 5:	To understand about the t test and f test

Unit I:		**[12 Periods]**

Meaning and Importance of Research – Methods of research – Defining research problem – Research process.

Unit II:		**[12 Periods]**

Research Design - Formulation –Sampling and Sampling Design - Sampling Method: Probability Sampling and Non- probability Sampling.

Unit III:		**[12 Periods]**

Data Collection – Primary and Secondary Data – Designing of Questionnaire – Interview – Observation – Pilot Study and Case Study - Measurement and Scaling Techniques. Data Processing: Editing, Coding, Classification and Tabulation.

Unit IV:		**[12 Periods]**

Statistical Measures for Data Analysis: Types of hypotheses - Formulation and testing of Hypothesis – t-test, Chi- Square Test and one-way ANOVA

Unit V:		**[12 Periods]**

Interpretation and Report Writing – Techniques of Interpretation – Steps in Report Writing – Layout and Types of Report. Norms for using Index, Tables, Charts, Diagram, Appendix and Bibliography.

Text Books:

1. C.R.Kothari Research Methodology., New Age International(P) Ltd Publishers., Re-print 2017.

Reference Books:

1 Business Research Methods, Cooper, Schindler & Sharma, Tata McGraw Hill

2 Business Research Methods, Bryman & Bell, Oxford University Press India.

Web Resources:

https://onlinecourses.nptel.ac.in/noc24_ge41/preview

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	1	1	1	2	1	1	1	2	3	1
CO2	3	2	3	1	1	3	2	1	2	1	1	1	3	2	2
CO3	3	3	2	1	2	2	1	3	2	1	2	1	2	3	3
CO4	1	1	3	3	1	3	2	3	1	2	2	2	3	2	2
CO5	3	1	3	1	3	2	2	3	1	2	2	1	1	2	3

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Human Resource Management					

Course Introduction:

This course has been designed for students to learn and understand to study about organizational structure, human resource planning. To know the performance appraisal methods and also to Understand the Controlling through organizational conflict through appropriate leadership styles.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	Understand the organizational structure
CO 2:	Analyze the job and role to select and recruit personnel
CO 3:	Measure the performance of an employees for promotion and training
CO 4:	Capture employee grievance redressal procedures for organizational betterment
CO 5:	Control the organizational conflict through appropriate leadership styles

Unit I:	**Human Resource Management**	**[12 Periods]**

Meaning – Importance – Evaluation – Objectives – Scope -Hawthorn Studies – Its implications – Organization structure.

Unit II:	**Human resource planning**	**[12 Periods]**

Human resource planning – Job analysis – Role analysis – Selection and Recruitment – Right Sizing - Testing – Interview- SWOC analysis - Training – Promotion

Unit III:	**Human Resource Development**	**[12 Periods]**

Human Resource Development - Performance appraisal – Job evaluation and merit rating – Job satisfaction. Human behaviour process – Perception – Motivation- theories of Motivations - Personality development -Main determinants of Personality – Theories of personality

Unit IV:	**Organisational Discipline**	**[12 Periods]**

Organisational Discipline: Meaning – Causes of Indiscipline – Acts of Indiscipline – Procedure for Disciplinary Action – Organization conflict – Conflict in organizational behaviours – Individual aspect of conflict – Management of conflict - Whistle Blowing - Grievance – Meaning – Characteristics of Grievances – Causes of Grievance – Methods of knowing Grievance – Grievance Redressal Procedure

Unit V:	**Direction**	**[12 Periods]**

Direction – Supervision – Control - Leadership –Types of Leadership - Leadership theories, Theories of supervision

Text Books:

1. Gupta, C.B., (2018). Human Resource Management. (19th Edition.) New Delhi: S. Chand Publishing

Reference Books:

1 Prasad,L.M.. (2019). Organizational behavior. (6th Edition.) New Delhi: S. Chand Publishing.

2 Fred Luthans.,. (2015). Organizational Behavior. (10t edition.) New Delhi: Tata McGraw-Hill Education.

Web Resources:

https://www.coursera.org/specializations/human-resource-management

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	3	1	2	2	1	3	1	2	3	1	1	2	3	1
CO2	3	2	3	3	1	1	2	2	2	1	1	1	1	2	3
CO3	3	1	2	1	2		1	3	2		2	1	2	3	
CO4	1	1		3	1	3	2		1	2	2	2		2	2
CO5	3	1	3		3	2		3	1	2	2	1	1	2	3

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Management Accounting					

Course Introduction:

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To provide the fundamental knowledge and techniques in Management Accounting
CO 2:	Find and Apply tools and techniques used to plan, control and make decision
CO 3:	Analysis the types of Ratio analysis and advantages of ratios
CO 4:	To provide the fundamental knowledge about working capital
CO 5:	To know the knowledge about types of Responsibility Centres

Unit I:	**INTRODUCTION**	**[12 Periods]**

Management Accounting – Meaning and Definition, Characteristics, Objectives, scope and functions of Management Accounting- Financial Accounting, Cost Accounting and Management Accounting- – Tools and Techniques of Management Accounting- Advantages and Limitations of Management Accounting – Installation of Management Accounting System

Unit II:	**FINANCIAL STATEMENT**	**[12 Periods]**

Introduction-objectives of analysis of financial statement tools of financial statement analysis multi –step income statement, Horizontal analysis, Common sized analysis, Trend analysis, analytical Balance sheet

Unit III:	**RATIO ANALYSIS**	**[12 Periods]**

Ratio Analysis - Meaning and rationale, advantages and limitations. Types of Ratios Liquidity Ratios, Solvency Ratios, Profitability Ratios, Efficiency Ratios, Integrated Ratios Statement

Unit IV:	**WORKING CAPITAL**	**[12 Periods]**

Concept and definition of working capital – Determination of Working capital – Assessment of Working Capital needs – Study of components of working capital, such as cash management, accounts receivable management and inventory management

Unit V:	**PERFORMANCE MEASUREMENT**	**[12 Periods]**

Meaning, objectives and structure of Responsibility Accounting as a divisional performance measurement. Types of Responsibility Centers: Cost/Expense Centers, Profit Centers, Investment Centers

Text Books:

1. R.K.Sharma & Shashi K.Gupta, "Management Accounting", Kalyani Publisher, New Delhi

Reference Books:

1. S.N.Maheswari, "Management Accounting", Vikas Publications, New Delhi
2. T.S.Reddy & Y Hari Prasad Reddy, "Management Accounting", Margan Publication, Chennai.

Web Resources:

https://www.acca-x.com/global/en/courses/management-accounting/introduction-ma1.html

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
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CO2	3	1	3	2	1	3	3	1		1	3	1	1	3	3
CO3	3	3		1	3		1		3	1	2	1	1	2	3
CO4	1	3	2	3	2	2	2	2		3	2	1	3	2	1
CO5		1	1	1	3	1	1		2	1	1	1	1	2	2

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Direct Tax					

Course Introduction: The objective of this course is to provide the student with the skills to identify the tax implications of business decisions. This is to make student to build knowledge on basic concepts, tax provisions and deductions relating to Direct Tax System in India

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To Identify the residential status and incidence of taxation for various types of assessees.
CO 2:	To apply the knowledge for computing Taxable Salary Income and House Property Income
CO 3:	To Identify the expenses allowed and disallowed in business income
CO 4:	To Compute the income under the head Income from other sources.
CO 5:	To Apply tax provisions of various assessees, Assessment procedures, Appeals, Collection, recovery and Refund of Tax.

