JIS College of Engineering

Syllabus/ Curriculum

Regulation: 2025 (R-25)

Program Name:

Master of Business Administration

Department of Business Administration

Course Structure			
	Subjects	Credit	Total
Sem-1	7 Core (Theory) + 1 Sessional + 1 Practical	[(6x4) +(1x2) +(1x1+(1x1))]	28
Sem-2	6 Core (Theory) + 1 Sessional	(6x4) +(1x2)	26
Sem-3	1 Core (Theory)+1Project+ 4 Elective [2 Major+2 Minor] (Theory)	(1x4) +6+(4x4)	26
Sem-4	1 Core (Theory)+4 Elective [2 Major+2 Minor] (Theory)+Viva Voce	(1x4) +(4x4) +4	24
			104

Semester-1

Code	Subject	Type	Credit
MB101	Accounting for Managers	Theory	4
MB102	Information Systems for Business	Theory	4
MB103	Managing Organization	Theory	4
MB104	Economics for Managers	Theory	4
MB105	Operations Management	Theory	4
MB106	Quantitative Techniques	Theory	4
MB107	Business Communication	Theory	2
MB108	Seminar Presentation	Sessional	1
MB191	Business Communication Lab	Practical	1
			28

Semester-2

Code	Subject	Type	Credit
MB201	Marketing Management	Theory	4
MB202	Human Resource Management	Theory	4
MB203	Financial Management	Theory	4
MB204	Legal Aspects of Business	Theory	4
MB205	Business Analytics and Spreadsheet	Theory	4
MB206	Research Methodology	Theory	4
MB207	Field Project & Seminar	Sessional	2
			26

Semester-3

Code	Subject	Type	Credit
Core Subject			
MB301	Business Strategy	Theory	4
MB302	Summer Internship	Sessional	6
Electives Subjects			
MM301	Customer Relationship Management	Theory	4
MM302	Sales and Retail Management	Theory	4
MM303	Integrated Marketing Communication	Theory	4
FM301	Security Analysis and Portfolio Management	Theory	4
FM302	Financial Services	Theory	4
FM303	Financial Strategic Management	Theory	4
HR301	Strategic Human Resource Management	Theory	4
HR302	Human Resource Planning	Theory	4
HR303	Industrial Relations	Theory	4
SM301	Database Management	Theory	4
SM302	Managing Software Projects	Theory	4
SM303	Enterprise Resource Planning	Theory	4
OP301	Introduction to Supply Chain Management	Theory	4
OP302	Logistics and Distribution Management	Theory	4
OP303	Legal Aspects of Supply Chain Management	Theory	4
MHH301	Hospital Architecture Planning and Maintenance	Theory	4
MHH302	Healthcare Laws, Ethics and Medical Terminology	Theory	4
MHH303	Hospital Operations Management	Theory	4
DSA301	Introduction to Python	Theory	4
DSA302	Time Series Analysis and Forecasting	Theory	4
DSA303	Business Intelligence	Theory	4

Semester-4

Code	Subject	Type	Credit
Core Subject			
MB401	Financial Reporting, Statements and Analysis	Theory	4
MB402	Grand Viva	Sessional	4
Electives Subjects			
MM401	Consumer Behaviour	Theory	4
MM402	Digital Marketing	Theory	4
MM403	Service Marketing	Theory	4
FM401	Corporate Taxation and Planning	Theory	4
FM402	Financial Derivatives and Risk Analysis	Theory	4
FM403	International Finance	Theory	4
HR401	International Human Resource Management	Theory	4
HR402	Compensation and Benefits Management	Theory	4
HR403	Human Resource Development	Theory	4
SM401	Information Security and Privacy	Theory	4
SM402	E-Commerce	Theory	4
SM403	Business decisions using advanced excel	Theory	4
OP401	Total Quality Management	Theory	4
OP402	Strategic Supply Chain Management	Theory	4
OP403	Project Management (Operations)	Theory	4
DSA401	R Programming for Data Science	Theory	4
DSA402	Machine Learning Algorithms in Business	Theory	4
DSA403	Application of AI in Business	Theory	4
MHH401	Public Health System & Outreach Programmes	Theory	4
MHH402	Organization and Management of Support & Utility Services	Theory	4
MHH403	Health Promotion Approaches and Management	Theory	4

SEMESTER 1

[MB-101]: ACCOUNTING FOR MANAGERS

Course Objective:

The objective of this course is to provide an understanding of financial accounting fundamentals for prospective consumers of corporate financial information, such as managers, stockholders, financial analysts, and creditors.

Financial Accounting: [8L]

Overview: Importance and scope of accounting, Objectives for accounting, Users of accounting information, Basic terminologies, Accounting Concepts and conventions, Transactions and events, accounting equation, Classification of accounts under Traditional approach, Classification of accounts, Accounting Standards, International Financial Reporting System.

Mechanics of Accounting: [10L]

Double entry system of accounting, journalizing of transactions; ledger posting and trial balance, preparation of final accounts.

Depreciation Provisions and Reserves: [8L]

Concept of depreciation; Causes of depreciation; depletion, amortization, and dilapidation; Depreciation accounting; Methods of recording depreciation; Methods for providing depreciation; Depreciation policy as per Accounting Standard, Provisions, and reserves.

Cost Accounting & Activity Based Costing: [6L]

Cost Accounting-Meaning-Scope- Financial Accounting Vs. cost accounting- Management Accounting Vs. Cost Accounting-Elements of Cost-Preparation of cost sheet- Activity Based Costing (ABC)-Concept, Purpose, Benefits, Stages, Relevance in decision making.

Financial Planning &CVP Analysis: [8L]

Applications of Marginal Costing and managerial decision making-- Factors that underpin the decisions involving alternative choices- Usage of CVP analysis to respond to changes in the business environment.

Suggested Readings:

- S. Ramanathan—Accounting for Management,1st edition, Oxford Higher Education
- Sumit Gulati & Y.P. Singh—Financial Management,1st edition, McGraw Hill Education.
- Hanif & Mukherjee – Modern Accounting-Vol-1.TMH

- Pandey, I. M-Essentials of Management Accounting, Vikas Publishing House
- Khan & Jain -Financial management, McGraw Hill
- B. Banerjee - Cost Accounting-Theory and Practices-PHI

Course Outcome:

CO1: Understand the nature and role of the four principal financial statements (i.e., the Income Statement, the Statement of Financial Position, the Statement of Cash Flows, and the Statement of Changes in Equity).

CO2: Develop an awareness and understanding of the accounting process and fundamental accounting principles that underpin the development of financial statements (e.g., accrual accounting vs. cash accounting, definition, recognition, measurement and disclosure of assets, liabilities, revenues, expenses; inventory valuation methods, provisions, depreciation; accounting for intangibles).

CO3: Ability to read, interpret and analyse financial statements; combine financial analysis with other information to assess the financial performance and position of a company.

CO4: Apply course concepts to analyse common business management decisions such as pricing and outsourcing decisions from a financial perspective.

[MB-102]: INFORMATION SYSTEMS FOR BUSINESS

Course Objective:

This course is designed to provide necessary skills to successfully manage systems development projects and effectively use and administer Information Systems in different business settings. The course will also help students in acquiring and applying analytical skills which will enable them to visualize a complex business problem and make informed decisions based on available information and technology resources. Ultimately developing an understanding of the business and professional responsibilities related to the use of information systems in organizations is the overall objective of the course.

Management Information System (MIS): [10L]

Definition, Concept, Characteristics, Factors of Designing Successful MIS, Steps Involved in Setting Up MIS, Advantages of MIS, Problems Involved in Installing and Operating MIS, MIS Growth Stages Theory in an Organizations, Limitations of MIS, Status of MIS Personnel. Dimensions of Information Need at Different Levels of Management, Uncertainty Absorption and Planning, Organizing, and controlling.

Database Management System: [6L]

Overview of DBMS, Components of DBMS, RDBMS. Concepts of Tables, Records, Attributes, Keys, Integrity Constraints, SQL: DDL & DML Concepts, SQL Commands.

Data Warehousing and Data Mining: [5L]

Concepts of Data Warehousing, Data Mart, Meta Data, Multidimensional Modeling, OLAP, OLTP, Data Mining concepts.

Introduction to Data Communication and Computer Networks: [6L]

Fundamentals of Data Communication: Analog and Digital, Bandwidth, Types of Transmission, Computer Networks: Advantages, Types of Computer Networks, Basic Components of Computer Networks, Internet, Concept of WWW, FTP, SMTP etc., IP Addresses, ISPs, URL, Domain names, Web Browsers, Internet Protocols, Search engines, e-mail, Internet applications in business.

E-Business: [8L]

Introduction, Traditional commerce, and E-commerce, Advantages and disadvantages of e-commerce, Threats, Concepts of Security Measures: Firewall, Encryption, Cyber Security: Meaning, Importance, Tools, etc.

Enterprise Systems: [5L]

ERP (Enterprise Resource Planning): Concepts, Architecture, Generic modules, Applications; CRM (Customer Relationship Management): Concepts, Features; SCM (Supply Chain Management): Concepts, drivers, Inbound & Outbound SC, Concept of e-Procurement, e-Tailing, e-Logistics, e-Collaboration, e-Integration.

Suggested Readings:

- Management Information Systems by James A. O'Brien
- Management Information System by Kenneth C. Laudon, Jane P. Laudon
- Waman S Jawadekar: Management Information Systems– Text and Cases, Mc Graw Hill
- Mahadeo Jaiswal and Monica Mittal: Management Information Systems, OUP.

Course Outcome:

CO1: Analyze and model the flow of information through business processes.

CO2: Formulate plans and architectures for the capture, storage and retrieval of data.

CO3: Apply networking concepts and technologies to support business needs.

CO4: Align information systems and services with business strategy and formulate plans for the retrieval and analysis of supporting data.

CO5: Document, monitor and assess the effectiveness of IT controls.

[MB-103]: MANAGING ORGANIZATION

Course Objective:

The students will be able to understand the human interactions in an organization, find what is driving it and influence it for getting better results in attaining business goals.

Introduction: [10L]

Nature of Management - Social Responsibilities of Business-Manager and Environment Levels in Management - Managerial Skills, Functions of Management, Planning - Steps in Planning Process – Scope and Limitations - Short Range and Long-Range Planning - Flexibility in Planning ¬ Characteristics of a sound Plan -Management by Objectives (MBO) - Policies and Strategies –BCG, SWOT, GE Nine cell- Scope and Formulation - Decision Making - Techniques and Processes.

Organizing: [8L]

Organization Structure and Design – Authority and Responsibility Relationships -Delegation of Authority and Decentralization - Impact of Technology on Organizational design - Mechanistic vs Adoptive Structures - Formal and Informal Organization - Organizational Structure –Line, Staff, Line & staff.

Perception and Learning: [8L]

Perception and Learning - Personality and Individual Differences - Motivation and Job Performance - Values, Attitudes and Beliefs - Stress Management - Communication Types- Process - Barriers - Making Communication Effective, Conflict and Nature of conflicts, Process, levels.

Group: [8L]

Group Dynamics – stages of group Formation-Group & Team-Leadership -Styles – theories- Approaches - Power and Politics - Organizational Climate and Culture - Organizational Change and Development.

Management Styles and approaches: [6L]

Comparative Management Styles and approaches – Japanese Management Practices Organizational Creativity and Innovation - Management of Innovation - Entrepreneurial Management. Various principles of management: including Taylor, Fayol Weber, Mayo, Mintzberg, Contingency theory and Situational theory, Drucker, Senge.

Suggested Readings:

- Organizational Behaviour, Fred Luthans, McGraw-Hill
- Organizational Behaviour, Robbins and Judge, Pearson
- Essentials of Management, Koontz, TMGH

Course Outcome:

CO1: Demonstrate the applicability of the concept of organizational behaviour to understand the behaviour of people in the organization.

CO2: Demonstrate the applicability of analyzing the complexities associated with management of individual behaviour in the organization.

CO3: Analyze the complexities associated with management of the group behaviour in the organization.

CO4: Demonstrate how the organizational behaviour can integrate in understanding the motivation (why)behind behaviour of people in the organization.

[MB-104]: ECONOMICS FOR MANAGERS

Course Objective:

The objective of this course is to develop the ability to apply the concepts, tools, and techniques of economics in analyzing and interpreting business decisions.

Introduction: [2]

Meaning of Economics, Nature and Scope of Managerial Economics, Basic Problems of an Economy, Working of Price Mechanism and Resource Allocation.

Theory of demand and supply: [5]

Demand functions, Demand Schedule, Determinants of Demand, Individual and Market Demand, Indifference curve approach and Consumer ‘s Equilibrium, Income and Substitution effects, Concepts of Supply, Shift in Demand and Supply curves, Determination of equilibrium price and quantity Elasticity of Demand and Supply, Cardinal Utility Approach-Law of Diminishing Marginal Utility, Law of Equi-Marginal Utility

Theory of production: [5]

Production Function, Laws of Production: Law of Variable Proportions and Returns to Scale, Equilibrium of the Firm, Concept of Revenue, Law of Variable Proportions

Theory of costs: [5]

Concept of Short run and long run, Different Cost Curves, Relation between Average costs and Marginal Costs, Relation between Short Run costs and long run costs, Break-even analysis.

Theory of firm: [5]

Theory of Profit maximization, Managerial Utility maximization and Sales Revenue maximization.

Market structure: [5]

Features, Short run and long run Equilibrium aspects under Perfect Competition, Monopoly and Monopolistic Competition, Concept of Oligopoly, Kinked Demand Curve Model of Oligopoly.

Macroeconomic aggregates and concepts: [5]

GNP and GDP, Concepts and Measurement of National Income, Determination of National Income, Aggregate Consumption, Consumption Function.

International Institutions and their roles: [4]

WTO, World Bank, IMF, ADB, UNCTAD, EEC, SAPTA, NAFTA

Inflation: [4]

Causes and Remedies, Balance of Payments-components, Business Cycles-concepts.

Suggested Readings:

- H.L. Ahuza- Managerial Economics, S. Chand
- D.N. Dwivedi- Managerial Economics, Prentice Hall. Principles of Macroeconomics –Soumen Sikdar,(OUP)
- Managerial Economics - Suma Damodaran, (OUP)
- Macroeconomics – Dornbusch, Fischer &Startz (PHI)

Course Outcome:

CO1: Analyze the demand and supply conditions and assess the position of a company.

CO2: Design competition strategies, including costing, pricing, product differentiation, and market environment according to the natures of products and the structures of the markets.

CO3: Analyze real-world business problems with a systematic theoretical framework.

CO4: Make optimal business decisions by integrating the concepts of economics, mathematics, and statistics.

[MB-105]: OPERATIONS MANAGEMENT

Course Objective:

At the end of the course, the students can understand the situations in a production system environment that suggests the use of certain quantitative methods to assist in decision making on operations management and strategy.

Introduction: Nature and Scope of Operations Management: [5L]

Difference between Manufacturing and Service Operations; Product Process Matrix capacity planning-Responsibilities of Production Manager; Production as a Coordination Function; Production design & Process planning. Plant location: Factors to be considered in Plant Location – Choice of General Region, Particular Community and Site – Multiple Plant Location Decision – Plant Location Trends. Characteristics of Manufacturing Systems: Classification of Manufacturing Systems with Examples.

Intermittent and Continuous Production: [4L]

Plant Layout: Need for a Good Plant Layout; Characteristics of a Good Layout; Costs associated with Plant Layout; Process Layout vs. Product Layout; Optimization in a Process Layout and Product Layout; Designing Product and Process Layout; Assembly Line Balancing – Concept and Problems; Cellular.

Production and Inventory Control: [5L]

Classification of inventory items – ABC, FSN, VED classification; Introduction to EOQ and EBQ; MRP – Concept, inputs and outputs, benefits, examples; Deterministic demand model–EOQ- Continuous and Periodic Review Inventory models; Master Production Schedule and MRP; Concepts of MRP II, JIT and ERP

Maintenance Management: [4L]

Types of Maintenance – Breakdown and Preventive Maintenance; Total Productive Maintenance (TPM)

Purchase Management: [4L]

Purchase Policy, Systems, Procedures; Vendor Selection; Negotiation; Vendor Development and Evaluation; Make or Buy decision; Legal aspects of purchasing.

Inspection and Quality Control: [6L]

Types and criteria of inspection; Statistical Quality Control; Control Charts, Total Quality Management (TQM) Concept.

Work Study & Method Study: [4L]

Definition and its Importance; Basic Procedure in Performing a Work Study; Method Study –Objectives and Procedure; Work Measurement–Objectives and Procedure; Concepts of Performance Rating, Basic Time, Allowances and Standard Time

Scheduling: [3L]

Definition and Assumptions, Johnson's Rule; Introduction to Project Management – CPM and PERT, identification, and Importance of the Critical Path. Gantt Chart, Johnson's Rule

Case Study [5L]

Suggested Readings:

- Bedi – Production and Operations Management (2nd edition); Oxford University Press
- Buffa, E. S. and Sarin, R. K. – Modern Production /Operations Management; John Wiley
- Chary, S.N. – Production and Operations Management (3rd edition); TMH
- Chase, Jacobs, Aquilano and Agarwal – Operations Management for Competitive Advantage (11th edition); TMH
- Dutta – Materials Management; PHI
- Evans and Lindsay – The Management and Control of Quality (6th edition); Cenage Learning
- Gaither and Frazier – Operations Management (9th edition); Thomson Learning
- Gopalakrishnan and Sundarsan – Materials Management: An Integrated Approach; TMH
- Hansen and Ghare – Quality Control and Applications; PHI
- Krajewski, Ritzman and Malhotra – Operations Management (8th edition); Pearson Education
- Mahadevan – Operations Management; Pearson Education

Course Outcome:

CO1: Describe the concept of operations management and productivity.
CO2: Apply the decision models to various real time problems.
CO3: Identify the elements of operations management and various transformation processes to enhance productivity and competitiveness.
CO4: Analyze and evaluate various facility alternatives and their capacity decisions, develop a balanced line of production & scheduling and sequencing techniques in operation environments.
CO5: Develop aggregate capacity plans and MPS in operation environments.

[MB-106]: QUANTITATIVE TECHNIQUES

Course Objective:

This subject aims to familiarize students towards perceiving and analyzing modern business & economic numerical and apply statistical techniques for arriving at sound management decisions. This is also intended to familiarize students with Operations Management concepts by introducing various optimization techniques with managerial perspective, to facilitate the use of Operations Research techniques in managerial decisions.

Linear Programming: [6L]

Formulating maximization/minimization problems, Graphical solution, Simplex method, Artificial Variables – Big M – Method, Special cases of LP, Duality of LP, and its interpretation.

Transportation Problems: [6L]

Introduction - Mathematical formulation of transportation problem - the Transportation method for finding initial solutions - North-West Corner Method - Least Cost Method - Vogel's Approximation method - test for optimality - steps of MODI method - loops in transportation table - Degeneracy.

Assignment Problems: [4L]

Introduction - Mathematical statement of the Problem - Hungarian method of solution - Maximization case in assignment problem — unbalanced assignment problem - restrictions on assignment - Travelling salesman problem.

Theory of Games: [4L]

Two-person zero sum games - Pure strategies - games with saddle points - rules to determine saddle points - mixed strategies - Game without saddle points - the rules of dominance.

Basic Statistics: [4L]

Basic Concept (Variables, Population v/s Sample, Central tendency, Dispersion, Data Visualization, Simple Correlation and Regression).

Probability & Distribution: [6L]

Probability – Introduction, Rules of Probability, Conditional Probability (Baye's Theorem), Random Variables, Discrete and Continuous Distributions (Binomial, Poisson and Normal), Sampling – Types and Distribution.

Theory of Estimation [5L]

Estimation – estimation problems, standard error, margin of error, confidence error, confidence interval, characteristics of estimators, consistency un-biasedness, sufficiency and efficiency, most sufficient estimators. Point Estimation and Interval Estimation, Estimation population mean using z statistic (σ known), Estimating population mean using t statistic (σ unknown), Estimating population proportion, Estimating Sample Size.

Suggested Readings:

- Statistics by Wayne L. Winston
- Business Statistics by GC Berry
- Business Statistics, Problems & Solutions by JK Sharma
- Operations Research by A Ravindran, Don T Philips and James J Solberg.
- Operations Research by V K Kapoor
- Operations Research by S K Kalavathy

Course Outcome:

CO1: Construct linear integer programming models and discuss the solution techniques.
CO2: Propose the best strategy using decision making methods under uncertainty and game theory.
CO3: Build and solve Transportation Models and Assignment Models.
CO4: Demonstrate the ability to apply fundamental concepts in exploratory data analysis.
CO5: Demonstrate an understanding of the basic concepts of probability and random variables.
CO6: Understand the foundations for classical inference involving confidence intervals and hypothesis testing.

[MB-107]: MANAGERIAL COMMUNICATION

Course Objective:

The course recognizes that challenges exist for creating and implementing effective communication both inside organizations (between individuals and groups) and outside organizations (with markets, partners, and influential third parties). It is intended to help the students think strategically about communication and aid them in improving their writing, presentation, and interpersonal communication skills within a managerial setting.

The goal of this course is to help students learn to communicate strategically within a professional setting. Students are asked to analyze their intended audience, the purpose of their communication, and the context in which they are operating before developing the message. The course focuses specifically on improving students' ability to write, speak, work in a team, and communicate across cultures in their roles as future managers.

Principles of Communication: [4L]

Definition, Purpose, Process, Types, Barriers to Communication, Listening, Feedback, Non-verbal Communication.

Written Communication: [6L]

Composing Business Letters/Email [Request, Enquiry, Placing Order], Circulars, Notices, Resume/CV, Basic Grammar, Comprehension, Preparing User Manual, Report Writing (Types of Reports, Different Formats of Report Writing).

Suggested Readings:

- Business Correspondence & Report Writing, Sharma, TMH
- Business Communication Strategies, Monipally, TM
- English for Technical Communication, Laxminarayanan, SciTech
- Business Communication, Kaul, PHI
- Communication Skills for Effective Management, Ghanekar, EPH
- Hynes, G.E. (2016). Managerial Communication: Strategies and Applications (6th ed.). Thousand Oaks, CA: Sage.
- Board of Editors. Language and Life. 1st edition, 2018. Oriental Black.

Course Outcome:

CO1: Identify common errors in spoken and written communication.

CO2: Get familiarized with English vocabulary and language proficiency.

CO3: Improve nature and style of sensible writing, acquire employment and workplace communication skills.

CO4: Improve their technical communication skills through technical reading and writing practices.

CO5: Perform well in campus recruitment, engineering, and all other general competitive examinations.

[MB-191]: BUSINESS COMMUNICATION LAB

Course Objective

BCS Lab is offered to understand the importance of oral and written communication and its applications in business for students. Students will be able to understand the importance of business communication to develop writing skills and presentation, writing business proposals and letters, and application of business communication in the self-development process.

The Sounds of English: [1L]

Practicing correct pronunciation through IPA, Stress, Intonation, Rhythm.

Group Discussions & Personal Interview: [2L]

Purpose, Different roles for participants, Etiquette in a structured GD, Practice GDs.

Interpersonal Skills (Role Plays): [2L]

Introduction of self and others, making announcements, Getting someone's attention, and interrupting conversations, Making requests and responding to them, asking for directions

Listening Skills: [1L]

Listening to unknown passages – for global understanding, identifying key terms, understanding concepts and answering a series of relevant questions that test comprehension.

Presentation Skills: [2L]

Oral Presentations (JAMs), Describing and analyzing videos and pictures, Interpreting and analyzing data from graphs and charts

Grooming: [3L]

Introduction:
Definition of personal grooming and its significance in various contexts (personal, professional, social). Importance of first impressions and building a positive self-image. Understanding how personal grooming impacts self-esteem and how others perceive individuals.

Components of Personal Grooming:

- **Hygiene**: Proper washing and showering. Oral hygiene (brushing, flossing, using mouthwash). Hand hygiene (washing hands frequently).
- **Skincare**: Understanding skin types and needs. Developing a skincare routine (cleansing, moisturizing, sun protection).
- **Hair Care**: Choosing the right products for your hair type. Proper styling and maintenance.
- **Attire**: Selecting appropriate clothing for different occasions and settings. Understanding clothing styles and trends.
- **Nonverbal Communication and Body Language**: Importance of body language and non-verbal communication in projecting a positive image. Proper posture and walking techniques. Eye contact and facial expressions. Understanding nonverbal cues and interpreting body language.
- **Confidence and Self-Expression**: Impact of personal grooming on self-esteem and confidence. Building confidence through grooming and presentation. Speaking confidently and actively listening. Clear self-expression and effective communication.
- **Practical Application**: Practice sessions in the language lab to demonstrate grooming techniques and body language. Role-playing scenarios to practice professional interactions and presentations. Feedback and evaluation of grooming practices and communication skills.

SEMESTER 2

[MB201]: MARKETING MANAGEMENT

Course Objective:

This course addresses the management challenge of designing and implementing the best combination of marketing actions to carry out a firm 's strategy in its target markets. Specifically, this course seeks to develop the students' skills in applying the analytic perspectives, decision tools, and concepts of marketing to decisions involving segmentation, targeting, and positioning; product offering; pricing; distribution channels and marketing communications.

Fundamentals of Marketing: [4L]

Definition and scope of Marketing, Marketing Concepts (Orientations); Modern Marketing Mix (7Ps), Customer Relationship Management.

Marketing Environment and environment scanning: [4L]

PESTEL Analysis, SWOT Analysis; Product-Market Grid, Impact of Digital Transformation on Market Forces.

Market Segmentation, Targeting and Positioning: [4L]

Consumer Behaviour and its influencing factors, Concepts of market segmentation and targeting; Effective Segmentation Approaches, Differentiation and Positioning strategies.

Product and Branding: [4L]

Product Classification, Product Mix; ProductLife Cycle and marketing strategies at different stages of PLC; Purpose of branding; Characteristics of good brand name, Brand equity; Branding strategies;

Pricing: [4L]

Procedure for price setting; Pricing objectives; Cost and demand consideration; Pricing Strategies and Tactics.

Marketing Channels: [4L]

Importance of Marketing intermediaries; Types of intermediaries and their functions; Levels of marketing channels; Channel design decisions.

Promotion: [4L]

Elements of Promotion Mix (advertising, sales promotion, personal selling, direct marketing, PR, and

publicity) – characteristics and their relative strengths and weaknesses; Concept of Integrated Marketing Communication.

Introduction to International Marketing: [4L]

Definition of international marketing, Domestic vs. international marketing, Benefits of international marketing, Process of internationalization, EPRG framework. Factors in pricing, Alternative strategies, Transfer pricing, Dumping, Counter trade.

International Product Policy: [2L]

New product policy, international product lifecycle, International Packaging, and International Labelling.

International Pricing Strategies: [2L]

Factors in pricing, Transfer pricing, Dumping, Countertrade.

Export Import Process: [2L]

Export Documentation-certificate of origin, bill of lading, letter of credit, Methods of payment.

Overseas Distribution system: [2L]

Alternative Middleman Choices-Home country and foreign country middlemen, Selection and Management of Agents, Locating, Motivating Channel Members.

Suggested Readings:

- Marketing Management by Philip Kotler and Kevin Lane Keller, Pearson.
- Principles of Marketing by Philip Kotler and Gary Armstrong, Pearson.
- Global Marketing by Warren J. Keegan and Mark C. Green, Pearson.
- International Marketing by Philip R. Cateora, John Graham, and Mary Gilly, McGraw Hill.
- Marketing Channels by Bert Rosenbloom, Cengage Learning

Course Outcome:

CO1: Develop a foundational understanding of market dynamics and business environment influences.
CO2: Analyze consumer needs and strategic approaches for effective market positioning.
CO3: Evaluate various distribution and communication strategies for business growth.
CO4: Apply marketing principles in global trade and competitive decision-making.

[MB202]: HUMAN RESOURCE MANAGEMENT

Course Objective:

The objective of the course is to teach the basic principles of strategic human resource management—how an organization acquires, rewards, motivates, uses, and generally manages its people effectively. In addition to providing a basic legal and conceptual framework for managers, the course will introduce the manager to practices and techniques for evaluating performance, structuring teams, coaching and mentoring people, and performing the wide range of other people related duties of a manager in today's increasingly complex workplace.

Human Resource Management-Overview: [10L]

Introduction of the paper, Definition of Human Resource, Definition& Concept of Human Resource Management, Difference between Personnel Management & HRM. Nature, Aim and Objectives, Scope, Coverage & Nature of HRM, Importance of Human Resource Management, Structure & Function of HR Manager, Role of Line Managers in Managing Human Resources. Difference Between Line Function and Staff Function. Changing Function of Human Resource Management with Examples.

Human Resource Planning: [10L]

Meaning, Objectives, Importance of Human Resource Planning, Need for HR Planning, Assessment of Available HR in the Organization, Workload Analysis, Manning Norms, Demand and Supply Forecasting Techniques.

Talent Acquisition and Training: [8L]

Recruitment: Definition, Sources of recruitment with advantages and disadvantages, Sources of Selection, Process of Selection, Difference Between Recruitment and Selection, Training: Definition, Difference between Training, Development and Education, Different Methods of Training, Evaluation of Training, Kirkpatrick's model. Executive Development: Importance of Executive Development, Different methods of Executive Development.

Employment Administration: [6L]

Career Planning: Meaning, Stages, Need, Concept of Career Development, Advantages and Limitations of Career Planning, Succession Planning, Definition, Process and Difference of Succession Planning with Career Planning. Performance Appraisal: Meaning, Objective, Process, Instruments of Performance Appraisal. Performance appraisal interview, Problems & errors in PA.

Emerging Areas: International Human Resource Management: [6L]

Concept, Need, Objectives and Features. Modern Human Resource Management Practice. Modern HR Trends, Managing Human Capital, Talent Management. Caselets and Class Activities (Applying HRM Techniques).

Suggested Readings:

- Rao, V. S. P. Human Resource Management. Excel Books.
- Venkata Ratnam, C. S., & Srivastava, B. K. Personnel Management, and Industrial Relations. Tata McGraw-Hill (TMH).
- Ghanekar, Anjali. Human Resource Management. Everest Publishing.
- Sheikh, A. M. Human Resource Development and Management. S. Chand.
- Ramaswamy, E. A. Managing Human Resources. Oxford University Press.

Course Outcome:

CO1: Define and identify the basic concepts, functions, and processes of Human Resource Management (HRM).
CO2: Describe the role, functions, and operations of the human resource department within organizations.
CO3: Design and formulate various HRM processes such as recruitment, selection, training, development, performance appraisals, reward systems, compensation plans, and ethical behaviour.
CO4: Develop strategies through which human resource management can diagnose a business strategy and facilitate the internal changes necessary to accomplish that strategy.
CO5: Evaluate the evolving role of human resources in the global business environment.

[MB-203]: FINANCIAL MANAGEMENT

Course Objective:

The objective of this course is to acquaint the students with the basic analytical techniques and methods of financial management of business firms. This course introduces the core concepts and skills needed in financial management. It considers the main financial decision facing a company, approaches as to how these decisions are made and introduces analytical tools that can assist in financial decision-making.

Introduction: **[6L]**

Concept of Finance, scope and objectives of finance, Profit maximization vs. Wealth maximization, Functions of Finance Manager in Modern Age.

Cost of Capital: **[4L]**

Concept, Computation of Specific Cost of Capital for Equity - Preference –Debt, Weighted Average Cost of Capital – Factors affecting Cost of Capital.

Leverages: [6L]

Determination of operating leverage, financial leverage and total leverage, EBIT-EPS Analysis & Indifference Points.

Management of Working Capital: **[6L]**

Concepts of Working Capital, Operating and Cash Conversion Cycle, Permanent and Variable Working Capital, Determinants of Working Capital, Estimation of working capital requirements of a firm, Management of working capital – cash, receivables, and inventories.

Capital structure decisions: [4L]

Concept and Approaches of capital structure decision: NI, NOI, Traditional and Modigliani Miller Approach.

Dividend Policy: **[6L]**

Factors influencing Dividend Policy, Forms of Dividends, Stock Dividends and Stock splits, Dividend Theories like Gordon's Model, Walters Model, M-M Approach and Residual Approach, Legal Consideration of Paying Dividends.

Investment Decision: [8L]

Appraisal of project; Concept, Process & Techniques of Capital Budgeting, and its applications; Risk and Uncertainty in Capital Budgeting.

Suggested Readings:

- Bhalla, V.K. (2009). Financial Management. New Delhi: Anmol Publications.
- Chandra, P. - Financial management (7th ed.). New Delhi: Mc Graw Hill.
- Pandey, I M. - Financial management (9th ed.). New Delhi: Vikas Publishing House.
- B. Banerjee-Fundamentals of Financial Management, PHI

Course Outcome:

CO1: Demonstrate the applicability of the concept of Financial Management to understand the managerial Decisions and Corporate Capital Structure.
CO2: Apply the Leverage and EBIT EPS Analysis associate with Financial Data in the corporate.
CO3: Analyze the complexities associated with management of cost of funds in the capital Structure.
CO4: Demonstrate how the concepts of financial management and investment, financing and dividend policy decisions could integrate while identification and resolution of problems pertaining to LSCM Sector.

[MB-204]: LEGAL ASPECT OF BUSINESS

Course Objective:

On completion of the course, the students can learn the various legal elements associated with business. As a manager, later in their career, they can take legally correct business decisions.

Introduction to Business Law: [5L]

Introduction, Meaning and Nature of Law, Sources of Indian Law, Legal Environment of Business, Mercantile Law, Some Basic Legal Concepts, Essentials of Law.

Indian Contract Act, 1872: [7L]

Contract defined, Elements of valid contract, Classification of contracts, Offer and acceptance, Consideration, Capacity to contracts, Free consent, Legality of object and consideration, Illegal agreements, Termination of contracts, Breach of contract, Indemnity and guarantee, Laws of Agency, Case Studies

Negotiable Instruments Act, 1881: **[6L]**

Definition and characteristics of different types of negotiable instruments, Parties to a negotiable instrument and their capacity, Dishonor of cheques, Discharge from Liability, Crossing of cheques, Bank drafts and Banker's cheques, case studies.

Sale of Goods Act, 1930: **[5L]**

Classification of goods, Conditions & Warranties, Passing of ownership rights, Rights of an unpaid seller, Remedies for breach of Contract of Sale of Goods, case studies.

Companies Act, 1956: [6L]

Nature and kinds of companies, Formation, Memorandum, Articles, Prospectus, Capital – shares, debentures, borrowing powers, minimum subscription, Appointment of Directors; Winding up of companies, case studies.

Consumer Protection Act, 1986: [6L]

Salient features and objectives of the Consumer Protection Act, 1986, Different Consumer redressal Forums, Composition and jurisdiction of district, state and National forum, Mode of complaints, Procedures for disposal of complaints, Penalty, case studies.

Intellectual Property Laws: **[5L]**

Introduction, Legal Aspects of Patents, Filing of Patent Applications, Rights from Patents, Infringement of Patents, Copyright and its Ownership, Infringement of Copyright, Civil Remedies for Infringement, case studies.

Suggested Readings:

- H.K. Saha Ray- Law of Contracts – Eastern Law Book House
- P. P. S. Gogna: A Textbook of Business Law, S. Chand & Co
- Commercial Law- Bharat Law House, New Delhi
- M. S. Pandit & S. Pandit: Business Law, Himalaya Publishing
- K. R. Bulchandani: Business Law, Himalaya Publishing
- P. K. Goel, Business Law for Managers, Wiley Publishers, India, 2008

Course Outcome:

CO1: Demonstrate an understanding of the Legal Environment of Business.