Unit I:	**INTRODUCTION**	**[12 Periods]**

Concepts of Direct Tax – Income Tax Act 1961– Definition – Assessee, Deemed Assessee, Average Rate, Person, Income, Gross Total Income, Basis of Charge – Residential status of an Individual, HUF, Partnership Firms, AOP and Company – Incidence of Tax, Exempted Incomes – PAN – TAN – Concepts of Tax Avoidance – Evasion – Tax Planning – Meaning and Importance of Tax Planning.

Unit II:	**INCOME SALARY AND HOUSE PROPERTY**	**[12 Periods]**

Computation of Income Salary and House Property – Perquisites – Profit in Lieu of Salary – Deduction Under Sec 16 – Computation of Income and House Property – Determination of Annual Value – Let Out – Self Occupied – Deductions out of Annual Value.

Unit III:	**COMPUTATION OF INCOME FROM BUSINESS**	**[12 Periods]**

Computation of Income from Business and Profession - Definition – Charging Provisions – Allowable Expenses (Sec 30 -37) – Expenses Expressly Allowed & Disallowed in certain cases – Deemed Profits - Computation of Income from Capital gains - Capital Asset – Basis of Charge – Transfer of Capital Asset – Deemed Transfer – Exempted Capital Gains – Treatment of Capital Losses.

Unit IV:	**INCOME FROM OTHER SOURCES**	**[12 Periods]**

Income from Other Sources. Aggregations – Set off and carry Forward of Losses. Deductions to be made in Computing Total Income under Sec 80

UNIT V:	**ASSESSMENT**	**[12 Periods]**

Assessment of Individuals and HUF - Assessment of Income of Firms – LLP - and Companies – Usage of Different types of forms of tax returns. Assessment Procedures – Appeals – Collection Recovery and Refund of Tax – Interest Sections.

Text Books:

1. Income Law and Practice, Assessment Year 2023 -2024

Reference Books:

1 Mehrotra, H.C and Goyal, S.P., "Income Tax", Current Edition., Sahitya Bhawan Publications, Agra, Current Assessment Year.

2 Gaur, VP and Narang, D.B. "Income Tax Law Practice", Current Edition, Kalyani Publisher, Ludhiana, Current Assessment Year.

Web Resources:

https://learning.icai.org/committee/direct-taxes/refresher-course-on-direct-taxes/

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
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CO1	1	3	3	1	3	3	3	3	2	1	3	1	3	3	1
CO2	3	1	3	1	1	3	3	1		1	3	1	1	3	3
CO3	3	3	2	1	3	1	1		3	1	2	1	1	2	3
CO4	1	3	2	1	2	2	2	2		3	2	1	3	2	1
CO5		1	1	1	3	1	1		2	1	1	1	1	2	2

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Python Programming					

Course Introduction: To expose the students to the fundamental concepts of Python Programming and Its features

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	Demonstrate fundamental understanding of the history of python programming and its foundations.
CO 2:	Understanding the basic concepts of python variables, Data types, Input Functions and operators.
CO 3:	Demonstrate the various python conditional statements If, if else, If-elseif-else and Looping statements.
CO 4:	Apply basic principles to understanding List in python, Functions in python and Tuples in python.
CO 5:	Demonstrate knowledge of basic python programming and Real time python programming

Unit I:	**Introduction**	**[12 Periods]**

History of python – Introduction to python programming – Basics of python – Compiler vs Interpreters. Install Python – Setting up Path – Running Python - Basic Syntax – Hello World – Interactive mode programming – A simple Python example

Unit II:	**Python variables**	**[12 Periods]**

Python variables – Data types in python – Input functions in python – Python operators – Basic Operators: Arithmetic Operators – Comparison (Relational) Operators – Assignment Operators – Logical Operators – Bitwise Operators – Membership Operators – Identity Operators

Unit III:	**Conditional statements**	**[12 Periods]**

Conditional statements in python if, if else, if-elseif-else – Loops in python for loop, while loop, nested loop – Functions: Introduction – Using a Function – Communicating with Functions – Example of creating a simple calculator using functions.

Unit IV:	**Lists**	**[12 Periods]**

Lists: Accessing values in Lists – Updating Lists – Delete List elements – Built-in Lists functions & Methods – Functions in python – Tuples in python- Exception Handling: Try, Except and Finally

Unit V:	**Basic programs**	**[12 Periods]**

Basic programs – Real time python programs – Files I/O: Opening a file – Seek and Find a file – Other I/O functions – Sending Mail: SMTP protocol – Syntax – Sending Email using Python

Text Books:

1. Python Crash Course: A Hands-On, Project-Based Introduction to Programming (2nd Edition)

Reference Books:

1. Head-First Python: A Brain-Friendly Guide (2nd Edition)
2. Learn Python the Hard Way: 3rd Edition

Web Resources:

https://onlinecourses.nptel.ac.in/noc24_cs78/preview

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	1	1	3		3		1				1		3
CO2	2	3	2		2	1	3	1			3		3	1	3
CO3	3	2	1	1	3		1	1	3		1	3	2		1
CO4	2	3		1	2	1		1		1	2		3	1	
CO5	3	3	3		3	1	3	1	3			1	3	1	3

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Visual Basic					

Course Introduction: Visual Basic is a Microsoft-developed programming language. Used to create Windows desktop apps, mobile apps, and web services. Known for its simple and intuitive language. Includes a user-friendly IDE

Course Outcomes	On completion of this course, students will
CO 1:	Understand the basics of the Visual Basic. NET language, including syntax, programming structures, and the integrated development environment.
CO 2:	Utilize variables, data types, and operators to store, manipulate, and evaluate data within VB.NET applications.
CO 3:	Understanding of an algorithm and its definition. Understanding of programming language syntax and its definition by example of C language.
CO 4:	Knowledge of basic principles of imperative and structural programming.
CO 5:	Visual Basic students are taught to create function and sub procedures to run programs and allow code to be reused

Unit I:	**INTRODUCTION**	**[12 Periods]**

Introduction to Visual basic- Concepts- Basic Programming language - Visual Basic Applications (VBA) – Object oriented - RAD Rapid Application Development – NET Framework- Visual Studio.

Unit II:	**TOOLBAR**	**[12 Periods]**

Objectives -Working with toolbar - Use of the toolbar- project programming structure in visual basic application - Event and event driven procedures-Summary

Unit III:	**FILES AND EXTENSION**	**[12 Periods]**

Forms and controls – Creating and saving a program- restoring and opening an existing program- Running a program-Stopping the program-Printing visual basic-Making EXE files.

Unit IV:	**USING VARIABLES**	**[12 Periods]**

Data types- Declaring using variables- Arithmetic operators- Relational operators- concatenation operators- Logical operators- Summary.