CO2: Apply basic legal knowledge to business transactions.

CO3: Communicate effectively using standard business and legal terminology.

[MB-205]: INTRODUCTION TO DATA SCIENCE AND BUSINESS ANALYTICS

Course Objective:

This course is planned to develop an understanding of how managers use business analytics to formulate and solve business problems and to support managerial decision making. This will make students familiar with the processes needed to develop, report, and analyze business data. And last but not the least it will make them learn how to use and apply Excel and Excel add-ins to solve business problems.

Foundations of Business Analytics: [4L]

Introduction to Business Analytics - Business Analytics – Definition, Market, Trends and People - The Paradigm Shift from Data to Insight and from Business Intelligence to Business Analytics – Descriptive - Predictive and Prescriptive Analytics, Introduction to Big Data

Business Analytics in Practice: [5L]

Financial Analytics, Human Resource Analytics, Marketing Analytics, Supply Chain Analytics, Web Analytics

Predictive Analytics: [6L]

Predictive Modeling and Analysis, Regression Analysis, Forecasting Techniques, Simulation and Risk Analysis, Introduction to Data Mining, Text Mining

Prescriptive Analytics: [5L]

Linear Optimization, Applications of Linear Optimization, Integer Optimization, Non-linear Optimization

Excel for Business Analytics: [11P]

Data organization, Sorting, Filtering, Conditional Formatting, Functions & Formula, Charts, Pivot Table, Goal Seek, What-if Analysis, Descriptive Statistical Measures: measures of location, dispersion, shape and association. Visualizing and Exploring Data: Overview, Tables, Charts, Advanced data visualization, data dashboards. Concatenate, VLOOKUP, HLOOKUP, Match, Count if, Text, Trim, Correlation Statistics – ANOVA

R for Business Analytics: [9P]

Introduction to R, basics of R Syntax, organize and modify data in R using data frames, prepare data for analysis in R using dplyr and tidyr, create visualizations using the popular R package ggplot, aggregate functions in R, joining tables together, manually calculate the mean, median, and mode of real-world datasets, calculating the variance and standard deviation, Quartiles, Quantiles, and Interquartile range

Suggested Readings:

- Business Analytics: Methods, Models, and Decisions by James R. Evans [Pearson]
- Key Business Analytics by Bernard Marr [Pearson]
- An Introduction to Data by Francesco Corea [Springer]

Course Outcome:

CO1: Recognize, understand, and apply the language, theory, and models of the field of business analytics. CO2: Critically analyze, synthesize, and solve complex unstructured business problems.

CO3: Apply descriptive, predictive, and prescriptive analytics to business problems for input into management decision-making processes.

CO4: Utilize spread sheet software to enhance efficiency in decision making.

[MB-206]: RESEARCH METHODOLOGY

Course Objective:

To impart knowledge for enabling students to develop data analytics skills and meaningful interpretation to the data sets to solve the business/Research problem.

Introduction to Research Methodology: [7L]

Research – Qualities of Researcher – Components of Research Problem – Various Steps In Scientific Research – Types of Research – Hypotheses Research Purposes - Research Design –Concept of measurement, causality, generalization, replication, Merging the two approaches (Quantitative and Qualitative Approach)– Survey Research – Case Study Research.

Data Collection: [7L]

Sources of Data – Primary Data – Secondary Data- Procedure Questionnaire – Sampling Methods – Merits and Demerits – Experiments – Observation Method – Sampling Errors - Type-I Error & Type-II Error, Determining size of the sample.

Statistical Inference: [10L]

Hypothesis Tests– Parametric Test – Z, F, t test, ANOVA, Non-Parametric Test – Chi square test (goodness of fit, independence of attributes) Spearman's Rank Correlation Coefficient. One Sample Test – Two Sample Tests / Chi-Square Test, Association of Attributes - Standard Deviation – Co-Efficient of Variations.

Statistical Applications: [10L]

Correlation and Regression Analysis – Analysis of Variance.

Research Reports: [6L]

Structure and Components of Research Report– Types of Report, Characteristics of Good Research Report, pictures and Graphs, Layout of a Research Paper, Journals in Social Science, Impact factor of Journals, When and where to publish? Ethical issues related to publishing, Plagiarism and Self-Plagiarism.

Suggested Readings:

- Panneerselvam, R., Research Methodology, Prentice Hall of India, New Delhi, 2004.
- Kothari CR, Research Methodology-Methods and Techniques, New Wiley Eastern ltd., Delhi, 2009.

Course Outcome:

CO1: To remember basic knowledge on qualitative research techniques.

CO2: To develop understanding on various kinds of research, objectives of doing research, research process, research designs and sampling.

CO3: To demonstrated measurement & scaling techniques as well as the quantitative data analysis. CO4: To implement data analysis-and hypothesis testing procedures.

SEMESTER-3

CORE PAPER

[MB301]: BUSINESS STRATEGY

Course Objective:

After completion of the course, the students can learn about various business strategies and the importance of strategic management in the context of business leadership.

Introduction: [4L]

Business Policy and Strategy, Nature and Scope of Strategic Management, Vision, Mission, Goal, Objective and Strategic Management Process.

Environmental Scanning: [5L]

SWOT Analysis, External Environment Analysis (Economic, Legal, Government, Political, Social, Geographic, Technical), Internal Environment Analysis- Strategic Advantage Factors (Finance, Marketing, Production, HR, R & D, etc.), Case Study.

Competitive Strategy: [5L]

Porter's Five Forces Theory, Generic strategies, Competitive Advantage, Value Chain Analysis, Mc Kinsey's 7S Model, Balance Score card. Case Study.

Organizational Change and Innovation: [5L]

Planned and Unplanned Change, Causes or Forces of Organizational Change, Managing Planned Change, choosing a Change Strategy, Creativity and Innovation in Organizations, Organizational Creativity and Innovation Process, Learning Organization. Case Study.

Formulating Strategies: [5L]

Corporate, Administrative/Executive and Operating Levels, Developing Functional Strategies– Production/Operations, Finance, Marketing, HR, Materials, R & D, Portfolio analysis - BCG & GEC matrix. Case Study

Strategic Implementation and Actions: [6L]

Stability, Growth, Turnaround, Retrenchment, Diversification, Vertical Integration, Horizontal Integration, Strategic alliance, Merger and Acquisition, Divestment, Joint Ventures, De- Merger, Role of Managers, Leadership, Strategic Control System and Measurement.

Corporate Social Responsibility: [3L]

Ethics, Theories of Capitalism, Corporate Social Responsibility.

Suggested Readings:

- Ansoff, H.I. & McDonnel, E.J.: Implementing Strategic Management, Prentice Hall
- Banerjee, Bani P.: Corporate Strategies, OUP
- Das, Ranjan: Crafting the Strategy, Tata McGraw Hill
- Kazmi, A.: Business Policy & Strategic Management, Tata McGraw Hill
- Mellahi, K. Frynas, J.G.& Finlay, P.: Global Strategic Management, OUP
- Porter, Michael E.: Competitive Strategy, The Free Press
- Roy, Dilip: Discourses on Strategic Management, Asian Books

Course Outcomes:

CO1: The students can apply scope, cost, timing, and quality principles to project management.

CO2: To analyze strategic management knowledge, processes, life cycle, and the embodied concepts, tools, and techniques to achieve strategic goals.

CO3: To apply technology tools for communication, collaboration, information management, and decision support.

CO4: Understand the entrepreneurial decision-making process – from business model design to the launch of the new venture.

CO5: The students can apply entrepreneurial and teamwork skills in finding, evaluating, and beginning the process of implementing new venture concepts.

ELECTIVE PAPERS

MARKETING SPECIALISATION

[MM301]: CUSTOMER RELATIONSHIP MANAGEMENT

Course Objective:

The purpose of this course is to prepare students to deal with these changes in the corporation and the global marketplace - by exploring issues related to challenges of developing and managing relationship marketing strategies and programs. This course explores a variety of factors and actions that drive successful partnering relationships and in turn lead to higher customer satisfaction, market share and net cash flow. Strategic, organizational, informational, operational, and financial perspectives are brought to bear on the issue of building successful business relationships.

Emerging Concepts in Customer Relationship Management: [5L]

CRM Definition, Need, and Importance: Conceptual Framework of Customer Relationship Management; The Value Pyramid, Customer Interaction Cycle, Customer Profiling and Total Customer Experience, Goals of a CRM Strategy, CRM Solutions Map, Role of People, Processes and Technology, Service Level Agreements (SLAs) and their Effective Management, Customer Retention and Engagement Strategies.

CRM in Marketing: [7L]

One-to-one Relationship Marketing, Cross Selling & Up Selling, Customer Retention Strategies, Behavior Prediction, Customer Profitability & Value Modeling, Channel Optimization, Event-based Marketing, CRM and Customer Service, Role of Call Centre in Customer Support, Customer Satisfaction Measurement, Personalization in Customer Engagement, Omni-Channel CRM Strategies.

Sales Force Automation: [7L]

Sales Process and Key Activities, Lead and Contact Management, CRM link Online-Business -E-Commerce and Customer Relationships, Basics of Supply Chain and Partner Relationship Management.

CRM as a Business Strategy: [5L]

CRM Concepts - Issues and Strategies, CRM as a Business Strategy and Process, CRM Process, Effective Customer Relation Management through Customer Knowledge Management; Customer Interaction Management, Customer Centricity in CRM-(Concept, Touch Points, Service), Customer life cycle.

Analytical CRM: [8L]

Managing and Sharing Customer Data - Customer Information Databases - Ethics and Legalities of Data Use - Data Warehousing and Data Mining Concepts, Data Analysis, and Its Applications - Market Basket Analysis (MBA) and its relevance to Customer Relationship Management, click stream Analysis, Personalization and Recommendation Systems using Collaborative Filtering.

CRM Implementation: [8L]

Defining Success Factors- Preparing a Business Plan (Requirements and Justification, Selecting Appropriate CRM tools, Defining Key Functionalities, Managing Customer Relationships (Conflict, Complacency), Resetting the CRM strategy. Selling CRM internally -Scoping and Prioritizing features, Measuring CRM Performance and Success.

Suggested Readings:

- Customer Relationship Management: Concepts and Tools by Francis Buttle, Routledge.
- CRM: A Strategic Approach by V. Kumar & Werner Reinartz, Pearson Education.
- Customer Relationship Management by Shankar V. Iyer, Pearson Education India.
- Customer Relationship Management: A Strategic Approach by Rajendra Kumar, Sage Publications India

Course Outcomes:

CO1: Understand CRM concepts, strategies, and the role of people, processes, and technology.

CO2: Learn CRM techniques for marketing, sales, and customer retention.

CO3: Explore sales automation and CRM integration with e-business and ERP.

CO4: Develop skills to implement CRM systems and measure their performance.

[MM302]: SALES AND RETAIL MANAGEMENT

Course Objective:

The course aims to impart knowledge about sales management and train the students to identify problems in retail management and come up with solutions apply their managerial skills.

Sales Management: [5L]

Nature, Meaning and Scope, Sales as a Function of Marketing Management, Theories of Selling– Buyer Seller Dyads, AIDAS Theory, Digital Transformation in Sales Management, Social Selling.

Selling Process: [3L]

Prospecting, Planning the Sales Call, Making the Sales Presentation, Handling Sales Objections, Closing the Sale Follow up, Value Added Selling, Emotional Selling.

Sales Organization: [5L]

Need and Structure of the Sales Organization, Building Sales Organization, Types of Sales Organization and their structure, Functions and Responsibilities of Sales Person, Recruitment, Selection and Development of the Sales Force, Diversity in Sales Teams, Remote Selling.

Sales Force Motivation: [5L]

Introduction to sales force Motivation, Designing and Administrating Sales Force Compensation Programs, Incentives, Contests and Performance Based Rewards, Sales Forecasting and Budgeting, Role of Workplace Culture and Employee Engagement in Sales Performance.

Channel Management Decisions: [4L]

Selection and Compensation of Channel Members, Managing Channel Conflicts, Digital Channels and E-Commerce Partnerships, Marketing Channel Policies and Legal Issues.

Retailing: [6L]

Introduction to Retailing and Its Growing Importance, Factors Influencing Retailing, Strategic Retail Planning Process, Modern Retail formats in India, Direct-to-Consumer (D2C) Retailing and Subscription Models

Project Management Concepts: [4L]

Concept and Characteristics of a Project, Importance of Project Management, Agile and Lean Management in Retail and Sales.

Retail Stores and Operations Management: [8L]

Setting up Retail Organization, Retail Layout, Sustainable Retailing Practices, Use of Technology in Retail Operations (RFID, Automated Checkout, AI-Driven Inventory Management), Objectives of Good Store Design, Responsibilities of a Store Manager, Logistic & Information System Retail Sales Techniques and Promotion, CRM, and Brand Management in Retailing.

Suggested Readings:

- Sales and Distribution Management"-Tapan K. Panda and Sunil Sahadev, Oxford University Press, 2019
- Retail Management: A Strategic Approach" – Barry Berman & Joel R. Evans, Pearson,2020
- Sales Management: Analysis and Decision Making"- Thomas N. Ingram, Raymond W. LaForge, Charles H. Schwepker Jr., Michael R. Williams, Routledge, 2021
- Retailing Management – Swapna Pradhan, McGraw Hill Education, 2022

Course Outcomes:

CO1: Understand sales management, digital transformation, and modern selling techniques.

CO2: Analyze selling processes, customer engagement, and value-added selling strategies.

CO3: Evaluate channel management, e-commerce partnerships, and retail business models.

CO4: Explore store operations, technology integration, and sustainable retailing practices.

[MM303]: INTEGRATED MARKETING COMMUNICATION

Course Objective:

The objective of the course is to acquaint the students with essential concepts and techniques for the development and designing of an effective Integrated Marketing Communication program. It provides the learning about various communication tools and its effectiveness, in such a way that fosters the creative ideas from the learners for development of effective marketing communication program.

An Introduction to Integrated Marketing Communication (IMC): [8L]

Meaning and Role of IMC in Marketing Process, Introduction to IMC tools – Advertising, Sales Promotion, Publicity, Public Relations, Direct Marketing and Experiential Marketing, Emerging Trends in IMC, Influence of social media on IMC.

Understanding Communication Process: [10L]

Source, Message and Channel Factors, Communication Response Hierarchy- AIDA model, Hierarchy of Effect Model, Innovation Adoption Model, Information Processing Model, Consumer involvement- The Elaboration Likelihood (ELM) Model, The Foote, Cone and Belding (FCB) Model, Behavioral Targeting and Personalization in Marketing Communication, Neuro-marketing and Consumer Decision-Making.

Planning for Marketing Communication: [10L]

Establishing Marcom Objectives, Sales as Marcom Objective, DAGMAR approach for Setting Ad Objectives, Budgeting for Marcom- Factors Influencing Budget, Methods for Budget Determination, Theoretical Approach to Budgeting Viz. Marginal analysis and Sales response curve, Creative Aspects of Advertising, Advertising Appeals and Types of Copy Writing, Headlines, Illustration and Message Creation, Campaign Planning and Development, Types of Advertising Media and Media Planning.

Developing the Integrated Marketing Communication Program: [8L]

Planning and Development of Creative Marketing Communication Strategies, Integrating Advertising, Sales Promotion, Publicity, and Event Sponsorships, Types of Appeals and Execution Styles in Campaigns, Media Planning and Selection Decisions- Steps Involved and Required Information. Measuring the effectiveness of Promotional Tools and IMC.

Advertising Laws and Ethics: [4]

Overview of Adverting and Law, Advertising and Ethics and the Role of Pester Power, Intellectual Property Rights in Advertising, ASCI Guidelines.

Suggested Readings:

- Advertising and Promotion: An Integrated Marketing Communications Perspective by George E. Belch & Michael A. Belch, Tata McGraw-Hill Education.
- Integrated Marketing Communications by R. S. Dhillon, Oxford University Press.
- Advertising & Integrated Marketing Communications by Sandra Moriarty, Nancy Mitchell, and William D. Wells, Pearson.
- Advertising and Promotion: An Integrated Marketing Communications Perspective by George E. Belch, Michael A. Belch, and Keyoor Purani, Pearson India.

Course Outcome:

CO1: Understand the key concepts and objectives of marketing communication.

CO2: Analyze and develop creative advertising strategies, including media planning and budgeting.

CO3: Integrate various promotional tools like advertising, sales promotion, and publicity to create a cohesive marketing communication strategy.

CO4: Evaluate the effectiveness of integrated marketing communication programs and ensure compliance with advertising laws and ethical standards.

FINANCE SPECIALISATION

[FM301]: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Course Objective:

This course provides a broad overview of investment management, focusing on the application of finance theory to the issue faced by portfolio managers and investors in general and to provide conceptual foundation for the purpose of undertaking Investment analysis for securities as well as portfolios.

Introduction: [2L]

The Investment Environment, Financial Instruments, The Securities Trading– Market AND Mechanism.

Security Analysis: [10L]

Primary & Secondary Market, New Issue Market- Listing of Securities, Operations of Indian Stock Market – Functionaries of Stock Market, Mechanics of Investing, Depository System – Indices of Share Price in India, Fundamental and Technical Analysis – Economic Analysis, Industry Analysis and Company Analysis, Trend Indicators.

Portfolio Theory: [8L]

Concepts of Risk and Return, Diversification of Risk, Optimum Portfolio Selection Problem- Markowitz Portfolio Theory - Mean Variance Criteria (MVC) - MVC and Portfolio Selection - Portfolio Selection.

Equilibrium In Capital Markets: [10L]

The Capital Asset Pricing Model, Index Models, Arbitrage Pricing Theory and Multifactor Models of Risk and Return, Market Efficiency and Empirical Evidence on Security Returns.

Bond Portfolio Management: [3L]

Bond Prices and Yields, The Term Structure of Interest Rates, Managing Bond Portfolios.

Active Portfolio Management: [7L]

Portfolio Performance Evaluation, International Diversification, The Process of Portfolio Management, The Theory of Active Portfolio Management.

Suggested Readings:

- Bodie, Kane, Marcus, Mohanty: Investments, Tata McGraw- Hill
- Chandra: Investment Analysis and Portfolio Management, Tata McGraw- Hill
- Fischer and Jordan: Security Analysis and Portfolio Management, Pearson Education/PHI.
- Ranganatham and Madhumati: Investment Analysis and Portfolio Management, Pearson Education.
- Rielley and Brown: Investment Analysis AND Portfolio Management, Thomson Learning.
- Sashidharan and Alex Mathew- Security Analysis and Portfolio Management- TMG Publication.

Course Outcome:

CO1: Students will understand the characteristics of different financial assets such as money market instruments, bond, and stocks and how to buy and sell these assets in financial markets.

CO2: Designing and managing the bond as well as equity portfolios in the real word. CO3: Students will be able to analyze and price different securities.

CO4: Students will know how to apply different valuation models to evaluate fixed income securities, stocks, and how to use different derivative securities to manage their investment risks.

[FM302]: FINANCIAL SERVICES

Course Objective:

Students will demonstrate critical thinking skills in identifying and evaluating problems and opportunities in the banking environment and apply analytical techniques to formulate creative solutions utilizing relevant discipline specific knowledge.

Bank and Banking: [6L]

Permissible Banking Activities, Types of Banks in India, Role of RBI as a Regulator, Money Market Instruments-Concept of NPA and Prudential Norms.

The Insurance Service: [4L]

Need and Importance of Life and non-life Insurance-Players in life and non-life insurance, Essentials of Insurance Contracts – Risk Appraisal and Selection, Life and Non-life insurance Products Including Unit Linked Plans, Role of IRDA.

Merchant Banking: [6L]

SEBI Guidelines for Merchant Bankers (Basic Ideas), Issue Management, Equity issues, Rights issues, Debenture Issues, Book building, Private Placements, Pre and Post Issues Activities – Raising Capital from International Markets: ADRs, GDRs, ECB etc. (Basic Concepts).

Lease and Hire Purchase: [5L]

Meaning and Types of leasing, Legislative frameworks, Matters on Depreciation and Tax, Problems on Leasing, Hire Purchasing – Concepts and features, Tax and Depreciation implications, Problems on Hire Purchasing.

Credit Rating: [6L]

Definition and meaning, Process of Credit Rating of Financial Instruments, Rating Methodology, Rating Agencies, Rating Symbols of Different Companies, Role of SEBI.

Mutual Funds: [4L]

Concept, Types, Nature, NAV, Trends in Indian Mutual Fund Market - Regulatory Framework and Role of SEBI.

Banking Technology & Electronic Banking: [5L]

Banking Technology and Electronic Banking, Banking Technology, Core Banking(CBS), Electronic Products, Banking Technology, Distribution Channels, Teller Machines at the Bank Counters, Cash Dispensers, ATMs, Home Banking, Electronic Payment System, Online Banking-Personal Identification Numbers and Their Use in Conjunction with Magnetic Cards of Both Credit and Debit cards, Smart Cards, Signature Storage and Display by Electronic Means, Cheque Truncation, Microfiche, Note and Coin counting Devices, Electronic Funds Transfer-SWIFTS, RTGS, NEFT, Banking Information Technology- RBI NET, Datanet, Nicnet, I-NET, Internet, Email, Global Developments and Banking Technology, Impact of Technology on Banks, Cyber Security-Protecting the Confidentiality and Secrecy of Data, Phishing attack, Cloud Computing, Mobile and Phone.

Other Financial Institutions: [4L]

NBFC-Public Financial Institutions-Foreign Institutional Investors

Suggested Readings:

- Baye M. and Jansen D. (1995) "Money, Banking and Financial Markets", Houghton Mifflin Co.
- Brown C., Mallet D., Taylor M. (1993) "Banks", London.
- Cance D. (1995): "Introduction to Options and Futures", Dryden Press, Florida.
- Ernst and Young (1993): "International Bank Accounting", Vol.1, 2, 3rd edition.
- Hempel G. and Simonson D. (1999): "Bank Management", John Wiley and Sons, Inc. New York.
- Papadeas P. (2011) Banking Activities and Derivatives In Accordance with the Banking Sector chart of Accounts, 4th edition, Athens.
- Know Your Banking -I-Basics of Banking, Indian Institute of Banking and Finance.

Course Outcome:

CO1: Comprehend the need, definition, functions and economic significance of financial institutions and markets.

CO2: Understand the interdependence between financial markets and interest rates.

CO3: Comprehend the behavioral analysis of interest rates: risk, liquidity, and term structure.

CO4: Identify the role played by the Central Bank and instruments of credit control.

[FM303]: FINANCIAL STRATEGIC MANAGEMENT

Course Objective:

In today's global economy, identifying and responding to fast-moving financial developments requires an objective framework to analyze and evaluate the opportunities and risks. Senior-level finance executives need a firm grounding in issues like capital structure, risk management, financial technologies, and mergers and acquisitions, to remain competitively relevant. Corporate Finance offers a deep dive into the areas of corporate finance required for senior finance executives to make informed decisions and mitigate financial risk, including a macroeconomic view of today's global economy.

Alignment of Managers and Owners Goal: [6L]

Practical Aspects of Capital Investment Process, Information and Capital Investment, Incentives and Their Role in Agency Problem, Measuring and Rewarding Performance: EVA, Pros and Cons of EVA

Capital Budgeting and Risk: [12L]

Company and Project Costs of Capital, Measuring the Cost of Equity, Capital Structure and the Company Cost of Capital, Risk Adjusted Discount Rate, Sensitivity Analysis, Monte Carlo Simulation, Real Options and Decision Trees.

Market Efficiency and Corporate Financing: [3L]

Basics of EMH, The Anomalies, The Lessons for The Corporate Manager.

The Financing Decision: [5L]

The Financing Process, The Financing Mix: Trade-offs and Theory, The Optimal Financing Mix, The Financing Mix and Choices, Concept of Asset Beta, Corporate Tax Shield – APV.

Valuation: [6L]

Principles and Practice of Valuation, Value Enhancement: Tools and Techniques, Acquisitions and Takeovers.

Strategic Finance Decisions: [8L]

Mergers and Acquisitions, Buy-backs, Spin Off, Divestures.

Suggested Readings:

- Brearly, Myers, Mohanty: Corporate Finance, Tata McGraw- Hill
- Copeland Weston Shastri: Financial Theory and Corporate Policies, Pearson Education
- Damodaran: Corporate Finance, Wiley
- Ehrhardt and Brigham: Corporate Finance – A Focused Approach, Thomson Learning
- Megginson, Smart and Gitman: Principles of Corporate Finance, Thomson Learning
- Ross, Westerfield and Jaffe: Corporate Finance, Tata McGraw- Hill.

Course Outcome:

CO1: Understand the implications of the overarching strategic objectives of the organization for the finance function.
CO2: Be able to describe and evaluate the different sources of corporate finance (e.g. equity, debt, retained earnings and so on) and be able to explain the relative advantages and disadvantages of each source.
CO3: Analyze a range of real-life financial situations using the concepts, frameworks and theories learned throughout the course.
CO4: Assess the external and internal influences on a corporation's capital structure, payout policy and policy in respect of risk management (via insurance, derivatives, and other instruments).

HR SPECIALISATION

[HR301]: STRATEGIC HUMAN RESOURCE MANAGEMENT

Course Objective:

The objective of this course is to provide students with the knowledge and skills that they can apply to effectively manage human resources to achieve organizational goals with updated strategies regarding Human Resource Management in future.

Introduction to Strategic HRM: [4L]

Definition, Need and Importance, Significance of SHRM –Traditional approach vs. strategic approaches to HRM– Strategic Role of HR subsystems, Introduction to business and corporate strategies, Integrating HR strategies with business strategies, Developing HR plans and policies.

Human Resource Environment: [5L]

Technology and structure, Workforce diversity, Demographic changes, Temporary Contract Labour, Global Environment, Global Competition, Global sourcing of labour, WTO, and labour standards.

Recruitment and Retention Strategies: [5L]

Online recruitment, Employee referrals, Recruitment process outsourcing, Headhunting, Executive education, Flexi timing, Telecommuting, Quality of work life, Work – life balance, Employee empowerment, Employee involvement, Autonomous work teams.

Training and Development Strategies: [5L]

Creating learning organization, Competency mapping, Multiskilling, Succession planning, Cross cultural training.

Performance Management strategies: [4L]

Defining key result areas (KRA) - Result based performance, linking performance to pay, Merit based promotions.

Reward and Compensation Strategies: [5L]

Performance based pay, Skill based pay - Team based pay, Broad banding Profit sharing, Executive compensation, Variable pay.

Retrenchment strategies: [2L]

Downsizing, Voluntary retirement schemes (VRS), HR Outsourcing, Early retirement plans, Project based employment.

Human Aspects of Strategy implementation: [6L]

Behavioral issues in strategic implementation, Matching culture with strategy, Human side of mergers and acquisitions, Leadership, power and politics, Employee morale, Personal values, and business ethics.

Global HR Strategies: [2L]

Introduction to global HR strategies, Developing HR as a value-added function.

Measures of HR functions: [2L]

Need to measure, ROI, approaches to measure –HR Accounting, HR Auditing–HR Score Card–HR cost monitoring, HR effectiveness index etc.

Suggested Readings:

- Strategic HRM – Jeffery Mello, Thompson publication, New Delhi
- Strategic HRM- Charles Greer, Pearson Education Asia, New Delhi
- Strategic HRM-Michael Armstrong, Kogan Page, London
- Strategic HRM- Agarwal, Oxford University Press, New Delhi

Course Outcome:

CO1: Identify the key HRM functions and operations.

CO2: Define, explain, illustrate, and reason with the key human resource management concepts.

CO3: Identify the linkages between HRM functions and operations and organizational strategies, structures, and culture.

CO4: Reflect and comment in a way that demonstrates awareness of the different contexts that impact on the operation of HRM.

CO5: Exhibit behavior and performance that demonstrates enhanced competence in decision- making, group leadership, oral and written communication, critical thinking, problem- solving, planning and teamwork.

[HR302]: HUMAN RESOURCE PLANNING

Course Objective:

The objective of the course is to impart the knowledge to the students about the basic understanding of Human Resource Planning and its various dimensions both at the micro level of an organization.

Basics in HR Planning: [5L]

Definition of HRP, Importance of HRP in an organization, Macro Level Scenario of HRP, Concepts and Process of HRP, Consideration Technology, Finance, Product Demand.

Methods and Techniques: [8L]

Demand Forecasting: Managerial Estimates, Trend Analysis, Utilization Analysis: Work Study, Job Analysis, Supply Forecasting: Inventory Analysis, Wastage Analysis, Markov Analysis, Balancing Supply & Demand, Issues of Shortage and Surplus.

Strategic HRP: [6L]

Introduction, Concept, Tools, and Evaluation, HRIS- Concept, Procedures, Importance.

Job Analysis & Job Evaluation: [6L]

Job Analysis - Concepts, Process, Job Description, Job Specification, Uses, Limitations; Job Evaluations – Concepts, Methods, Limitations.

Competency Mapping: [5L]

Concept, techniques of competency mapping.

HR Plan: [6L]

Implementation Strategies – Recruitment, Redeployment, Redundancy, Retention, Productivity Plan, Training Plan, Career Plan, Succession Plan.

Case Studies on HR Planning: [4L]

Suggested Readings:

- Bennison, M. & Casson, J.: The Manpower Planning Handbook, McGraw Hill.
- Bell, D. J.: Planning Corporate Manpower, Longman.
- Bohlander, G., Snell, S., Shermen, A.: Managing Human Resources, Thomson.
- Mellow, Jeffrey A.: Strategic Human Resource Management, Thomson
- Pettman, B. O. &Tavernier, G.: Manpower Planning Workbook, Gower.

Course Outcome:

CO1: Analyze the theory and concepts of human resource planning.

CO2: Identify the evolution of HRP throughout the organization.

CO3: Relate and apply models and methods used in forecasting.

CO4: Describe the applications of a Human Resources Information System.

CO5: Evaluate the organization's planning program.

[HR303]: INDUSTRIAL RELATIONS

Course Objective:

The objective of the course is to impart knowledge about Industrial relation between various industries and to learn about various laws and legislations related to the various industrial affairs.

Industrial Relations: [2L]

Concept, Approaches to IR, Parties to IR, System Model of IR.

Discipline: [3L]

Concept of Discipline, Deviations in Work Behavior Hot Stove Rule, Types of Discipline.

Grievance Management: [6L]

Causes and Effects, Need for Grievance Procedures, Discovery of Grievance Procedures, Essential Pre requisites of Grievance Procedure, Steps in the Grievance Procedure, Model Grievance Procedure, Grievance, Management in Indian Industry, Guidelines for Handling Grievances.

Laws regulating Establishment: [2L]

Factories Act, 1948.

Trade Unionism in India: [5L]

Origin, Growth, Structure and Management of Trade Unions, Leadership, Employers' Organizations in India, Managerial Associations.

Collective Bargaining: [5L]

Theories, Prerequisites, Process, Negotiating Skills and Strategies, Productivity Bargaining, Growth of Collective Bargaining in India.

Workers' Participation in Management: [6L]

Concept, Purpose, and Practices in other countries; Workers' Participation Schemes in India – Works Committee, Joint Management Council, Worker – Director, Shop Council and Joint Council, WPM, EPM; Problems and Prospects in India; Quality Circles – Concept and Practices in India.

Laws relating to Industrial Relations: [6L]

Industrial Disputes Act, 1947; Industrial Employment (Standing Orders) Act, 1946; Trade Unions Act, 1926.

Laws relating to Social Security: [5L]

Workmen's Compensation Act, 1923; Employees' State Insurance Act, 1948; Employees' Provident Funds & Misc. Provisions Act, 1952; Maternity Benefit Act, 1961; Payment of Gratuity Act, 1972.

Suggested Readings:

- Marchington, M.: Managing Industrial Relations, McGraw Hill.
- Monapppa, Arun: Industrial Relations, Tata McGraw Hill.
- Venkata Ratnam, CS: Industrial Relations, OUP
- Agarwal, S. L.: Labour Relations Law in India, McMillan
- Pathak, A.: Legal Aspects of Business, Tata McGraw Hill
- Garg, Ajay.: Labour Laws One Should Know, Nabhi Publication

Course Outcome:

CO1: Demonstrate descriptive knowledge of the field of industrial relations.

CO2: Analyze the dynamic legal context in which employment relationships are enacted.

CO3: Recognize and consider the social, historical and equity issues within industrial relations.

CO4: Develop and evaluate critically the analysis of various industrial issues within the periphery of industrial laws and legislations.

CO5: Apply aspects of employment law to real workplace situations.

INFORMATION SYSTEMS SPECIALISATION

[SM301]: DATABASE MANAGEMENT

Course Objective:

The course, Database Management Systems, introduces the management of database systems. The course emphasizes the understanding of the fundamentals of relational systems including data models, database architectures and database manipulations. The course also provides an understanding of new developments and trends such as Internet database environment and data warehousing. The course uses a problem-based approach to learning.

Introduction to Database Concepts: [6L]

Definition of DBMS, Need for Using DBMS, Concepts of Tables, Records, Attribute, Keys, Integrity Constraints, 3-schema Architecture, Data Independence, Data Models – Hierarchical, Network, Relational

The Relational Model, Language and Systems: [8L]

The Relational Data Model and Relational Algebra, SQL: DDL, DML and DCL concepts, SQL commands (ANSI standard).

Integrity and Security: [5L]

Integrity Constraints, Concept of Triggers, Stored Procedures (Theoretical Concepts only), Database Security and Authorization (Concept of GRANT / REVOKE).

Database Design: [6L]

ER Modeling (Entity-Relationship Diagrams-ERD, Construction of Tables), Functional Dependencies & Normalization (up to 3NF, Concept of BCNF), Denormalization, Case Study on Normalization.

System Implementation Techniques: [6L]

Query Processing & Optimization (Concept only), Transaction Processing Concepts, Concurrency Control and Recovery Techniques (Concept only).

Indexing Concepts: [5L]

Ordered Indices (Primary, Secondary, Dense, Sparse, Multilevel), Concepts of Hashing (Static, Dynamic)

Advanced Data Models and Emerging Trends: [4L]

Advanced Data Modeling Concepts, Object–Oriented Databases, Distributed Databases & Client Server Architecture, XML.

Suggested Readings:

- Elmasri, Navathe: Fundamentals of Database System, Pearson Education.
- Silberschatz, Korth, Sudarshan: Database System Concepts, McGraw Hill International.
- Date C.J.: An Introduction to Database System, Pearson Education.
- Hopper, Prescott, Mcfadden: Modern Database Management, Pearson Education.

Course Outcomes

CO1: Define program-data independence, data models for database systems, database schema and database instances.
CO2: Recall Relational Algebra concepts and use it to translate queries to Relational Algebra statements and vice versa.
CO3: Identify Structure Query Language statements used in creation and manipulation of Database.
CO4: Analyze, design, and evaluate a real database application using a database management system.

[SM302]: MANAGING SOFTWARE PROJECTS

Course Objective:

This course will focus on the issues that are crucial to the development of good quality software. It will look at several approaches to the process of software development and issues they attempt to address. Students will understand what the important steps in the development of software are and how to perform them. They will learn how to perform the task of software project management. Since any project management task is incomplete without cost and time estimation, students also will learn some of the approaches, which have been developed to do so.