Unit V:	**CONTROL AND STATEMENT**	**[12 Periods]**

Introduction – looping –decision control structures – Sequence – Selection – repetition- If statement – If else statement- Nested If

Text Books:

1. Visual Basic 2015 in 24 Hours, Sams Teach Yourself

Reference Books:

1 Beginning Visual Basic 2015 John Wiley & Sons, 2 Dec 2015

2 Beginner's Guide to Visual Basic . NET Programming: A Practical Approach to VB. NET

Web Resources:

https://www.coursera.org/courses?query=visual%20basic

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1		1	3	1	3	3	3		3		2	3		2
CO2		1		1			1		3	2	3	1	2	3	1
CO3	1	3	1	3	1	3		1		2		2	2		2
CO4	3	3					1			3	3		3	3	
CO5	1	1	3		3			3	1	3	1	1	3	1	1

Elective

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	E-COMMERCE	4	6	-	-	**Elective**

Course Introduction: E-commerce is the activity of buying or selling of products on online services or over the Internet. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To demonstrate an understanding of the foundations and importance of E- commerce.
CO 2:	To demonstrate an understanding of retailing in E-commerce by Analysing branding and pricing strategies, determining the effectiveness of market research.
CO 3:	To analyse the impact of E-commerce on business models and strategy
CO 4:	To describe Internet trading relationships including Business to Consumer, Business- to-Business, Intra-organizational.
CO 5:	To describe the key features of Internet, Intranets and Extranets and explain how they relate to each other.

Unit I:	**Introduction to E-Commerce**	**[12 Periods]**

Introduction to E-Commerce – Benefits of Electronic Commerce – Impact of Electronic commerce- Classification of Electronic Commerce – Applications of Electronic Commerce Technologies- Business Models- Architectural Framework.

Unit II:	**Network Infrastructure**	**[12 Periods]**

Network Infrastructure: Local Area Networks – Wide Area Network – Intranet, Extranet and Internet – TCP/IP Reference Model – Domain Name Systems – Internet Industry Structure. Information Distribution and Messaging: File Transfer Protocol Applications - Electronic Mail – World Wide Web Server – HTTP – Web servers Implementations.

Unit III:	**Information Publishing Technology**	**[12 Periods]**

Information Publishing Technology: Information publishing – Web browsers – Hyper Text Mark-up Language – Common Gateway Interface – Multimedia Content – Other Multimedia Objects – Virtual Reality Modelling Language

Unit IV:	**Securing the Business on Internet**	**[12 Periods]**

Securing the Business on Internet: Security policy, Procedures and practices – Site security – Protecting the Network – Firewalls -– Securing the Web service. Securing Network Transactions- Transaction Security – Cryptology – Cryptology Algorithms – Public Key Algorithm – Authentication Protocols – Digital Signatures – Electronic Mail Security – Security Protocols for Web Commerce.

Unit V:	**Search Engines and Directory Services**	**[12 Periods]**

Search Engines and Directory Services: Information Directories – Internet Advertising- E –Commerce Applications- Cyber Law-Introduction- Concept of Cyberspace - cyber law in E-Commerce-Contract Aspects - Electronic Governance. Drupal.

Text Books:

1. Bharat Bhasker, "Electronic Commerce: Framework, Technologies and Applications", Tata McGraw Hill Publishing Company Limited, Noida, UP

Reference Books:

1. Jeffvey F. Rayport & Bernard J. Jaworeski, "Introduction to E-Commerce", Tata McGraw Hill Publishing Company Limited, Noida, UP.
2. Suresh T.Viswanathan, "The Indian Cyber Law", Bharat Law House, New Delhi.

Web Resources: https://www.amazon.in/ecommerce-book/s?k=ecommerce+book

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	1	1	1	2	1	1	1	2	3	1
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CO3	3	3	2	1	2	2	1	3	2	1	2	1	2	3	3
CO4	1	1	3	3	1	3	2	3	1	2	2	2	3	2	2
CO5	3	1	3	1	3	2	2	3	1	2	2	1	1	2	3

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	CYBER SECURITY	4	5	-	-	**Core Theory**

Course Introduction: Managing business and industrial enterprises entails essential functions aimed at achieving organizational objectives through strategic decision-making across various business domains.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To become knowledge about fundamentals of cyber security
CO 2:	To gain stronger knowledge about concepts of security in operating Systems
CO 3:	To enable graduates to plan & do framework according to the requirement of Industries.
CO 4:	To gain knowledge about various types of cryptography in network security
CO 5:	To gain knowledge about where to find information about threats, vulnerabilities and attacks.

Unit I:	**INTRODUCTION**	**[12 Periods]**

Introduction -Computer Security -Harm - Vulnerabilities - Controls - Authenticate Access Control and Cryptography - Web—User Side - Browser Attacks - Web At Targeting Users - Obtaining User or Website Data - Email Attacks.

Unit II:	**SECURITY THREAT MANAGEMENT**	**[12 Periods]**

Security Threat Management: Risk Assessment - Forensic Analysis - Security threat correlation –Threat awareness - Vulnerability sources and assessment- Vulnerability assessment tools –Threat identification - Threat Analysis - Threat Modelling - Model for Information Security Planning.

Unit III:	**CRYPTOGRAPHY IN NETWORK SECURITY**	**[12 Periods]**

Cryptography in Network Security - Firewalls - Intrusion Detection and Prevention Systems - Network Management - Databases - Security Requirements of Databases - Reliability and Integrity - Database Disclosure - Data Mining and Big Data

Unit IV:	**PRIVACY CONCEPTS**	**[12 Periods]**

Privacy Concepts -Privacy Principles and Policies -Authentication and Privacy – Data Mining - Privacy on the Web - Email Security - Privacy Impacts of Emerging Technologies- Where the Field Is Headed.

Unit V:	**SECURITY PLANNING**	**[12 Periods]**

Security Planning - Business Continuity Planning - Handling Incidents - Risk Analysis - Dealing with Disaster - Emerging Technologies - The Internet of Things - Economics - Electronic Voting - Cyber Warfare- Cyberspace and the Law - International Laws - Cyber-crime - Cyber Warfare and Home Land Security.

Text Books:

1. Charles P. Pfleeger Shari Lawrence Pfleeger Jonathan Margulies, Security in Computing, 5th Edition

, earson Education , 2015

Reference Books:

1. George K. Kostopoulous, Cyber Space and Cyber Security, CRC Press, 2013.
2. Nelson Phillips and Enfinger Steuart, ―Computer Forensics and Investigations‖, Cengage Learning, New Delhi, 2009.

Web Resources:

https://onlinecourses.nptel.ac.in/noc23_cs127/preview

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
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CO3	3	3	2	1	2	2	1	3	2	1	2	1	2	3	3
CO4	1	1	3	3	1	3	2	3	1	2	2	2	3	2	2
CO5	3	1	3	1	3	2	2	3	1	2	2	1	1	2	3

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	BLOCK CHAIN FOR BUSINESS FUNDAMENTALS	4	6	-	-	**Skilled**

Course Introduction: This Subject of the course is to provide conceptual understanding of block chain technology and how it can be used in Industry. The course covers the technological underpinning of block Chain operations in both theoretical and practical implementation of solutions using Ethereum.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To understand the Basic concepts and block chain technology
CO 2:	To Describe the various consensus mechanisms employed in both permissioned and permission less block chains, including Proof of Work
CO 3:	To Understanding various types of wallets including desktop, app-based, and browser-based, learning to create and manage an account in Meta Mask
CO 4:	To Develop block chain-based solutions and write smart contract using Ethereum Framework.
CO 5:	To understand the consensus and hyper ledger fabric in block chain technology.