Software Project Planning: [4L]

Project Process Groups (Initiating, Planning, Executing, Controlling and Closing Processes), Project Management Methodology, Software Project Management Plan (SPMP).

Project Scope Management: [10L]

Definition, Project Initiation – Strategic Planning and Project Selection, Project Charters, The Scope Statement, Work Breakdown Structure - Approaches (Using Guidelines, The Analogy Approach, Top – Down and Bottom – Up Approaches), Scope Verification and Scope Change Control.

Software Process Models: [4L]

Waterfall Model, Prototyping Model, The RAD Model, Evolutionary Software Process Model (The Incremental Model), Spiral Model, WIN Spiral Model, Concurrent Development Model, Component Based Methods, The Formal Methods Model AND Fourth Generation Techniques, Process Technology, Product and Process.

Project Time Management: [3L]

Project Schedule, Project Network Diagrams (AOA or ADM, PDM), Activity Duration Estimating, Gantt Charts, Critical Path method, PERT.

Project Cost Management: [5L]

Importance, Basic Principles, Cost Estimating (Types), Techniques and Tools, Problems with Cost Estimates, Cost Control, Earned Value Management, Estimation Techniques: COCOMO (Basic, Intermediate and Complete COCOMO Model), Halstead's Software Science, Putnam Model, Jensen Model.

Software quality assurance: [6L]

Software Testing Techniques and Strategies, Test Planning, Reporting and Bug fixing, Test Automation, Software Maintenance, Software Complexity & Reliability.

Project Human Resource Management: [3L]

Managing People (Motivation Theories, Influences and Power, Improving Effectiveness), Organizational Planning, Staff Acquisition & Team Development.

Disaster Recovery Planning and Risk Management: [5L]

Importance, Risk Management Planning, Sources of Risk, Risk Identification, Qualitative & Quantitative Risk, Risk Response Planning, Risk Monitoring & Control.

Suggested Readings:

- Senn: Analysis and Design of Information Systems, McGraw Hill International.
- Hoffer: Modern System Analysis and Design, Pearson Education.
- Kendall: System Analysis and Design, Pearson.
- Roger Pressman: Software Engineering- A Practitioner's Approach, TMH

Course Outcomes:

CO1: Define roles and responsibilities by PM process group (initiating, planning, executing, controlling, closing).
CO2: Articulate the purpose and benefits of project management (PM).
CO3: Work in groups to analyze a project and implement a solution.
CO4: Explain quality management and process improvement in the context of software development projects.

[SM303]: ENTERPRISE RESOURCE PLANNING

Course Objective:

This course will enable student understanding of issues and decisions that must be made when embarking upon an ERP selection and implementation journey. It will also lead to an understanding the challenges associated with managing extant ERP systems.

ERP Overview: [6L]

Introduction, Business Function and Business Processes, Integrated Management Information, Business Modeling, Integrated Data Model, Common ERP Myths, History, Advantages, Future of ERP packages, Features, Capabilities and Overview of Commercial Software.

Risks and Benefits of ERP: [12L]

Risk Factors of ERP Implementation, Technological Issues, Implementation Issues, Benefits of ERP.

ERP and Related Technologies: [3L]

Business Process Reengineering, Management Information system, Decision Support System, Executive Information System.

Functional Modules: [5L]

Functional Modules of ERP Software, Integration of ERP, SCM and CRM.

ERP Implementation: [6L]

Basics, Technological, Operational, Business Reasons for ERP implementation, ERP Implementation Life Cycle, Objectives, Phase Re-Engineering Work Processes for IT Applications, Business Process Redesign, Knowledge Engineering and Data Warehouse.

ERP and E-Business: [3L]

E-Business Modules: Finance, Manufacturing (Production), Human Resources, Plant Maintenance, Materials Management, Quality Management, Sales and Distribution ERP Package, ERP Market: ERP Market Place, SAP AG, PeopleSoft, BAAN, JD Edwards, Oracle Corporation ERP-Present and Future: Enterprise Application Integration (EAI), ERP and E-Commerce, ERP and Internet, Future Directions in ERP.

Suggested Readings:

- ERP Demystified, Alexis, Leon, Tata McGraw Hill.
- ERP Concepts and Practices, Garg, V.K. and Venket, Krishna, N.K., PHI Publications.
- ERP: A Managerial Perspective, Sadagopan, S, Tata McGraw Hill.
- Enterprise Resource Planning, Shankar, Ravi and Jaiswal, S Galgotia

Course Outcomes:

CO1: Know and be able to apply key technical terminology in enterprise information systems as they apply in different ERP products and development methods.

CO2: Analyze a current architecture and perform an effective gap analysis before an ERP implementation.

CO3: Effectively describe problems typical of ERP implementation projects and translate this information and use this information.

CO4: Be able to evaluate the progress of an ongoing ERP implementation project.

OPERATIONS AND SUPPLY CHAIN SPECIALIZATION

[OP301]: INTRODUCTION TO SUPPLY CHAIN MANAGEMENT

Course Objective:

This course uses a logical approach to present discussions of this topic from perspectives like: Purchasing, Logistics, Innovation/Sustainability. The objective is to make students think about how Global Trade and Supply Chain Management impact all the areas and processes of the firm and its trading partners.

Introduction to Concepts in Supply Chain Management: [4L]

Decision Phases in a Supply Chain, Processes of a Supply Chain, The Macro Processes of a Supply Chain.

Scope, Performance and Strategic Fit: [4L]

Achieving a Strategic Fit, Issues affecting Strategic Fit, Expanding Strategic Scope.

Drivers and obstacles: [4L]

The Role of Drivers in achieving Strategic Fit, The Obstacles in Strategic Fit Achievement.

Designing a Supply Chain Distribution Network: [4L]

Factors affecting the Distribution Network Design, Types of Distribution Network Designs, Selecting a Distribution Network Designs, Distributors in the Supply Chain- The Indian Perspective.

Forecasting Demand: [4L]

Role Played by Forecasting in a Supply Chain, Characteristics of a Forecast, Forecasting Components and Various Methods of Forecasting, Steps involved in Demand Forecasting, Time Series Forecasting, Measures to determine Forecasting Error.

Managing Inventory: [4L]

Types of Inventories, Managing Inventory under Conditions of Certainty, Managing Inventory under Conditions of Uncertainty, Calculating Appropriate Safety Inventory, Calculating Fill Rate in Inventory, Symptoms of Poor Inventory Levels, Cycle Inventory Costs in Practice.

Optimal Level of Product Availability: [4L]

Factors influencing Optimal Product Availability, Improving Supply Chain Profitability, Impact of Various Contracts on Supply Chain Profitability, Achieving Optimal Levels of Product Availability in Practice, ABC Analysis for Inventory Management.

Sourcing: [4L]

Supplier Scoring and Assessment, Supplier Selection and Contracts, Contracts in Supply Chain, Product Design Collaboration, Procurement in Supply Chain, Sourcing Planning and Analysing.

Transportation Networks and Sourcing: [4L]

Role of Transportation, Modes and Their Performance, Transportation Infrastructure and Policies, Design Options and Their Trade Offs, Tailored transportation, Sourcing – In-house or Outsource, 3rd and 4th PLs, Supplier Scoring and Assessment.

E-business and the Supply Chain: [4L]

Role of E-business in a Supply Chain, The E-business Framework, B2B E-business, and BC.

Suggested Readings:

- Supply Chain Management: Strategy, Planning, and Operation 6th edition by Chopra and Meindl. Pearson
- N. Chandrasekaran, SUPPLY CHAIN MANAGEMENT, Oxford University Press, 2010

Course Outcome:

CO1: Demonstrate operational purchasing methods and techniques on supplier management and supply in specific business contexts.

CO2: Explain the strategic importance of logistic elements and describe how they affect supply chain management.

CO3: Advice management on the organization of E-commerce, logistics, import taxes, risk, customs, and legal aspects of global trading.

CO4: Analyze the creation of new value in the supply chain for customers, society, and the environment.

[OP302]: LOGISTIC AND DISTRIBUTION MANAGEMENT

Course Objective:

This course provides an overview of how firms use distribution intermediaries to gain a competitive advantage in local and global markets through the integration of logistics management. The management of the physical flow of products and information throughout the entire supply chain is examined, including physical distribution, transportation, warehousing, customer service, materials management and third-party logistics systems planning and operations and management of the supply chain.

Physical Distribution: [6L]

Introduction to Distribution, Need for Channel Intermediaries, Distribution and Logistics Management, Functions of Distribution, Components of Distribution, Levels of Distribution Channels

Distribution Channels: [6L]

Introduction to Distribution Channels, Channel Types, Vertical Marketing System, Horizontal Marketing Systems

Wholesaling: [3L]

Introduction to Wholesaling, Wholesaling Functions, Types of Wholesalers, Selection of Manufacturers by Wholesalers, Selection of Wholesalers by Manufacturer

Retailing: [3L]

Introduction to Retailing, Types of Retail Formats, Functions of Retail Formats, Types of Franchising

Logistics Management: [6L]

Introduction to Logistics, Gaining Competitive Advantage through Logistics, Introduction to Reverse Logistics, Introduction to 3PL, Introduction to 4PL, Comparison of 3PL and 4PL

Inventory Management: [3L]

Introduction to Inventory, Advantages and Disadvantages of Inventory, Constituents of Inventory Costs, Economic Order Quantity (EOQ) Selective Control of Inventory, Inventory Turnover Ratio

Transportation: [5L]

Role of Transportation in Logistics, Transportation Selection Decision, Basic Modes of Transportation- Rail, Road, Water, Air, Pipeline- Characteristics of Different Modes Transport Economics – Inter Modal Operations.

Warehousing: [5L]

Introduction to Warehousing, Types of Warehouses, Functions of Warehousing, Cost of Warehousing, Warehouse Locations, Warehouse Layout, Identification of Material in a Warehouse

Modern Concepts in Logistics: [3L]

Introduction to Cross Docking, Introduction to Bar coding, Introduction to RFID (Radio Frequency Identification), Introduction to Smart Cards, Introduction to ECR (Efficient Consumer Response), Introduction to VMI (Vendor Managed Inventory)

Suggested Readings:

- Sahay B S, Supply Chain Management for Global Competitiveness, Macmillan India Ltd., New Delhi.
- Contemporary Logistics, 10thedition. Coyle, Langley, Murphy & Wood.
- Alan Rushton, Phil Croucher, Dr Peter Baker: The Handbook of Logistics and Distribution Management: Understanding the Supply Chain

Course Outcome:

CO1: Remember and identify the principles of logistics management.

CO2: Interpret the logistics role in the economy and the organization.

CO3: Distinguish and differentiate between the concepts of logistics.

CO4: Combine the theoretical knowledge with practical knowledge.

[OP303]: LEGAL ASPECT OF SUPPLY CHAIN MANAGEMENT

Course Objective:

On completion of the course, the students can learn the various legal elements associated with supply chain management that will help them to take legally correct business decisions.

The Standards of Weights and Measures Act, 1976: [5L]

Introduction, Important Definitions, Establishment of Standards of Weights and Measures, Inter-state Trade or Commerce, Import and Export of Weights and Measures, Offences and their Trial, Other Provisions of the Act.

Insurance Laws: [4L]

Introduction, Definitions of Important Insurance Terms, Marine Cargo Policy, Export Credit Guarantee Summary.

Insurance Cover: [5L]

Introduction, Indian Insurance Industry, Life Insurance, Health Insurance, Motor Vehicle Insurance, Shopkeeper's Policy Summary.

Income Tax Act: [5L]

Introduction, Important Definitions, Income from Salary, Income from House Property, Income from Business, Income from Capital Gain, Income from Other Sources, Fringe Benefit Tax, Tax Deduction at Source, Filing of Returns.

Negotiable Instruments Act, 1881P: [6L]

Definition and characteristics of different types of negotiable instruments, Parties to a negotiable instrument and their capacity, Dishonour of cheques, Discharge from Liability, Crossing of cheques, Bank drafts and Banker's cheques, case studies.

Basics of Labour Laws: [5L]

Introduction; The Payment of Wages Act, 1936; The Minimum Wages Act, 1948; The Payment of Bonus Act, 1965; The Payment of Gratuity Act, 1972; The Employee's Provident Funds and Miscellaneous Provisions Act, 1952; The Employee's State Insurance Act, 1948; The Workman's Compensation Act, 1923, Case studies

The Motor Vehicles Act, 1988 and Documentation Laws: [6L]

Basic provisions under MV Act and other laws Part -I: Introduction; Provisions regarding Driving License; Provisions regarding Conductor's License; Registration of Vehicles; Part -II: Introduction; Types of Documents; Stamp Duty on Documents; Laws Applicable to Documents

Other Relevant Acts: [4L]

The Consumer Protection Act, 1986, The Environment Protection Act, The Patent act, Copy right act.

Suggested Readings:

- H.K. Saha Ray: Law of Contracts – Eastern Law Book House
- P. P. S. Gogna: A Textbook of Business Law, S. Chand & Co.
- Commercial Law- Bharat Law House, New Delhi
- M. S. Pandit & S. Pandit: Business Law, Himalaya Publishing.
- K. R. Bulchandani: Business Law, Himalaya Publishing.

Course Outcomes:

CO1: At the end of the course, the students will be able to understand the meaning and differences of Negotiable Instruments.

CO2: The students would be able to understand the various Labour Laws.

CO3: They can apply various provisions of Motor Vehicles Act, 1988.

CO4: At the end of the course, students will understand various Insurance Laws.

HEALTHCARE AND HOSPITAL ADMINISTRATION

[MHH-301]: HOSPITAL ARCHITECTURE, PLANNING AND MAINTENANCE

Course Objective:

To understand the necessity of architecture and planning in hospitals. To get familiarized with the designing and maintenance of hospital systems. The course also emphasizes the importance of sustainable practices, integrating modern technologies, and ensuring that healthcare facilities are adaptable to future needs. Furthermore, it covers the vital aspect of hospital maintenance, teaching students how to manage resources effectively, ensure ongoing safety and functionality, and maintain high-quality environments for both patients and healthcare professionals.

Hospital as a System: [3L]

Definition of hospital, classification of hospitals, changing role of hospitals, role of hospital administrator, hospital as a system, hospital & community.

Planning: [8L]

Principles of planning, regionalization, hospital planning team, planning process, size of the hospital, site selection, hospital architect, architect report, equipping a hospital, interiors & graphics, construction & commissioning, planning for preventing injuries, electrical safety.

Technical Analysis: [7L]

Assessment of the demand and need for hospital services, factors influencing hospital utilization, bed planning, land requirements, project cost, space requirements, hospital drawings & documents, preparing project report, Case Studies.

Hospital Standards and Design: [10L]

Building requirements: Entrance & Ambulatory Zone, Diagnostic Zone, Intermediate Zone, Critical Zone, Service Zone, Administrative Zone. List of Utilities, Communication Facility, Biomedical Equipment, Voluntary & Mandatory Standards. General Standards, Mechanical Standards, Electrical Standards, Standards for Centralized Medical Gas System, Standards for Biomedical Waste.

Hospital Ethics and Standards: [8L]

Hospital Ethics, Quality Management – NABH, JCI, Health Administration and Planning Management, International Health Regulation, Health Education, Voluntary Agencies and NGOs, Hospital Licensing, Biostatistics and Health Information System, Health Administration.

Facilities Planning: [4L]

Transport, Communication, Mortuary, Information System, Minor Facilities, Case Studies.

Suggested Readings:

- G.D. Kunders, Designing for Total Quality in Health Care
- Gupta S.K., Sunil Kant, Chandra Shekhar, R. Satpathy, Modern Trends in Planning and Designing of Hospitals
- Syed Amin Tabish, Hospital and Nursing Homes: Planning, Organisation & Management
- G.D. Kunders, Hospitals: Facilities Planning and Management.

Course Outcome:

CO1: To get acquainted with the legal provisions and issues related to health care.
CO2: To familiarize with the medical terminologies.
CO3: To understand the ethical issues in the health care system.
CO4: To understand Health Administration and Planning Management.

[MHH302]: HEALTH CARE LAWS, ETHICS AND MEDICAL TERMINOLOGY

Course Objective:

The course aims to provide students with a comprehensive understanding of the legal, ethical, and terminological aspects of healthcare and hospital management. It equips learners with knowledge of laws related to hospital formation, procurement, taxation, medical ethics, and various health regulations such as the Medical Termination of Pregnancy Act and the Transplantation of Human Organs Act. The course also introduces key medical terminology including roots, prefixes, suffixes, abbreviations, and symbols, enabling effective communication in clinical settings. Additionally, students will gain insights into the classification of illnesses, infection control practices, and the structure and functions of various hospital services essential for efficient healthcare delivery.

Laws Relating to Hospital Formation: [6L]

Promotion – Forming society, The Companies Act, Law of Partnership, A Sample Constitution for the Hospital, Medical Ethics.

Laws Relating to Purchases and Funding: [8L]

Law of Contracts, Law of Insurance, Export-Import Policy, FEMA, Exemption of Income Tax for Donations, Tax Obligations, Filing Returns and Deductions at Source. Laws pertaining to health: Central Births and Deaths Registration Act, 1969 – Recent amendments, Medical Termination of Pregnancy Act, 1971, Infant Milk Substitutes, Feeding Bottles and Infant Food Act, 1992

Laws Pertaining to Hospitals: [8L]

Transplantation of Human Organs Act, 1994, Pre-natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994, Medical Negligence, Medico-Legal Case, Dying Declaration, MCI Act on Medical Education, The Biomedical Waste (Management and Handling) Rules, Radiation Safety System

Medical Terminology: [8L]

Glossary of medical terms: Major diseases and medical specialties. Roots, Prefixes, Suffixes, Abbreviations, and Symbols, Common roots: element referring to, usage and definition, Common prefixes and suffixes, Common abbreviations: departments, general healthcare concepts, routes of medication, and laboratory.

Illness: [10L]

Classification and description of diseases, infection control, medical asepsis, nosocomial infections and communicable diseases, reservoir, carrier, and mode of transmission.

Overview of hospital services: Intensive Care Unit, Coronary Care Unit, Burns, Paraplegic & Malignant Disease Treatment, Hospital Welfare Services, Hospital Standing Services, Indian Red Cross Society, Nursing Services Pharmacy, Medical Stores, Housekeeping, Ward Management, Central Sterile Supply Department, Medical Records, Fatal Documents, Medical Registers, Statutory Records

Suggested Readings:

- B.M. Sakharkar, Principles of Hospital Administration and Planning – Jaypee Brothers Publications
- Francis C.M., Mario C. de Souza, Hospital Administration – Jaypee Brothers Medical Publishers

Course Outcome:

CO1: To get acquainted with the legal provisions and issues related to health care.

CO2: To familiarize with the medical terminologies.

CO3: To understand the ethical issues in the health care system.

CO4: To understand overview of hospital services

[MHH303]: HOSPITAL OPERATIONS MANAGEMENT

Course Objective:

The course is designed to equip students with a thorough understanding of hospital operations management by exploring both clinical and non-clinical functions. It covers essential aspects such as front office operations, patient admission and discharge processes, billing, medical records, and biomedical equipment maintenance. Students will gain insights into clinical services including OPD and radiology, as well as supporting services like housekeeping, linen, food services, and CSSD. The course also delves into facility location planning, hospital layout design, work measurement techniques, and productivity analysis. Additionally, it focuses on strategic and operational aspects of purchasing, inventory management, and value engineering, enabling students to manage hospital operations efficiently and effectively.

Front Office: [4L]

Admission, Billing, Medical Records, Ambulatory Care, Death in Hospital, Brought-in Dead, Maintenance and Repairs, Bio-Medical Equipment.

Clinical Services: [6L]

Clinical Departments, Outpatient Department (OPD): Introduction, Location, Types of patients in OPD, Facilities, Flow pattern of patients, Training and Coordination. Radiology: Location, Layout, X-Ray Rooms, Types of X-Ray Machines, Staffing Pattern, USG, CT, MRI, ECG.

Supporting Services: [4L]

Housekeeping, Linen and Laundry, Food Services, Central Sterile Supply Department (CSSD).

Facility Location and Layout: [10L]

Factors, Importance of Location, General Steps in Location Selection, Types of Layouts – Product, Process, Service Facility Layout. Work Standards, Techniques of Work Measurement, Work Sampling, Calibration of Hospital Equipment. Productivity Measures, Value Addition, Capacity Utilization, Productivity, Capital Operations, HR Incentives Calculation, Applications in Hospital.

Purchasing Strategy Process: [8L]

Organizing the Purchasing Function, Financial Aspects of Purchasing, Tactical and Operational Applications in Purchasing. Inventory Management**:** Valuation and Accounting for Inventory, Physical Location and Control of Inventory, Planning and Replenishment Concepts, Protecting Inventory. Value Management**:** Value Engineering, Value Analysis.

Suggested Readings:

- Madhuri Sharma, Essentials for Hospital Support Services and Physical Infrastructure
- B.M. Sakharkar, Principles of Hospital Administration and Planning, Jaypee
- Francis C.M., Mario C. de Souza, Hospital Administration, New Delhi, 2000
- Prabhu K.M., Sood S.K., Hospital Laboratory Services Organization and Management, Journal of Academy of Hospital Administration, 2, 1990

Course Outcomes (COs)

CO1: To get acquainted with admission, billing, medical records, Bio-Medical Equipment.

CO2: To familiarize with clinical services.

CO3: To understand the facility, location, layout, and supporting services.

CO4: To understand purchase strategy process

DATA SCIENCE AND DATA ANALYTICS SPECIALISATION

[DSA301]: INTRODUCTION TO PYTHON

Course Objectives:

This course aims to provide students with a strong foundation in Python programming, covering fundamental to advanced concepts. The course is designed not just for data science but also for general-purpose programming, web development, automation, and software development. The focus is on enabling students to write efficient, scalable, and maintainable Python programs while developing problem-solving and logical thinking skills.

Introduction to Python Programming: [5L]

Overview of Python and its Applications (Data Science, Web Development, Automation, AI, etc.), Installing Python and Setting Up IDEs (Jupyter, PyCharm, VS Code), Understanding Python Syntax, Indentation, and Basic Data Types, Writing and Running Python Scripts, Operators and Expressions in Python

Control Structures and Functions: [5L]

Conditional Statements (if, Elif, else), Looping Constructs (for, while), List Comprehensions for Efficient Iterations, Defining and Calling Functions, Lambda Functions, Map, Filter, and Reduce.

Data Structures in Python: [6L]

Lists: Creation, Indexing, Slicing, and Operations, Tuples and Sets: Performance and Use Cases, Dictionaries: Key-Value Pairs, Operations, and Applications, Working with Strings and String Manipulation.

Object-Oriented Programming (OOP) in Python: [8L]

Introduction to Object-Oriented Programming (OOP), Classes and Objects, Constructors (__init__), Methods, and Attributes, Inheritance, Polymorphism, and Encapsulation.

File Handling and Exception Handling: [8L]

Reading and Writing Files (TXT, CSV, JSON)**,** Working with File Paths and Directories**,** Handling Exceptions (try, except, finally)**,** Logging and Debugging in Python

Introduction to Modules, Libraries & Virtual Environments: [6L]

Understanding Modules and Packages in Python, Using Standard Libraries (math, datetime, random), Installing and Managing External Libraries using pip, Virtual Environments and Dependency Management.

Suggested Readings:

- Lutz, M. (2013) Learning Python. O'Reilly Media.
- Severance, C. (2016) Python for Everybody: Exploring Data Using Python 3. CreateSpace.
- McKinney, W. (2017) Python for Data Analysis: Data Wrangling with Pandas, NumPy, and Python. O'Reilly Media.

Course Outcomes (COs)

CO1: Develop proficiency in Python programming by writing efficient, scalable, and maintainable code for various applications.
CO2: Implement core programming concepts such as OOP, data structures, file handling, and exception handling to build software solutions.
CO3: Use Python for automation, web scraping, API integration, and database interactions to solve real-world business problems.
CO4: Build foundational knowledge to extend Python skills into specialized domains like web development, data science, and AI.

[DSA302]: TIME SERIES ANALYSIS AND FORECASTING

Course Objectives:

This course aims to introduce students to time series analysis and forecasting techniques with a strong focus on business applications. The course will equip students with the ability to analyze time-dependent data, identify trends and seasonality, apply statistical and machine learning-based forecasting models, and make data-driven decisions in areas such as finance, marketing, supply chain, and operations management.

Introduction to Time Series Analysis: [6L]

Definition and Characteristics of Time Series Data, Importance of Time Series in Business Decision-Making, Time Series Components: Trend, Seasonality, Cyclicality, and Irregularity, Data Preprocessing: Handling Missing Values, Smoothing, and Transformation, Case Study: Retail Sales Analysis Over Time

Time Series Data Visualization and Exploration: [6L]

Plotting Time Series Data using Python (Matplotlib, Seaborn), Identifying Trends, Seasonality, and Cyclic Behavior, Rolling Statistics, Moving Averages, and Smoothing Techniques, Case Study: Website Traffic and Consumer Behavior Analysis

Classical Time Series Forecasting Models: [8L]

Naïve and Moving Average Forecasting, Exponential Smoothing Models: Simple, Double (Holt's), Triple (Holt-Winters), Evaluating Forecasting Performance (RMSE, MAPE, AIC, BIC), Case Study: Forecasting Monthly Sales Revenue

ARIMA and SARIMA Models for Business Forecasting: [10L]

Introduction to Autoregressive Integrated Moving Average (ARIMA), Stationarity and Differencing Techniques (ADF Test, KPSS Test), Autocorrelation and Partial Autocorrelation (ACF & PACF), Seasonal ARIMA (SARIMA) for Handling Seasonal Trends, Case Study: Demand Forecasting for E-commerce

Machine Learning Approaches to Time Series Forecasting: [10L]

Regression-Based Forecasting Models, Decision Trees and Random Forest for Time Series Forecasting, Support Vector Machines (SVM) and k-NN for Predicting Time-Dependent Data, Feature Engineering for Time Series Analysis, Case Study: Customer Subscription and Churn Rate Prediction

Suggested Readings:

- Hyndman, R. J., &Athanasopoulos, G. (2018). *Forecasting: Principles and Practice*. O Texts.
- Chatfield, C. (2016). *The Analysis of Time Series: An Introduction*. Chapman and Hall/CRC.
- Brockwell, P. J., & Davis, R. A. (2016). *Introduction to Time Series and Forecasting*. Springer.

Course Outcomes (COs)

CO1: Analyze and visualize time series data to identify trends, seasonality, and cyclic patterns for business forecasting.

CO2: Apply classical forecasting techniques such as moving averages, exponential smoothing, and ARIMA for accurate predictions in business domains.

CO3: Utilize machine learning and deep learning-based forecasting models to enhance predictive accuracy in business decision-making.

CO4: Implement time series forecasting applications in finance, marketing, supply chain, and operations management for improved strategic planning.

[DSA303]: BUSINESS INTELLIGENCE

Course Objectives

This course aims to introduce students to Business Intelligence (BI) and its applications in strategic decision-making. It covers data-driven decision-making, BI tools, dashboards, reporting, and predictive analytics. The course will equip students with skills to analyze business data, generate insights, and implement BI strategies to improve organizational efficiency and competitiveness.

Introduction to Business Intelligence & Data-Driven Decision Making: [5L]

Definition, Scope, and Importance of Business Intelligence (BI), BI vs. Business Analytics vs. Data Science, Data-Driven Decision Making in Business, BI in Marketing, Finance, HR, and Operations, Case Study: Role of BI in Retail Industry

BI Architecture, Data Warehousing & ETL Process: [5L]

Business Intelligence Architecture and Framework, Introduction to Data Warehousing Concepts, ETL (Extract, Transform, Load) Process, Data Integration and Data Cleaning Techniques, Case Study: Building a Sales Data Warehouse

Data Visualization and Dashboarding: [6L]

Importance of Data Visualization in BI, Introduction to BI Tools: Tableau, Power BI, Google Data Studio, Creating Interactive Dashboards for Business Analytics, Key Performance Indicators (KPIs) and Business Metrics, Case Study: Financial Performance Dashboard

Business Reporting and Performance Management: [8L]

Reporting and querying in BI, Automating Business Reports Using BI Tools, Balanced Scorecard and Performance Management, Data-Driven Decision Making for Business Growth, Case Study: HR Analytics and Employee Performance Reporting

Predictive Analytics and Data Mining for BI: [8L]

Role of Predictive Analytics in BI, Introduction to Data Mining Techniques (Classification, Clustering, Association), BI-Driven Customer Segmentation and Targeting, Market Basket Analysis for Business Decision Making, Case Study: Predicting Customer Churn Using BI

Module 6: Big Data & Cloud-Based Business Intelligence (6L)

Introduction to Big Data and its Role in BI, Cloud-Based BI: AWS, Google Cloud, Microsoft Azure, AI-Driven BI: Leveraging AI and ML in BI, Data Security and Privacy in Business Intelligence

Suggested Readings:

- Sharda, R., Delen, D., & Turban, E. (2020). Business Intelligence, Analytics, and Data Science: A Managerial Perspective. Pearson.
- Davenport, T. H., & Harris, J. G. (2017). Competing on Analytics: The New Science of Winning. Harvard Business Review Press.
- Camm, J. D., Cochran, J. J., Fry, M. J., Ohlmann, J. W., & Anderson, D. R. (2019). Business Analytics. Cengage Learning.

Course Outcomes (COs)

CO1: Understand the role of Business Intelligence in data-driven decision-making and organizational strategy.

CO2: Implement BI tools and techniques to analyze, visualize, and report business data for improved performance.

CO3: Utilize predictive analytics and data mining to generate actionable business insights.

CO4: Apply cloud-based and AI-driven BI solutions to solve real-world business challenges across industries.

SEMESTER-4

CORE PAPER

[MB401]: FINANCIAL REPORTING, STATEMENTS AND ANALYSIS

Course Objective:

This course aims to familiarize the students with various accounting concepts, tools and techniques and its application in managerial decision making. It also acquaints the students with the latest accounting practices and reporting standards.

Significant Accounting Policies, Accounting Standards: [10L]

Meaning, objectives, principles, and environment of financial reporting; Introduction to Accounting Standards issued by ICAI, US GAAPs, International Accounting Standards, IFRS, Applicability of various accounting standards, comparison and the process of harmonization, Certain Special Features of Corporate Accounting.

Tools of Financial Analysis: [12L]

Trend analysis, Common size statements, Comparative statements, Ratio Analysis-Liquidity, Solvency, profitability, Turnover ratios.

Cash Flow: [10L]

Introduction, Meaning of Cash Flow Statement, Purpose of Cash Flow Statement, Preparation of Cash Flow Statement, Format of Cash Flow Statement (AS3: Revised Method), Cash Flow from Operating Activities, Cash Flow Statement under Direct Method, Different between Cash Flow Analysis and Fund Flow Analysis, Uses of Cash Flow Statement.

Fund Flow: [8L]

Introduction, Meaning of Funds Flow Statement, Ascertainment of flow of funds, Technique of preparing funds flow statement, Schedule of Changes in Working Capital, Adjusted Profit and Loss account, Funds Flow Statement.

Suggested Readings:

- Ahuja, N. L. and Dawar, V. 'Financial Accounting and Analysis' Taxmann Publishers
- Khan and Jain, 'Management Accounting', Tata McGraw.
- J. Madegowda, 'Accounting for Managers', Himalaya Publishing.
- Horngren, Charles T., Gary L. Sundem and William O. Stratton, "Introduction to Management Accounting", Pearson Education Asia.
- Ramchandran, 'Financial Accounting for Management', Tata McGraw

Course Outcome:

CO1: Developing skills for interpretation business information and application of financial theory n financing related decisions.

CO2: To familiarize the students with financial statements and principles underlying them and to develop their skills in reading Annual Reports.

CO3: To acquaint them in brief with accounting mechanics, process, and system, but emphasis is laid on sound concepts and their managerial implications.

CO4: To lay a foundation for developing their skills in interpreting financial statements.

ELECTIVE PAPERS

MARKETING SPECIALISATION

[MM401]: CONSUMER BEHAVIOUR

Course Objective:

On completion of the course, the students can evaluate how different aspects of the environment influence consumer behaviour and apply marketing strategy to influence consumer behaviour.

Introduction to Consumer Behaviour: [4L]

Definition and Importance of Consumer Behaviour, Environmental Influences on Consumer Behaviour: Culture, Subcultures, Social Class, Reference Group and Family, Role of Tradition, Customs, and Rituals in Consumer Behaviour.

Consumer Decision Process: [5L]

Stages of Consumer Decision Making: Need recognition, information search, evaluation of alternatives, purchase decision, consumption and post- purchase evaluation, Types of decision process – complex decision making, impulse buying, loyalty, Influence of Packaging, Branding, and Labeling on Consumer Decisions, Case Study on Consumer Decision-Making.

Individual determinants of Consumer Behaviour: [5L]

Motivation and its Role in Consumer Behaviour, Personality, Self-Concept, and Consumer Perception, Learning and Attitude Formation in Consumers, Role of Emotions in Consumer Behaviour.

Family and Social Influences: [5L]

Family Decision-Making and Buying Behaviour; Influence of reference Groups and Opinion Leadership; Social Influence, Word-of-Mouth, and Diffusion of Innovations; Impact of Peer Pressure on Consumer Choices.

Cultural and Social Class Impact on Consumer Behaviour: [5L]

Nature of Culture and its Effect on Consumer Decisions; Influence of Subcultures and Social Class on Buying Behaviour; Role of Religious Beliefs in Consumer Decision- Making.

Psychological and Economic Influences on Consumer Behaviour: [5L]

Influence of Economic Conditions on Consumer Choices; Impact of Inflation, Recession, and Economic Stability on Consumption Patterns; Consumer Behaviour in Rural vs. Urban Markets

Models of Consumer Behaviour: [5L]

Howard-Seth Model, Angle-Blackwell-Kollat (Multimedia ion Model), Nicosia Model.

Organizational Buying Behaviour: [4L]

Differences between Consumer and Organizational Markets; Organizational Buying Decision- Making Process; Factors influencing Organizational Buying Behaviour.

Case Studies & Applications: [2L]

Suggested Readings:

- Consumer Behaviour – Suja R. Nair, Himalaya Publishing House, 2022.
- Consumer Behaviour and Marketing Strategy – S. Ramesh Kumar, Pearson India, 2021.
- Consumer Behaviour: Text and Cases – Satish K. Batra & S. H. H. Kazmi, Excel Books, 2020.
- Consumer Behaviour and Branding: Concepts, Readings, and Cases – S. Ramesh Kumar, Pearson India, 2017.

Course Outcomes:

CO1: Analyze cultural, social, personal, and psychological influences on consumer behavior.

CO2: Apply consumer decision-making models to understand purchasing patterns.

CO3: Develop and implement marketing strategies based on consumer insights.

CO4: Understand the role of reference groups, opinion leaders, and social influences in consumer choices.

[MM402]: Digital Marketing

Course Objective:

The Digital Marketing course aims to provide students with an understanding of digital marketing strategies across platforms like SEO, social media, and email. Students will learn to develop, implement, and analyze digital marketing campaigns effectively. The course focuses on practical skills to measure and optimize campaign success**.**

Introduction to Digital Marketing: [6L]

Benefits of Digital V/s Traditional Marketing; Digital Marketing Platforms; Defining Digital Marketing Goals; Latest Digital Marketing Trends. Email Marketing; Affiliate Marketing; Inbound Marketing. Overview of Digital Marketing Channels (Websites, Mobile Apps, Email, etc.)