Unit I:	**INTRODUCTION**	**[12 Periods]**

Introduction: Overview of Block chain - History of Block chain - Peer to Peer Network - Smart Contract- Wallet - Digital Currency – Ledgers - Types of Block Chain Platform.

Unit II:	**CONSENSUS MECHANISM**	**[12 Periods]**

Consensus Mechanism: Permissioned Block chain, Permission less Block chain, Different Consensus Mechanism- Proof of Work, Proof of Stake, Proof of Activity, Proof of Burn, Proof of Elapsed Time, Proof of Authority, Proof of Importance.

Unit III:	**CRYPTO CURRENCY AND WALLET**	**[12 Periods]**

Crypto currency and Wallet: Types of wallet, Desktop Wallet, App based Wallet, Browser based wallet, Meta Mask, Creating a account in Meta Mask, Use of faucet to fund wallet, transfer of cryptocurrency in Meta Mask.

Unit IV:	**SMART CONTRACT AND ETHERUM**	**[12 Periods]**

Smart contract and Ethereum: Overview of Ethereum, Writing Smart Contract in Solidity, Remix IDE , Different networks of Ethereum, understanding blocks practically at blockhcain.com, how to compile and deploy smart contract in remix.

Unit V:	**HYPER LEDGER FABRIC & PUBLIC KEY CRYPTOGRAPHY**	**[12 Periods]**

Hyper ledger Fabric: Overview - Open Source Hyper ledger project – Hyper ledger Fabric- Architecture, Identities and Policies, Membership and Access Control, Channels, Transaction Validation, writing smart

contract using Hyper Ledger Fabric. Public Key Cryptography – Algorithms- techniques- hashing – Transaction integrity – Security block chain.

Text Books:

1. Mark Gates, "Block chain: Ultimate guide to understanding block chain, bit coin, crypto currencies, smart contracts and the future of money", Wise Fox Publishing and Mark Gates 2017

Reference Books:

1. NPTEL & MOOC courses titled block chain technology
2. Mastering Block chain - Distributed ledgers, decentralization and smart contracts explained, Author- Imran Bashir, Packt Publishing Ltd, Second Edition, ISBN 978-1- 78712-544-5, 2021 Reference Books

Web Resources:

https://www.amazon.in/HTML-CSS-Complete-Reference-Fifth/dp/0071496297/ref=monarch

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
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CO3	1	3	1	3	2	3	2	3	2	3	2	2	3	1	2
CO4	3	2	1	2	2	1	2	2	1	1	2	2	1	1	3
CO5	1	2	3	1	2	1	2	2	3	2	3	3	1	1	1

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	WEB DESIGNING	4	6	-	-	**Skilled**

Course Introduction: Web design is the planning and creation of websites. This includes a number of separate skills that all fall under the umbrella of web design. Some of these skills are information, architecture, user interface, navigation, layout, colors, fonts and overall imagery.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To gain knowledge about Web Designing
CO 2:	To analysis the Websites
CO 3:	To understand the concept of Website
CO 4:	To know about the Cascade and HTML
CO 5:	To help the students in preparing the own Website

Unit I:	**WEB ESSENTIALS**	**[12 Periods]**

The Internet – Basic Internet Protocols – The World Wide Web – HTTP Request and Response – Web Clients – Web Servers – Networking Protocols – OSI Model – TCP/IP Protocols.

Unit II:	**HTML**	**[12 Periods]**

Introduction to HTML – HTML History and Versions - Working with HTML 5 – Elements and Attributes in HTML – Interactive Capabilities in HTML 5.

Unit III:	**CASCADING STYLE SHEET**	**[12 Periods]**

The Evolution of CSS – Introduction to Advanced CSS - - Introduction to Advanced CSS - Selectors - Advanced Layout Techniques - Typography and Web Fonts - Transitions, Transformations, and Animation - CSS Properties - Optimization and Performance- Modern CSS Features and Trends.

Unit IV:	**RESPONSIVE WEB DESIGN**	**[12 Periods]**

Responsive Web Design Principles - Mobile-First Design Approach - Viewports and Meta Tags for Responsiveness - Relative vs. Absolute CSS Units - Implementing CSS Media Queries - Handling Flexible Images and Media - Testing and Debugging Responsive Websites -Responsive Navigation Strategies

Unit V:	**ADVANCED WEB DESIGN TECNIQUES AND TOOLS**	**[12 Periods]**

Advanced CSS Layout Techniques: Flexbox and CSS Grid - Modern Web Typography: Variable Fonts and Custom Fonts - Responsive Images and Art Direction - Motion Design: Animations and Transitions - Accessibility in Web Design: Inclusive Design Principles - Dark Mode Design: Implementation and Best Practices - Interactive Storytelling -Designing for Emerging Technologies: VR and AR.

Text Books:

1. HTML and CSS: Design and Build Websites" Author: Jon Duckett Publisher: Wiley.
2. Sathish Jain : Web Designing and Development

Reference Books:

1 Sathish Jain, Geetha Iyer – Web Designing and Publishing

2 "Responsive Web Design" Author: Ethan Marcotte Publisher: A Book Apart

Web Resources:

https://www.amazon.in/HTML-CSS-Complete-Reference ifth/dp/0071496297/ref=monarch_sidesheet

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	1	1	1	2	1	1	1	2	3	1
CO2	3	2	3	1	1	3	2	1	2	1	1	1	3	2	2
CO3	3	3	2	1	2	2	1	3	2	1	2	1	2	3	3
CO4	1	1	3	3	1	3	2	3	1	2	2	2	3	2	2
CO5	3	1	3	1	3	2	2	3	1	2	2	1	1	2	3

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Business Finance	4	6	-	-	**Skilled**

Course Introduction: The course aims at specializing in specific areas of core competence of Commerce studies i.e. Business Finance. This is an area where commerce students have edge over others. It is designed to impart in depth knowledge and professional skills required for handling the finance related activities of business entities and corporate enterprises.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To understand basic types, goals, and implications of financial management
CO 2:	To determine the cost of capital, and understand and apply the concepts of the weighted cost of capital
CO 3:	To know the different criteria used to evaluate proposed investments
CO 4:	To understand derivatives, or options, in the context of corporate finance.
CO 5:	To understand the dynamics of behavioral finance and its influence on individual and corporate financial decision-making

Unit I:	**INTRODUCTION**	**[12 Periods]**

Meaning of business finance, business finance v/s corporate finance, role of business finance in an organization, principles of business finance, meaning of financial planning, steps in financial planning, significance of financial planning, essential features of a good financial plan, types of financial plan.

Unit II:	**THEORY OF BUSINESS FINANCE**	**[12 Periods]**

Theory of Business Finance; Profit maximisation v/s Wealth maximisation, Capital Budgeting; Cost of Capital; Working Capital Management, Capital Structure, Operating and Financial leverages. Funds Flow and Cash flow analysis. Management of Financial Institutions; Development Banking

Unit III:	**CAPITAL STRUCTURE**	**[12 Periods]**

Theories of capital structure (Modigliani-Miller propositions, trade-off theory, pecking order theory), Factors influencing capital structure decisions, Relevance and irrelevance of dividend policy, Dividend theories (Walter's model, Gordon's model, etc.), Share repurchase and dividend reinvestment plans.