Search Engine Optimization: [6L]

Introduction to Search Engines; How Search Engine works; SEO Techniques and Best Practices; Search Engine Marketing; Google AdWords; Google AdSense; Keyword Optimization. and On- Page/Off-Page SEO

Social Media Marketing: [6L]

What is social media marketing; Benefits of SMM; Social Media Strategy; Facebook Marketing; Twitter Marketing; YouTube Marketing; Instagram Marketing; LinkedIn Marketing; Paid Ads vs. Organic Reach; Social Media Advertising (Facebook Ads, Instagram Ads).

Analytics and Data-Driven Marketing: [6L]

Importance of Analytics in Digital Marketing; Introduction to Google Analytics; Traffic, Behavior, Audience, and Conversion Reports; Advanced Analytics Tools (Hotjar, SEMrush); Data Interpretation for Campaign Performance.

Facebook marketing: [8L]

Overview-Types of Facebook pages, Facebook profile setup and page navigation, Growth of Business on Facebook, Facebook Ads: Types and Targeting, Creating Engaging Content and Call to Action, FB analytics.

Twitter (X)Marketing: [4L]

Introduction to Twitter (X) Marketing, advantages, and implementation; Growing Twitter Followers; Effective use of hash tags and sponsored tweets., twitter analytics and trends.

LinkedIn and Instagram Marketing: [4L]

Overview of LinkedIn and Instagram as Marketing Platforms; Profile Optimization and Content Strategy for Both Platforms; Leveraging LinkedIn for B2B and Instagram for B2C Marketing; Creating Engaging Posts, Stories, and Ads on Instagram; LinkedIn Ads and Instagram Sponsored Posts: Targeting and Analytics.

Suggested Readings:

- Digital Marketing by Vandana Ahuja, Oxford University Press, 2019.
- Digital Marketing: Strategy, Implementation, and Practice by S. H. H. Kazmi & Satish K. Batra, Pearson India, 2020.
- The Art of Digital Marketing by Rajiv Dingra, HarperCollins India, 2021.
- Digital Marketing for Dummies by Ryan Deiss & Russ Henneberry, Wiley, 2020.
- Contagious: How to Build Word of Mouth in the Digital Age by Jonah Berger, Simon & Schuster, 2013.

Course Outcomes:

CO1: Apply digital marketing strategies across SEO, social media, and email.
CO2: Analyze and optimize digital campaigns using analytics tools.
CO3: Develop effective social media, email, and content marketing plans.
CO4: Use paid advertising on platforms like Google and Facebook for engagement.

[MM403]: SERVICE MARKETING

Course Objective:

The objective of this course is to supplement basic marketing and marketing strategy courses by focusing on problems and strategies specific to marketing of services. Problems commonly encountered in marketing services -- such as inability to inventory, difficulty in synchronizing demand and supply, difficulty in controlling quality -- will be addressed. Strategies used by successful services marketers to overcome these difficulties will be discussed. The emphasis in the course will be on service universals rather than on any industry (such as bank marketing). However, concepts will be illustrated during cases, examples, and exercises in service industries such as banking, health care, financial illustrated, consulting, the professions, and communication as well as manufacturing and high-tech industries (both of which depend heavily on services to provide value).

Introduction: [5L]

Definition and Characteristics of Services, Differences between Services and Goods, Tangibility Spectrum of services, Services Marketing Mix – People, Physical Evidence & Process.

The Gap Model of Service Quality: [8L]

The Customer Gap and, The Provider Gap, The Customer Expectations vs. Perception of Service, The Zone of Tolerance and Customer Satisfaction, SERVQUAL Model for Measuring Service Quality, Identifying and Bridging Service Gaps.

Understanding Customer Requirements: [8L]

Listening to Customers through Research, Building Long-Term Customer Relationships, Service Recovery Strategies, Factors for Defining Service Standards, Types of Customers, and their expectations.

Physical Evidence and Servicescape: [8L]

Meaning and Types of Servicescape, Strategic Roles of Servicescape in Service Delivery, Guidelines for Developing Physical Evidence Strategy, Blueprinting the Strategic Servicescape

Employees and Customers Role in Service Delivery: [4L]

Importance of Service Culture, Role of Employees in Service Delivery, Role of Customers in Co- creating Service Experience, Enhancing Customer Experience through Employee Interaction.

Managing Demand and Capacity: [3L]

Understanding Capacity Constraints, and Demand Patterns, Matching Demand and Capacity through Strategies, Techniques for Managing Service Delivery Efficiency.

Marketing Communication in services: [4L]

Need for Coordination in Service Marketing Communication, Promotion and advertising strategies in Services Marketing, Logistics and Distribution in Services Marketing; Digital and Social Media Integration for Services.

Suggested Readings:

- Services Marketing by Harsh V. Verma, Pearson India.
- Services Marketing: Text and Cases by K. K. Bajaj & Rajagopal, Oxford University Press.
- Services Marketing: People, Technology, Strategy by Christopher Lovelock & Jochen Wirtz, Pearson.
- Services Marketing: Integrating Customer Focus Across the Firm by Valarie A. Zeithaml, Mary Jo Bitner, Dwayne D. Gremler, McGraw-Hill Education.

Course Outcome:

CO1: Understand the fundamental concepts and characteristics of services and differentiate them from goods.

CO2: Analyze the gaps in service quality and develop strategies to bridge those gaps using the SERVQUAL model.

CO3: Apply effective customer relationship management and service recovery strategies to meet customer expectations.

CO4: Evaluate the role of employees, customers, and service scape in delivering superior service experience.

FINANCE SPECIALISATION

[FM401]: CORPORATE TAXATION & PLANNING

Course Objective:

To provide a strong conceptual framework for management students to appreciate the significance and impact of taxation on managerial decision making.

Residential Status & Tax Incidence: [4L]

Cannons of Taxation Person, Assesse, Income, Previous Year, Assessment Year, Gross Avoidance, Planning, Exemption, Planning, Exemption, Deduction, Rebate, Relief.

Income Exempted from Tax: [4L]

Individual & Corporate.

Computation of Taxable Income of Individual, Firm & Corporate: [6L]

Heads of Income – Salaries, Income from House Property, Profits & Gains from Business or Profession, Capital Gains, Income from Other sources.

Set Off & Carry Forward of Losses – Principles, Meaning, inter – sources &inter– head Set Off, Carry Forward and Set Off of Losses under sections 71, 72 & 73.

Computation of Tax for Individual, Firm & Corporate: [6L]

Rate of Tax and Surcharge, Tax Rebate, Tax Management – Submission of Return and Procedure of Assessment, Pan, Tan, Preliminary ideas of Deduction and Collection of Tax at Source, Advance Payment of Tax, Refund of Tax.

Goods and Service Tax: [10L]

GST in India. Features and Advantages, Structure of GST in India: CGST, SGST, UTGST, IGST, Taxes subsumed by GST, Commodities kept outside the scope of GST. Procedure for Registration; Deemed Registration, Cancellation of Registration, Revocation of Cancellation of Registration. Levy and Collection of Tax under GST: 16 Rates structure of GST, Scope of supply, Composition Scheme under GST.

Suggested Readings:

- Lal &Vasisht: Direct Taxes, Pearson Education
- Singhania: Direct Taxes, Taxman
- Singhania: Indirect Taxes, Taxman

Course Outcome:

CO1: Demonstrate knowledge of the components of the basic income tax formula for individuals and business entities, understand when income and deductions are recognized, and describe when they are excluded (or disallowed) or deferred.

CO2: Apply analytical reasoning tools to assess how taxes affect economic decisions for individuals and business entities.

CO3: Demonstrate the ability to conduct tax research.

CO4: Understand tax-related statutory, regulatory, and professional ethics obligations and identify tax-based community service opportunities.

CO5: Explain basic tax policy considerations underlying common tax regimes.

[FM402]: FINANCIAL DERIVATIVES AND RISK ANALYSIS

Course Objective:

This course provides advanced knowledge of financial derivatives, including their pricing, valuation, and strategic use for risk management. It also covers mergers, acquisitions, and corporate restructuring, focusing on value creation and organizational realignment. By integrating financial instruments with corporate strategy, the course equips participants to make informed decisions in dynamic markets and drive sustainable growth.

Introduction: [6L]

An Introduction to Derivatives, Products, Classification, participant, Evolution, Functions, Forward & Future Introduction, difference, Pricing, Arbitrage, Convergence, Relationship of futures price & expected spot price. Commodity futures Forms of business alliances, Strategic choice of type of business alliance, Merger and acquisition and take-over, Introduction to restructuring problems.

Futures, and Forwards instruments: [12L]

Index Futures, forward contracts & stocks, Future contract on indices & individual stocks, Features, specifications, pricing, Hedging, Speculation & arbitrage with stock index futures, Features of Swap, Need, swap dealer, Applications, Rationale. Put, Quotations.

Options: [3L]

Markets; Payoffs; Risk Neutral Valuation; Binomial Option Pricing Model; Black Scholes Option Pricing Model; Put Call Parity; Uses of Options; Option Strategies.

Valuation and Financial Restructuring: [5L]

Pricing of mergers (Pricing the competitive bid for take- over), Negotiation/approach for merger, Acquisition and take – over contracting; implementation of M& A; managing post-merger issues, Divestiture – Mechanism, process and techniques, Ethical issues of merger and take-over. Value creation/ destruction through corporate mergers and acquisitions

Merger and Acquisition process: [6L]

Restructuring, divestment and abandonment, share repurchase, commonly used takeover tactics and takeover defenses, International take over and restructuring, The M & A process, Implementation, and management guides for Mergers & Acquisitions

Risk Management in Financial Institutions: [8L]

Overview of BASEL–II, Market Risk, Credit Risk and Operational risk elements. Stoploss; Delta hedging; Theta; Gamma; Vega; Rho; Scenario Analysis; Portfolio insurance, VaR.

Suggested Readings:

- Khatri Dhanesh Kumar: Derivatives and Risk Management Paperback–2016, PHI
- M. Ranganatham, R. Madhumathi: Derivatives and Risk Management (English, Paperback), PEARSON.
- Janaki Ramanan: Derivatives and Risk Management, Pearson
- David A. Dubofsky & Thomas W. Miller JR.: Derivative-Valuation and Risk Management: RCM Study Materials.
- BSE website, NSE website, sites on Chicago Option trading.
- John F. Marshall & Bipul K. Bansal.: Financial Engineering, PHI
- John C Hull.: Option, Futures and other Derivatives, PHI

Course Outcome:

CO1: Explain the fundamentals of financial derivatives, including futures, options, forwards, and swaps.

CO2: Understand the legal, ethical, and regulatory implications of derivatives trading and corporate transformations.

CO3: Analyze different types of corporate restructuring, including mergers, acquisitions, divestitures, and leveraged buyouts.

CO4: Apply derivative instruments to hedge risk and enhance portfolio performance.

[FM403]: INTERNATIONAL FINANCE

Course Objective:

The primary themes include understanding the nature of international financial markets, risk management and hedging by firms with international operations, the advantages, and disadvantages of the dive resources of funds available from international financial markets and issues related to cross-border and multi- currency valuation.

International Dimensions of Financial Management: [3L]

The Emergence of the MNC, Nature of the MNC, Objectives of the Firm & Risk Management, Domestic Financial Management & International Financial Management.

International Monetary System: [10L]

History of International Monetary System, Present Day Currency Regimes, Regime Choices for Emerging markets, Birth of EMU and EURO.

Balance of Payments (BOP): [3L]

Principles of BOP Accounting, Components of BOP, Significance of 'Deficit' & 'Surplus' in BOP, India's BOP and Economic Performance, Capital, Mobility and Capital Account Convertibility.

The Foreign Exchange Market, Exchange Rate Determination, and Currency Derivatives: [5L]

The Foreign Exchange Market – Functions, Participants and Transactions – Exchange Rates and Quotations – Indian foreign Exchange Market, Foreign Currency Derivatives– Currency Options, Futures, Forwards, Swaps– Foreign Currency Derivatives in India, International Parity Conditions – Purchasing Power Parity- Interest Rate Parity, Foreign Exchange Rate Determination.

Foreign Exchange Exposure & Risk Management: [6L]

Two dimensions of Foreign Exchange Risk (viz. Exposure & Unanticipated change in Foreign Exchange Rates), Types of exposure Measuring and Managing Economic Exposure, Transactions Exposure & Translation Exposure: (a) internal hedging strategies. (b) External or market-based Hedging strategies.

International banking Services[3L]

Ordered Capital Adequacy Standards-International Money Markets, International Equity Sources - Global Equity Markets- Methods of Sourcing - Cross-listing in Secondary Markets- New Equity Issues, International Debt Sources- Debt Management and Funding Goals - International Debt Instruments- International Bank Loans - Euro notes- International Bond Market

Financial Management of MNCs [5L]

Foreign Direct Investment and Cross- Border Acquisitions; International Capital structure and the cost of Capital- An Overview- Impacts of Internationalization on the Cost of Capital- Improving Market Liquidity- Overcoming Market Segmentation- Causes of Segmentation- International Diversification and the cost of capita l-International Cost of Capital Models- The Theory of Optimal Financial Structure- Impact of Internationalization on Optimal Financial Structure - Financial Structure of Foreign Affiliates.

Multinational Capital Budgeting: [5L]

Capital Budgeting: Anoverview-CapitalBudgetingforForeignProjects-Twomethods-ForeignComplexities- Parent vs project valuations; Multinational Cash Management- The Management of Multinational Cash Balances- Cash Management Systems in Practice- Transfer Pricing & Related Issues- Blocked Funds.

Suggested Readings:

- Eiteman, David K. Multinational Business Finance. Pearson Publications.
- Avadhani, J. A. International Finance. Himalaya Publishing House.
- Banerjee, V. J. International Finance: Theory and Practice. Centrum Press.
- Van Horne, James C. Financial Management. Pearson Education Limited.
- Miers, Bearley. Financial Management. McGraw-Hill Education.

Course Outcome:

CO1: Explain the organization and institutional details of foreign exchange and international money markets.

CO2: Explain and apply orthodox theories of exchange rates and open economy macroeconomics, up to and including the Dornbusch overshooting model.

CO3: Analyze the causes of historical exchange rate movements, and some of the contributory factors to a variety of financial crises, with reference to the models covered.

CO4: Apply the theories and models covered to the issue of optimal currency areas, with specific reference to the design and operation of the euro.

HR SPECIALISATION

[HR401]: INTERNATIONAL HUMAN RESOURCE MANAGEMENT

Course Objective:

Due to the movement of human resource across the countries as well as within the countries there is a need to understand the various aspects of it and to critically analyze the issues related to it. So, the objective of the course is to provide and teach about the basic understanding of such aspects to deal with to the students.

Understanding International Business Operations: [5L]

Cross-Cultural and HRM issues in International Business Operations– Differences between Domestic & International HRM–Culture and International HRM: Different models, Impact of culture on IHRM.

International Recruitment and Selection: Important issues: [8L]

Expatriate Selection and Selection Criteria–Training and Development Vis-à-vis International HRM–Expatriate training: Important Issues and Concerns.

Performance Management: Issues and Concerns in International HRM: [7L]

Standards for performance appraisal of international employees–appraisal of HCNs — Employee Reward inInternationalHRM—ObjectivesofandApproachestoEmployeeRewardinInternationalHRM– Key Components of a compensation program–International evidence on best practices in reward. Organizational Change Management Strategies - Models of organizational change, Lewin’s three step model, Kotter's 8-Step Change Model, ADKAR Model, Bridges' Transition Model, the 4I Model (Inquire, Involve, Inspire, Initiate). Action research model (8L)

Managing Diversity and Cross-cultural issues in international context: [6L]

Managing Diversity in International Perspective–Cross-cultural issues in Merger and Acquisition and other strategic issues.

Cross cultural and International HRM trends and future challenges: [6L]

Global cross-cultural and knowledge management strategies

Suggested Readings:

- N. Sengupta & Mousumi, S. Bhattacharya, International HRM, Excel Books
- P.L. Rao, International Human Resource Management – Text and Cases, Revised Edition, Excel Books- New Delhi
- Edwards-International HRM, Pearson Education.
- K. Aswathappa- International Human Resource Management Sadhna Dash Text and Cases, Tata McGraw Hill Publishing Company Ltd
- P. Subba Rao, International Human Resource Management Himalaya Publishing House Dr. Nilanjam Sengupta-International Human Resource Management Excel Books, New Delhi

Course Outcome:

CO1: Identify issues, opportunities and challenges pertaining to international HRM.

CO2: Apply competency in dealing with cross cultural situations. especially in areas such as recruitment and selection, performance management, training, learning and development, career management, compensation, motivation, and repatriation.

CO3: Classify external forces that have the potential to shape international HRM.

CO4: Develop generic and transferable skills-especially in diagnosing international HRM issues critically and analytically, conducting research for the purpose of discussing specific cases relating to international HRM, evaluating alternative approaches, and defending there commend actions with evidence, and developing confidence in conducting training workshops.

[HR402]: COMPENSATION AND BENEFITS MANAGEMENT

Course Objective:

The objective of the course is to teach the various dimensions of Compensation and benefits management and to familiarize the role of various bodies involved in it.

Compensation management – An Introduction: [6L]

Definition of Compensation, Basic concepts of Compensation (wages, salary, benefits, DA, consolidated pay, Equity based programs, commission, reward, remuneration, bonus etc,), House Rent Allowances, City Compensatory Allowance, Other Allowances, Wage Fixation, Types of Compensation Management - The Pay Model, Strategic Pay Policies, Strategic Perspectives of Pay, Strategic Pay Decisions, Best Practices vs. Best Fit Options.