Unit IV:	**RISK AND RETURN FUNDAMENTALS**	**[12 Periods]**

Risk and return fundamentals, Portfolio theory and diversification, Capital asset pricing model (CAPM), Financial markets- money market, capital market, derivatives market, Types of financial instruments- stocks, bonds, options, futures. Components of working capital, Working capital financing strategies, Cash management and inventory management.

Unit V:	**CAPITALIZATION**	**[12 Periods]**

Meaning of capitalization, Theories of capitalization, Cost theory v/s Earnings theory, overcapitalization and under capitalization, meaning, causes, effects and remedies; overcapitalization v/s under capitalization; balanced capitalization, meaning and importance.

Text Books:

1. Principles of Corporate Finance by Richard A. Brealey, Stewart C. Myers, and Franklin Alle

Reference Books:

1. Fundamentals of Financial Management by Eugene F. Brigham and Joel F. Houston Srivastava, R.M.
2. Essentials of Business Finance, Himalaya Publishing House, Kalyani Publications

Web Resources:

https://www.coursera.org/courses?query=business%20finance

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	1	1	1	2	1	1	1	2	3	1
CO2	3	2	3	1	1	3	2	1	2	1	1	1	3	2	2
CO3	3	3	2	1	2	2	1	3	2	1	2	1	2	3	3
CO4	1	1	3	3	1	3	2	3	1	2	2	2	3	2	2
CO5	3	1	3	1	3	2	2	3	1	2	2	1	1	2	3

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Financial Markets and Institutions	4	6	-	-	**Skilled**

Course Introduction: Upon successful completion of Financial Management, the student will be able to: Demonstrate an understanding of the overall role and importance of the finance function. Demonstrate basic finance management knowledge communicate effectively using standard business terminology.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To Introduce students to the world of financial services
CO 2:	To enrich student's understanding of the fundamental concepts and working of financial service institutions.
CO 3:	To equip students with the knowledge and skills necessary to become employable in the financial service industry.
CO 4:	To differentiate between fund based and fee based financial activities of financial system.
CO 5:	To acquire an understanding of various concepts related to leasing, hire purchase, factoring ,bill discounting, VC and Merchant Banking.

Unit I:	**INTRODUCTION**	**[12 Periods]**

Introduction: Nature and Role of Financial System; Financial System and Financial Markets; Financial System and Economic Development; Indian Financial System - An Overview-Financial Regulations

Unit II:	**MONEY MARKETS**	**[12 Periods]**

Money markets - Meaning, Constituents, Functions of Money Market; Money Market Instruments-Call Money Markets-Treasury bills, Market Certificate of deposits, Commercial bills, trade bills etc; Recent trends in Indian Money Market; Capital Market-Primary and Secondary Market; Government security market; Role of SEBI as a regulator and Capacity – an overview; Recent developments

Unit III:	**RESEARVE BANK OF INDIA**	**[12 Periods]**

Reserve Bank of India and Commercial Bank Organization, management and functions; Credit Creation and Control, Monetary policy, Commercial Bank: Meanings, Functions, management and Investment policies of Commercial banks, Present structure; E-banking and E-trading; Recent developments in commercial banking – State and National Financial Institutions –MFI.

Unit IV:	**INSURANCE SECTOR**	**[12 Periods]**

Insurance Sector, Objectives role, Investment Practices of LIC and GIC; Insurance Regulatory and Development Authority – Role and Functions.

Unit V:	**FINANCIAL INSTITUTION**	**[12 Periods]**

Non- Banking Financial Institutions: Concepts and Role of Non-Banking Financial Institutions-sources of Finance, Functions of Non-banking Institutions; Investment Policies of non – banking financial institutions in India.

Text Books:

1. E.Gardon & K.Natarajan:Financial Markets and Services,HPH,7th Edition,Mumbai

Reference Books:

1. Vasant Desai:Financial Markets and Financial Services, Himalaya Publising House, 1st Edition Mumbai.
2. Khan M Y , " Financial Services ,"2010 5th Edition, Tata Mc Graw Hill, New Dekhi.

Web Resources:

https://onlinecourses.nptel.ac.in/noc20_mg10/preview

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
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CO1	3	3	3	3	3	3	3	3	1	3	2		3	3	3
CO2	2	2	2	3	1	3	2	3	2			2	3	3	2
CO3	3	3	3		3		3	3		1			3	3	3
CO4	1	3			1	3	3		3		3	3	3	3	
CO5	3	2	2	1	3		3		3	1	2		3	2	2

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type

	Investment Management	4	6	-	-	**Skilled**

Course Introduction: This course aims to provide the knowledge of meaning and nature of Investment and its importance. The students will be able to understand the different kinds of securities and the risk involved.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To know the fundamental concepts of Investment Management.
CO 2:	To understand the types of market, their indicators and various derivatives.
CO 3:	To learn the various concepts of bonds, holding returns and valuation of shares.
CO 4:	To analysis and forecast on Security, Economic, Industry, Company and Technical Analysis.
CO 5:	To study about various models to analyse and evaluate Port Folio and pricing theories.

Unit I:		**[12 Periods]**

Investment – Meaning and Nature – Investment Process – Risk – Concept of Risk – Types of Risk – Systematic & Unsystematic risk – Calculation of Risk and Returns –Beta Factor utility and its risk - Portfolio Risk and Returns

Unit II:		**[12 Periods]**

Primary Market - Secondary Market – Stock Market Indicators – Types of Stock Market Indices – Indices of Indian Stock Exchange - Derivative – Financial Derivatives – Futures and Options – Commodity Derivatives – Commodity Exchanges - Hedging

Unit III:		**[12 Periods]**

Fixed Income Securities – Meaning and Types – Bond Valuation and Analysis- Current Yield – Holding Period return, Yield to Maturity – Preference Share Valuation – Equity Share Valuation – Constant growth Model, Two Stage growth Model , Three Phase Model and Valuation through P/E Ratio.

Unit IV:		**[12 Periods]**

Security Analysis – Economic Analysis and Forecasting, Industry Analysis, Company Analysis,, Technical Analysis – Concept Theories -Dow Theory, Eliot Wave Theory , Gap Analysis, Trend lines, Market indicators.

Unit V:		**[12 Periods]**

Portfolio – Meaning – Portfolio Analysis and Evaluation – Markowitz's Model – Sharpe's Single Index Model, Capital Asset Pricing Model: Basic Assumptions, CAPM Equation, Security Market Line, Extension of CAPM – Capital Market Line – SML Vs CML – Arbitrage Pricing Theory (APT): Equation, Assumption, Equilibrium, Difference between APT Vs CAPM

Text Books:

1. Investment Analysis and Portfolio management – Prasanna Chandra, 6th Edition June 25, 2021.

Reference Books:

1. Analysis of Investments & Management – Reilly & Brown, Cengage, 10e/2017
2. Security Analysis & Portfolio Management – Punithavathy EhavathyPandian,2/e, Vikas, 2005.

Web Resources:

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
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CO2	2	1	1	1	3	1	3	3	3	3	2	1	3	1	1
CO3	3	1	1	3	1	3	1	1	3	2	1	2	3	1	1
CO4	2	1	3	1	3	1	3	3	1	2	3	1	2	1	3
CO5	3	3	1	3	3	3	1	3	1	2	3	1	3	3	1

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Management Principles and Ethics	4	6	-	-	**Skilled**

Course Introduction:
Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To familiarize the students to the basic concepts of management in order to aid in understanding how an organization function.
CO 2:	To provide insights on planning & Decision making.
CO 3:	To throw light on organizing, managing change andInnovation
CO 4:	To elucidate on leadership, communication and controlling.
CO 5:	To create awareness and importance of business ethics andsocial responsibility.

Unit I:	**INTRODUCTION**	**[12 Periods]**

Nature of Management – Management Skills - The Evolution of Management Thought – Tasks of a Professional Manager – Manager – Organizational Culture -Environment – Systems Approach to Management – Levels in Management

Unit II:	**PLANNING & DECISION MAKING**	**[12 Periods]**

Steps in Planning Process – Scope and Limitations – Short Term and Long-Term Planning – Flexibility in Planning – Characteristics of a Sound Plan – Management by Objectives (MBO). Strategic Management Process - Decision Making Process and Techniques.

Unit III:	**Nature of Organizing**	**[12 Periods]**

Organization Structure and Design - Authority Relationships – Delegation of Authority and Decentralization – Interdepartmental Coordinator – emerging Trends in corporate Structure, Strategy and Culture – Impact of Technology on Organizational design – Mechanistic vs. Adoptive Structures – Formal and Informal Organization. Span of control – Pros and Cons of Narrow and Wide Spans of Control – Optimum Span – Managing Change and Innovation.

Unit IV:	**CONTROL**	**[12 Periods]**

Concept of Control – Application of the Process of Control at Different Levels of Management (top, middle and first line). Performance Standards – Measurements of Performance – Remedial Action - An Integrated Control system in an Organization

Unit V:	**Business Ethics**	**[12 Periods]**

Importance of Business Ethics – Ethical Issues and Dilemmas in Business - Ethical Decision Making &Ethical Leadership – Ethics Audit - Business Ethics and - CSR Models.

Text Books:

1. Certo, S C. and Certo, T, Modern Management, 18thEdition, Prentice Hall,January 2021.

Reference Books:

1. 1. Griffin, R. W., Management, 11th Edition, South-Western College Publication, January 2012.

2. Mukherjee, K., Principles of Management, 2nd Edition, Tata McGraw Hill Education Pvt. Ltd., 2009.

Web Resources:

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	3	1	2	2	1	1			1	1	1	2	3	1
CO2	2	1	3	1	1	3	2	1	2	1			3	2	2
CO3	3	3	2	1			1	3	2	1	2	1	2	3	3
CO4	1	1	3	3	1	3	2		1	2			3	2	2
CO5	3			1	3	2	2	3	1	2	2	1	1	2	3

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	International Marketing	4	6	-	-	**Skilled**

Course Introduction: The course aims at exposing the students to the global business activities, marketing in international business and global forces transforming the international business today. The course would develop a general perspective about managing international business both in operational as well as strategic context.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	Explain the applications of marketing
CO 2:	Identify the skill sets required in marketing
CO 3:	Examine the various functions of Global Marketing
CO 4:	Determine the various Marketing areas
CO 5:	Pricing Methods of International Marketing

Unit I:	**OVERVIEW**	**[12 Periods]**

Need, Scope, Contrast in domestic and international marketing, EPRG Framework, Socio cultural environment – Barriers in International Marketing- – Future of Global Marketing

Unit II:	**INTERNATIONAL MARKETING & DEVELOPMENT**	**[12 Periods]**

Strategic effects of going international, Strategies employed by Indian companies to sustain globally, Global Market Entry Strategies – Export/Import, International Intermediaries – EMC's, Trading Companies, Licensing, Franchising, FDI

Unit III:	**ENVIRONMENT AND GLOBAL MARKETING**	**[12 Periods]**

Economic Environment, New trade theory, Macro economic objectives, Function of WTO, Regional Economic groups (EEU, NAFTA, etc.), World Bank.

Unit IV:	**PRODUCT AND PROMOTION STRATEGY**	**[12 Periods]**

The international product and its life cycle, Global product policy, Global branding and different positioning of the same brand in different countries

Unit V:	**PRICING FOR INTERNATIONAL MARKET**	**[12 Periods]**

Key factors in global pricing & methods, Pricing policies – Marginal cost, cost plus, Market oriented, Export payment methods – L/C, Advance, DA/DP, FIBC, Counter trade, Transfer price, Dumping & legal aspects.

Text Books:

1. Daniels & Lee, International Business Keegan, Global Marketing

Reference Books:

1. Harvard Business Review, Global Business Review (Sage Publications), Global Forum – ITC Geneva
2. Keegan,Warren,&Green,Mark., "Global Marketing",Chennai,Pearson,2018.

Web Resources:

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	1	2	3			3	3	3	3		2	1	2	1
CO2	3		2	1	1	2	1			2	3	1	3	3	3
CO3	1	2				2	2	3		2	3	2	1	1	2
CO4	3		2	1	1			2	2	3	3		2	1	3
CO5	2	1			1	2	2			3	1	1	3	2	1

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Enterprise Resource Planning	4	6	-	-	**Skilled**

Course Introduction: This course aims at studying and understanding ERP systems

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	Demonstrate a good understanding of the basic issues in ERP systems
CO 2:	Analyse the strategic options for ERP identification and adoption
CO 3:	Design the ERP implementation strategies
CO 4:	Understand the need of Business Systems and Processes through strategic analysis of ERP
CO 5:	To develop a process driven thinking towards business processes

Unit I:	**INTRODUCTION**	**[12 Periods]**

Enterprise Resource Planning: Introduction - Information System and Its Components - Value Chain Framework - Organizational Functional Units - Evolution of ERP Systems - Role of ERP in Organization - Three-Tier Architecture of ERP system - Benefits of ERP

Unit II:	**ERP IMPLEMENTATION LIFECYCLE**	**[12 Periods]**

ERP Implementation Lifecycle: Project Preparation - Initial Costing - Requirement Engineering - ERP Solution Selection - Technical Planning - Change Management and Training Plan - Implementation and Deployment Planning - Configuration, Custom Coding, Final Preparation, Go-live.

Unit III:	**ERP AND RELATED TECHNOLOGIES**	**[12 Periods]**

ERP and Related Technologies: Business Processing Reengineering (BPR) - Data Warehousing - Data Mining - On-line Analytical Processing (OLAP) - Supply Chain Management (SCM) - Customer Relationship Management (CRM) - Electronic Data Interchange (EDI).

Unit IV:	**MANUFACTURING PERSPECTIVE**	**[12 Periods]**

ERP Manufacturing Perspective: MRP - Material Requirement Planning, BOM - Bill of Material, MRP - Manufacturing Resource Planning, DRP - Distributed Requirement Planning, PDM - Product Data Management.

Unit V:	**ERP MODULES**	**[12 Periods]**

ERP Modules & ERP tools: Finance, Plant Maintenance, Quality Management, Materials Management – Open ERP JD Edwards – Enterprise One Microsoft Dynamics-CRM Module SAP

Text Books:

1. Manufacturing Resource Planning (MRP II) with Introduction to ERP; SCM; an CRM by Khalid Sheikh, Publisher: McGraw-Hill

Reference Books:

1. ERP and Supply Chain Management by Christian N. Madu, Publisher: CHI
2. Implementing SAP ERP Sales & Distribution by Glynn C. Williams, Publisher McGraw-Hill

Web Resources:

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2	2	3		2	3	1	1	2		1	3	2	1
CO2	3	1	2	1	3	2	1		3	2	2	2	2	3	1
CO3	1	2		3	1	2	3	1		2	1	2	1	1	2
CO4	3		2	1	1			2	2	3	3		2	1	3
CO5	2	1			1	2	2			3	1	1	3	2	1

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type

	Entrepreneurship Development					

Course Introduction: Entrepreneurship development is the means of enhancing the knowledge and skill of entrepreneurs through several classroom coaching and programs, and training. The main point of the development process is to strengthen and increase the number of entrepreneurs.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To explain concepts of Entrepreneurship and build an understanding about business situations in which entrepreneurs act.
CO 2:	To qualify students to analyse the various aspects, scope and challenges under an entrepreneurial venture.
CO 3:	To explain classification and types of entrepreneurs and the process of entrepreneurial project development.
CO 4:	To discuss the steps in venture development and new trends in entrepreneurship.
CO 5:	Identify the type of entrepreneur and the steps involved in an entrepreneurial venture.

Unit I:	**INTRODUCTION**	**[12 Periods]**

Entrepreneur - meaning - importance - Qualities, nature, types, traits, culture. Similarities and differences between entrepreneur and intrapreneur. Entrepreneurship and economic development - its importance - Role of entrepreneurship - entrepreneurial environment.

Unit II:	**ENTREPRENEURS**	**[12 Periods]**

Evolution of entrepreneurs - entrepreneurial promotion: Training and development. Mobility of entrepreneurs - entrepreneurial change - occupational mobility – factors in mobility - Role of consultancy organizations in promoting entrepreneurs – Forms of business for entrepreneurs

Unit III:	**PROJECT MANAGEMENT**	**[12 Periods]**

Project management: Sources of business idea - Project classifications - identifications - formulation and design - feasibility analysis. Financial analysis - project cost estimate - operating revenue estimate -Ratio analysis – investment Process - B E analysis - Profit analysis - Social cost benefit analysis – Project Appraisal methods. Preparation of Project Report and presentation.

Unit IV:	**PROJECT FINANCE**	**[12 Periods]**

Project finance: Sources of finance - Institutional finance - Role of IFC, IDBI, ICICI, LIC, SFC, SIPCOT, Commercial Bank - Appraisal of bank for loans. Institutional aids for entrepreneurship development - Role of DICS, SIDCO, NSICS, IRCI, NIDC, SIDBI, SISI, SIPCOT, Entrepreneurial guidance bureau – Approaching Institutions for Assistance.

Unit V:	**SMALL SCALE INDUSTRIES**	**[12 Periods]**

Steps in setting SSI unit - Problems of entrepreneurs - Sickness in small industries - reasons and remedies - Incentives and subsidies - Evaluating entrepreneurial performance - Rural entrepreneurship - Women entrepreneurship.

Text Books:

1. Entrepreneurship ByRajee Roy Oxford University press – Chennai

Reference Books:

1. Entrepreneurship Text and cases By P. Narayana Reddy – cengage learning.
2. Management and Entrepreneurship By Kanishka Bedi Oxford University press.

Web Resources:

https://onlinecourses.nptel.ac.in/noc23_mg61/preview

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
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CO2	3	1	2	1	3	2	1		3	2	2	2	2	3	1
CO3	1	2		3	1	2	3	1		2	1	2	1	1	2
CO4	3		2	1	1			2	2	3	3		2	1	3
CO5	2	1			1	2	2			3	1	1	3	2	1

SKILL

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Advanced Spread Sheet with Database Management System	**-**	**5**	**-**	**4**	**Skill**

Course Introduction: This course provides an insight into advanced level database management through Ms Excel typically used in organization to summarize, analyze, explore and present visualizations of data. It helps to use advanced formulas and functions and enables learners to generate advanced excel skills necessary for computing and analyzing data for the purpose of making many policy decisions.

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To impart skill of the learner on working with multiple spreadsheets
CO 2:	To impart knowledge on handling huge volume of data, filtering, sorting, aggregating and summarizing those into categories and subcategories.
CO 3:	To develop knowledge focusing on advanced functions, formulas and productivity tools and deriving different statistical result.
CO 4:	To assist in developing spreadsheet and process data using graphs, chart, diagrams, tables etc. to produced results in more sophisticated and timesaving ways.
CO 5:	To impart skill of the learner on working with multiple spreadsheets and manipulation of data using Outline, Auto filter and Pivot Tables.

Unit I:		**[12 Periods]**

1. Create a student mark list with following input field: Student name, Roll number, Marks in Tamil, English, Accounts, Economics and Computer Science. Calculate total mark, Average, and Result by using arithmetic functions (Sum, Multiply, Divide and Subtract)
2. Create an Excel sheet named Employee Necessary Employee Name, Employee Code, Address, Designation, Grade, Date of Join, and Salary) by using Arithmetic functions and show a report in chart
3. Create a table columns and rows in excel with students' details as Student Name, Gender, roll no. Department Name, Address and Percentage and Show students who have final scores greater than 40 by advanced Filter Option. Auto formula and Show report with graph.

Unit II:		**[12 Periods]**

4.Calculate the total score of each student by updating student details with minimum 3 subjects and write the formula, Display the word "Fail" if the student failed and "Pass" if the student passed in Mention column. Students are considered failed if their total is less than 40. Otherwise, they pass. Count the number of students

who failed and count the number of students who passed. Calculate the percentage of students who failed and calculate the percentage of students who passed. Display grade letter of each student in Grade column

5. Create an excel sheet with details as Order ID, Product, Unit price, Quantity, Discount, Revenue, Tax percentage and Net income. Calculate the total revenue, Calculate the revenue of each sale, Calculate the net income of each sale and calculate the total net income

6. Create Excel Sheet with full name, Last name, first name and E-mail (Last name_ First name@gmail.com). Get the last name from the full name, Get the first name from the full name and generate an e-mail for each person. The e-mail takes the form of Last name_ First name@gmail.com.

Unit III:		**[12 Periods]**

7. Implementation of DDL commands of SQL with suitable examples · Create table · Alter table · Drop Table

8. Implementation of DML commands.

9. Implementation of different types of operators in SQL · Arithmetic Operators · Logical Operators · Comparison Operator · Special Operator · Set Operation.

Unit IV:		**[12 Periods]**

9. Operators · Comparison Operator · Special Operator · Set Operation

10. Implementation of different types of Joins · Inner Join · Outer Join · Natural Join

11.Implementation of different types of function with suitable examples · Number function · Aggregate Function · Character Function · Conversion Function · Date Function

12. Implementation of · Group by & having clause · Order by clause · Indexing.

Unit V:		**[12 Periods]**

13. Implementation of · Sub queries · Views using SQL

14. Implement the Database Backup & Recovery commands.

15. Implementation of Rollback, Commit, Save point.

16. Create the Database /Table Space · Managing Users: Create User, Delete User, Managing roles: - Grant, Revoke.

Text Books:

1. Excel All In One - Paul MCFedries, Greg Harvey 2021
2. Data Base Management System (A Practical Approach) 5th Edition - Chopra Rajiv

Reference Books:

1. Excel Reference Book: Financial Modeling in Excel - Danielle Stein Fairhurst – 2017
2. Data Base Management System Complete Practical Approach - Sharad Maheshwari, Ruchin Jain - 2005

Web Resources:

https://books.google.co.in/books?id=nt-0cfaWPoC&pg=PT11&dq=DBMS+practical+questions&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUKEwjUmaXVio-GAxVmTmwGHQ06B5EQ6AF6BAgGEAI

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	1	1	1	2	1	1	1	2	3	1
CO2	3	2	3	1	1	3	2	1	2	1	1	1	3	2	2
CO3	3	3	2	1	2	2	1	3	2	1	2	1	2	3	3
CO4	1	1	3	3	1	3	2	3	1	2	2	2	3	2	2
CO5	3	1	3	1	3	2	2	3	1	2	2	1	1	2	3

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Object Oriented Programming with C++	**-**	**5**	**-**	**4**	**Skill**

Course Introduction:

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	Creating simple programs using classes and objects in C++.
CO 2:	Implement Object Oriented Programming Concepts in C++.
CO 3:	Develop applications using stream I/O and file I/O.
CO 4:	Implement simple graphical user interfaces.
CO 5:	Implement Object Oriented Programs using templates and exceptional handling concepts.

Unit I: **[12 Periods]**

1. Find payroll for the employee using C++
2. Calculate EOQ, Minimum Level, Maximum Level, Re-Order Level using C++

Unit II: **[12 Periods]**

3. Calculate Working capital for the current year and previous year using C++
4. Calculate simple interest and compound interest in C++

Unit III: **[12 Periods]**

5. Depreciation under straight line method using C++
6. Depreciation under diminishing method

Unit IV: **[12 Periods]**

7. Find Sum and Product using C++
8. Cost sheet using inheritance in C++

Unit V: **[12 Periods]**

9. Bank transaction using C++
10. C++ program for a basic commerce application that manages products and records sales. Functionalities: adding products, viewing the product list, and recording sales.

Text Books:

1. Object Oriented Programming in C++ by Robert Lafore Techmedia Publication.

Reference Books:

1. Object Oriented Programming in C++ Saurav Sahay Oxford University Press.
2. Object Oriented Programming in C++ R Rajaram New Age International Publishers 2nd .

Web Resources:

https://onlinecourses.nptel.ac.in/noc19_cs38/preview

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CO1	3	2	2	3		2	3	1	1	2		1	3	2	1
CO2	3	1	2	1	3	2	1		3	2	2	2	2	3	1
CO3	1	2		3	1	2	3	1		2	1	2	1	1	2
CO4	3		2	1	1			2	2	3	3		2	1	3
CO5	2	1			1	2	2			3	1	1	3	2	1

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type

	Computerised Accounting using software & Python	**-**	**5**	**-**	**4**	**Skill**

Course Introduction:

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	Understanding the basic concepts of python variables and Programming Environment.
CO 2:	Demonstrate fundamental understanding of Data Types
CO 3:	To understand the R Data structure
CO 4:	Students are able to appreciate the importance of law and legal institutions in Business
CO 5:	Students are able to have a basic understanding of the laws relating to contract, consumer protection, competition, companies and dispute resolution

Unit I:	**Programming Environment**	**[12 Periods]**

1. Download and install R-Programming environment and install basic packages using install.packages() command in R.
2. Learn all the basics of R-Programming (Data types, Variables, Operators etc,.)

Unit II:	**R – Data types**	**[12 Periods]**

3. Write a program to find list of even numbers from 1 to n using R-Loops
4. Create a function to print squares of numbers in sequence.

Unit III:	**R – Data Structures.**	**[12 Periods]**

5. Write a program to join columns and rows in a data frame using cbind() and rbind() in R.
6. Implement different String Manipulation functions in R.

Unit IV:	**Balance Sheet with Tally**	**[12 Periods]**

7. Prepare Trial Balance, Profit & Loss A/C and Balance Sheet (With minimum of any 5 adjustments) 3. Prepare Inventory statement using (Calculate Inventory by using all methods) a) FIFO b) LIFO c) Simple Average method d) Weighted Average Method
8. Prepare Trial Balance, Profit & Loss A/C and Balance Sheet (With minimum of any 5 adjustments

Unit V:	**Statements with Tally**	**[12 Periods]**

9. Prepare a fund flow statement and give your opinion.
10. Prepare a cash flow statement and present your view.

Text Books:

1. Norman Matloff, The Art of R Programming, UC Davis 2009.
2. AK Nadhani, Simple Tally 9, BPB Publications, Chennai, 2008.

Reference Books:

1. Vishnu P. Singh, —Tally. Erp 9||, Computech Publications Ltd, NewDelhi, 2006.
2. Srinivasa Vallaban, Computer Applications in Business, Sultan Chand and sons, Chennai, 2006

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Course Outcome	Programme Outcomes												Programme Specific Outcome		
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CO3	1	2		3	1	2	3	1		2	1	2	1	1	2
CO4	3		2	1	1			2	2	3	3		2	1	3
CO5	2	1			1	2	2			3	1	1	3	2	1

Semester

Course Code	Couse Title	Credit	Lecture	Tutorial	Practical	Type
	Visual Basic	**-**	**5**	**-**	**4**	**Skill**

Course Introduction:

Course Focus on: Skill Development / Entrepreneurship / Employability / Research

Course Outcomes	On completion of this course, students will
CO 1:	To improve skills in object-oriented analysis, design, programming, and testing.
CO 2:	Understand VB application environment and event driven programming
CO 3:	Learn about basic programming concepts like variables, operators and various control for I/O in VB
CO 4:	Implement various control constructs, arrays and collections used in VB
CO 5:	Learn and implement about procedure, subroutine and menu driven programming

Unit I:		**[12 Periods]**

Write a simple VB program to accept a number as input and convert it into

a. Binary

b. Octal

c. Hexa-decimal

Unit II:		**[12 Periods]**

Write a simple VB program to add items to list box with user input and move the selected item to combo box one by one.

Unit III:		**[12 Periods]**

Write a simple VB program to develop a calculator with basic operation

Unit IV:		**[12 Periods]**

Design a form using common dialog control to display the font, save and open dialog box without using the action control property.

Unit V:		**[12 Periods]**

Program that converts temperatures between Celsius and Fahrenheit and Input/output operations and basic arithmetic in Visual Basic.

Text Books:

1. Visual Basic Programming - Dr. A. Murugan.,Dr. K. Shyamala., Grasha Jacob

Reference Books:

1. Programming With Visual Basic 6.0, Mohammed Azam, Vikas Publishing – 2001.
2. VISUAL BASICS 6.0, A.K.R.S.Anusha, Madras University – 2019.

Web Resources:

https://www.coursera.org/courses?query=visual%20basic

Mapping of Course Outcome with Programme Outcome and Programme Specific Outcome:

Course Outcome	Programme Outcomes												Programme Specific Outcome		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
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CO2	3	1	2	1	3	2	1		3	2	2	2	2	3	1
CO3	1	2		3	1	2	3	1		2	1	2	1	1	2
CO4	3		2	1	1			2	2	3	3		2	1	3
CO5	2	1			1	2	2			3	1	1	3	2	1