Job Evaluation, Grading and Compensation Structure: [5L]

Concept of Salary Structure, Salary Progression, Methods of Payment, Incentives, Fringe Benefits Limitations of Job- Related Compensation, Competency based Compensation, 360-degreefeedback.

Wages and Salary Administration at Macro (National) Level: [3L]

Wage Concept, Wage Policy, Institutional Mechanisms for Wage Determination, Pay Commission, Wage Boards, Public Sector Pay Revision, Union Role in Wage and Salary Administration.

Incentive Schemes: Pay for Performance: [5L]

Types of Incentive Schemes, Wage Incentive Plans, Pre-requisites of effective incentive schemes, Merits and Demerits of Incentives, Pay for Performance Plans.

Benefits and Services: [6L]

Concept and Nature of Benefits, Classification of Employee Benefits, Employee Benefit Programs, Factors Influencing Choice of Benefit Program, Administration of Benefits and Services, Employee Services–Designing a Benefit Package

Determining External Competitiveness and Benefits Management: [8L]

Pay Grades Benefits: Benefits Determination Process, Value of Benefits, Legally Required Benefits, Retirement, Medical, & VRS, Enterprise Incentive Plan – Profit Sharing Plan- ESOPs– Compensation Management in Multi-National Corporations.

Performance Based Compensation System: [7L]

Pay for Performance (PFP): Rewarding Desired Behaviours, Designing PFP Plans; Merit Pay/Variable Pay, Individual vs. Group Incentives, Long Term Incentives, Compensation of Special Groups, Compensation Strategies for special groups.

Suggested Readings:

- Richard I. Derson. I. Richard, Compensation Management, Pearson Education, Professionals, TMH
- Goel Dewakar, Performance Appraisal and Compensation Management, PHI Learning, New Delhi.
- Henderson I. Richard, Compensation Management in a knowledge- based world, Prentice Hall India, New Delhi.
- Thrope Richard &Homen Gill, Strategic Reward Systems, Prentice Hall India, New Delhi.

Course Outcome:

CO1: Analyze the theory and concepts of compensation management

CO2: Use Qualitative & Quantitative methods in conducting a job evaluation & its contribution in developing an effective salary structure.

CO3: Enumerate the benefits available to an employee in a workplace.

CO4: Discuss the different benefits available to an employee in a workplace.

CO5: Identify the legal and administrative issues in global compensation.

[HR403]: HUMAN RESOURCE DEVELOPMENT

Course Objective:

The overall objective of this course is to gain a comprehensive view of human resource development through a critical assessment of the field through both discussion and case studies.

Human Resource Development: [5L]

Meaning, Scope and Purpose, HRD Process, Techniques of Assessment of HRD Needs– Organizational Analysis, Task Analysis, Individual Analysis.

Strategies of HRD: [4L]

Organizational Development, Individual Development, Team Development, Organizational Culture Building.

Individual Development through Training: [8L]

Designing Training Programme; On-the-Job, Off-the-Job; Methods– Lecture, Case Analysis, Role Play, Games, Exercises; Role of Trainer, Introduction of Management Development Programme-Meaning and Definitions, Need, Objectives, Steps, Calendar, Process, Methods & Techniques, Auditing MDPs, Out-Bound Training.

Evaluation of Training: [5L]

Need, Principles, Criteria, Technique of Evaluation, Impediments to Effective Training, Improving Effectiveness of Training. Specialized Training E- Learning and Use of Technology in Training, HRIS, Electronic Performance Base System (EPSS). Managerial Grid Training-Introduction Sensitivity Training Personality Development Programs

Individual Development through Non–Training: [6L]

Job Redesign Programme; Job Enlargement, Job Enrichment, Job Rotation, Suggestion Schemes, Career Planning, Counselling.

Team Development Programmes: [6L]

Methods and Schemes: Role of Staff and Line Managers in HRD, Quality Circle, Kaizen, Work Life Balance, TQM

Competency Management: [6L]

Planning, Mapping, Measurement.

Suggested Readings:

- Desimone, R.L., Werner, J.M.& Harris, D.M.: Human Resource Development, Thomson.
- Pareek, Udai & Rao, T. V.: Designing and Managing Human Resource Systems, Oxford &IBH.
- Raj Sekharan, N.P.: Competency Web, Universities Press
- Rao, T. V.: Readings in HRD, Oxford &IBH.
- Silvera, D.M.: Human Resource Development–The Indian Experience-Publisher

Course Outcome:

CO1: Differentiate between human resource development (HRD)and other human resource management functions.

CO2: Explain and apply significant concepts and theories under pinning HRD.

CO3: Develop skills in identifying HRD needs and in designing, implementing, and evaluating HRD programs.

CO4: Explain the strategic importance of HRD in the success of organizations within the context of social and environmental pressure.

CO5: Analyze and evaluate contemporary HRD practices.

INFORMATION SYSTEMS SPECIALISATION

[SM401]: INFORMATION SECURITY AND PRIVACY

Course Objective:

This course is designed to impart the skills needed to provide security to the system. Student will learn: Various types of threats, Risk analysis, Physical security of infrastructure, providing authorization using biometrics, Network security and cryptography techniques, Database security and Web security issues.

Introduction to Information Security [4L]

Introduction, The History of Information Security, concept of Security, CNSS Security Model, Components of an Information System, Approaches to Information Security Implementation.

The Need for Security [3L]

Introduction, Threats and Attacks, Compromises to Intellectual Property, Deviations in Quality of Service, Espionage or Trespass, Forces of Nature, Human Error or Failure, Information Extortion, Sabotage or Vandalism, Software Attacks, Technical Hardware & Software Failures or Errors, Technological Obsolescence, Theft.

Planning for Security[4L]

Information Security Planning, Information Security Policy, Standards, and Practices, The Information Security Education, Training, and Awareness Program, Continuity Strategies.

Risk Management[3L]

An Overview of Risk Management, Risk Identification, Risk Assessment, Risk Control, Quantitative Versus Qualitative Risk Management Practices, Risk Control Practices.

Security Technology: Access Controls, Firewalls, and VPNs [5L]

Access Control, Firewalls, Remote Connections, Intrusion Detection and Prevention Systems, and other security tools, Honeypots, Honeynets, and Padded Cell Systems etc.

Cryptography[5L]

Foundations of Cryptology, Cipher Methods, Cryptographic Algorithms, Cryptographic Tools, Protocols for Secure Communications.

Physical Security[4L]

Physical Access Controls, Fire Security and Safety, Failure of Supporting Utilities and Structural Collapse, Interception of Data, Securing Mobile and Portable Systems.

Implementing Information Security[5L]

Information Security Project Management, Technical Aspects of Implementation, Nontechnical Aspects of Implementation, Information Systems Security Certification and Accreditation

Security and Personnel [4L]

Positioning and Staffing the Security Function, Employment Policies and Practices, Security Considerations for Temporary Employees, Consultants, and Other Workers

Information Security Maintenance[3L]

Security Management Maintenance Models, Digital Forensics

Suggested Readings:

- Principles of Information Security by Michael E. Whitman and Herbert Mattord
- Managing Enterprise Information Integrity: Security, Control and Audit Issues, By IT Governance Institute
- An Introduction to Computer Security: The NIST Handbook

Course Outcomes:

CO1: Analyses the vulnerabilities in any computing system and design an appropriate security solution.
CO2: Identify security issues in networks and propose effective resolutions.
CO3: Evaluate security mechanisms using rigorous approaches, including theoretical analysis.
CO4: Compare and contrast different IEEE standards and electronic mail security methods.

[SM402]: E-COMMERCE

Course Objective:

This course focuses on principles of e-commerce from a business perspective, providing an overview of business and technology topics, business models, virtual value chains and business strategies. In addition, some of the major issues associated with e-commerce—security, privacy, intellectual property rights, authentication, encryption, acceptable use policies, and legal liabilities—will be explored.

Introduction: [5L]

E-commerce or Electronic Commerce- An Overview, The Difference Between E-commerce and E-business, Evolution of E-commerce. E-Business Vs the Traditional Business Mechanism, Advantages of E-Business, Disadvantages of EBusiness, Main Goals of E-Business.

E-commerce Infrastructure: [7L]

E-commerce Infrastructure-An Overview, Network Infrastructure for E-Commerce – I: Local Area Network (LAN), Ethernet: IEEE 802.3: Local Area Network (LAN) Protocols, Wide Area Network (WAN), The Internet, TCP/IP Reference Model, Domain Names, Hyper Text Markup Language (HTML), Simple Exercises in HTML.

Building an E-commerce Presence: [3L]

Concept of an E-commerce Presence, Systematic Approach, Choosing Software & Hardware, Building Mobile Applications

E-commerce Security: [4L]

E-commerce Security Environment, Security Threats, Technology Solutions, Management Policies, Business Procedures, and Public Laws, E-commerce Payment Systems,

Electronic Payment Systems: [5L]

Electronic Payment Systems, Electronic Cash, Smart Cards and Electronic Payment Systems, Credit Card Based Electronic Payment Systems, Risks and Electronic Payment Systems

E-Commerce Business Strategies: [7L]

E-commerce Business Models, Major B2C and B2B business models, How E-commerce Changes Business: Strategy, Structure, and Process. Challenges of Traditional Marketing, Retailing in E-Business Space, Internet Marketing, Advertisement and Display on the Internet, E-Business for Service Industry. EDI, E-CRM and ESCM: Electronic Data Interchange (EDI), E-CRM, E-SCM. The Online Retail Sector, E- tailing Business Models, The Service Sector

Mobile Commerce: [7L]

Overview of M-Commerce - Wireless Application Protocol (WAP), Generations of Mobile Wireless Technology, Components of Mobile Commerce, Networking Standards for Mobiles.

Suggested Readings:

- Kalakota, R., & Whinston, A. B. Frontiers of Electronic Commerce. Pearson Education.
- Laudon, K. C., & Traver, C. G. E-Commerce: Business, Technology, Society (Global Edition, 12th ed.). Pearson Education.
- Loshin, Pete, & Murphy, P. A. Electronic Commerce. Jaico Publishing House.
- Bhaskar, Bharat. Electronic Commerce: Technologies and Applications. Tata McGraw-Hill (TMH).

Course Outcome:

CO1: Leverage E-Commerce platforms to enhance existing businesses or incubate new business ventures.
CO2: Utilize E-Commerce innovations to develop and maintain a competitive advantage.
CO3: Analyze and evaluate the importance of security, privacy, and ethical issues related to E-Commerce.
CO4: Understand procurement and supply chains in the context of B2B E-Commerce and identify major industry trends.

[SM403]: BUSINESS DECISIONS USING ADVANCED EXCEL

Course Objective:

This course equips learners with advanced Excel skills for data analysis and business decision-making. It covers complex formulas, pivot tables, visualization, and financial modelling. Participants will learn scenario planning, automation with macros, and statistical analysis. By the end, they can apply Excel-based solutions to enhance business intelligence and efficiency.

Basics of Excel: [4L]

Concepts of worksheets & workbooks, Menu & Ribbon, Cell Referencing, Entering & Formatting data, Date & Time functions, Text functions.

Visualizing data using Charts and Graphs: [3L]

Tables, Charts, Types of charts, Formatting charts, Dynamic Named Ranges, Dynamic Charting

Functions in Excel: [4L]

Formulas tab, Basic Functions, Statistical functions, financial functions, Logical functions, Mathematical functions like Sum if, Count if etc., Lookup &Reference functions, Engineering functions.

Sorting, Searching and Filtering Data: [4L]

Using functions to find, update and sort data, Auto-Filter, Advanced Filter, Error Proofing, Conditional Formatting, Data Validation

What-If Analysis: [3L]

Data Tables, Goal seek, Scenario Manager, Solver.

Pivot Table Reports & Charts: [3L]

Slicing and Dicing data, Drill down and roll-up

Statistical Analysis: [8L]

Using Data Analysis Add-in, Descriptive Statistics, Scatter plot, Histogram, Rank & Percentile; Correlation, Covariance, Regression, ANOVA, t-test, Z-test, F-test; Time series data Analysis, Moving Average, Exponential smoothing; Random number generation; Sensitivity analysis: Forecasting techniques and Simulation.

Getting External Data: [4L]

Data Cleaning, Audit Tool, Import/ Export Data: Text, Web, Database

Using AI with Excel: [2L]

Application of ChatGPT [2L]10. Case Studies (may include company financial reporting and statement analysis, project finance, event management, personal finance, and investment analysis etc.)

Suggested Readings:

- "Excel Data Analysis for Dummies" – Stephen L. Nelson
- "Microsoft Excel 365 Data Analysis and Business Modeling" – Wayne L. Winston
- "Excel Power Pivot & Power Query For Dummies" – Michael Alexander
- "Financial Modeling Using Excel and VBA" – Chandan Sengupta
- "Data Smart: Using Data Science to Transform Information into Insight" – John W. Foreman
- "Advanced Excel Reporting for Management Accountants" – Neale Blackwood
- "Professional Excel Development" – Rob Bovey, Dennis Wallentin, Stephen Bullen, John Green

Course Outcome:

CO1: Apply advanced Excel functions, formulas, and data analysis tools to support business decision-making.

CO2: Utilize pivot tables, charts, and visualization techniques to interpret and present business data effectively.

CO3: Implement scenario analysis, financial modeling, and forecasting techniques for strategic planning.

CO4: Automate repetitive tasks using macros and VBA to improve efficiency and productivity in business process

OPERATION AND SUPPLY CHAIN SPECIALISATION

[OP401]: TOTAL QUALITY MANAGEMENT

Course Objective:

To give the students an overview of quality and TQM and explaining the salient contributions of Quality Gurus like Deming, Juran and Crosby. General barriers in implementing TQM.

Introduction to Quality Management: [8L]

Introduction – Need for quality – Evolution of quality – Definition of quality – Dimensions of product and service quality – Definitions – Basic concepts of TQM – Gurus of TQM (Brief introduction) —TQM framework, benefits, awareness, and obstacles. Quality – vision, mission, and policy statements. Customer Focus – customer perception of quality, Translating needs into requirements, customer retention. Dimensions of product and service quality. Cost of quality.

Principles and philosophies of quality management: [8L]

Overview of the contributions of Deming, Quality Council, Quality statements and Strategic planning Customer Satisfaction, Customer complaints, Service Quality, Kano Model and Customer retention – Employee involvement – Motivation, Empowerment, Team and Teamwork, Recognition & Reward and Performance Appraisal– Continuous process improvement – Juran, Juran Trilogy, Crosby, Masaaki Imai, Feigenbaum, Ishikawa, PDSA cycle, 5S and Kaizen, Taguchi techniques – introduction, loss function, parameter and tolerance design, signal-to-noise ratio. Japanese 5S principles and 8D methodology– Supplier partnership – Partnering, Supplier selection, Supplier Rating and Relationship development.

Statistical process control and process capability: [8L]

Meaning and significance of statistical process control (SPC) – construction of control charts for variables and attributes. Process capability – meaning, significance and measurement – Six sigma concepts of process capability. Reliability concepts – definitions, reliability in series and parallel, product life characteristics curve. Total productive maintenance (TPM) – relevance to TQM. Business process re-engineering (BPR) – principles, applications, reengineering process, benefits and limitations.

Tools and techniques for quality management: [8l]

Quality functions development (QFD) – Benefits, Voice of the customer, information organization, House of quality (HOQ), building a HOQ, QFD process. Failure mode effect analysis (FMEA) – requirements of reliability, failure rate, FMEA stages, design, process, and documentation. Seven old (statistical) tools. Seven new management tools. Benchmarking and POKA YOKE– Reasons to benchmark, Benchmarking process, What to

Bench Mark, Understanding Current Performance, Planning, Studying Others, learning from the data, Using the findings, Pitfalls and Criticisms of Benchmarking- Concepts of Quality circles – Quality Function Deployment (QFD)– TPM – Concepts, improvement needs – Performance measures- Cost of Quality – BPR.

Quality systems organizing and implementation: [8L]

Introduction to IS/ISO 9004:2000 – quality management systems – guidelines for performance improvements. Quality Audits. TQM culture, Leadership – quality council, employee involvement, motivation, empowerment, recognition, and reward- Introduction to software quality.

Suggested Readings:

- Dale H. Besterfiled, at., "Total Quality Management", Pearson Education Asia, Third Edition, Indian Reprint (Pg.2006).
- James R. Evans and William M. Lindsay, "The Management and Control of Quality", 6th Edition, South-Western (Pg. Thomson Learning), 2005.
- Oakland, J.S. "TQM – Text with Cases", Butterworth – Heinemann Ltd., Oxford, 3rd Edition
- Janakiraman, B and Gopal, R.K, "Total Quality Management – Text and Cases", Prentice

Course Outcome:

CO1: To Evaluate the principles of quality management and to explain how these principles can be applied within quality management systems.

CO2: To Identify the key aspects of the quality improvement cycle and to select and use appropriate tools and techniques for controlling, improving, and measuring quality.

CO3: To create Critically appraise the organizational, communication and teamwork requirements for effective quality management.

CO4: To Critically analyse the strategic issues in quality management, including current issues and developments, and to devise and evaluate quality implementation plans.

[OP-402]: STRATEGIC SUPPLY CHAIN MANAGEMENT

Course Objective:

This course is intended to introduce the major building blocks, major functions, major business processes, performance metrics, and major decisions (strategic, tactical, and operational) in supply chain networks and to provide an insight into the role of Internet Technologies and Electronic Commerce in supply chain operations and to discuss technical aspects of supply chain management.

Introduction to SCM and Relationship concerns in integrated Supply Chain Management: [4L]

Meaning, Importance, Overview, Objective, Process Overview, Process tools, Supply chain dynamics, A model of SCM, focus areas in SCM, Change Drivers, Evolution of SCM, Types of Cargoes. Cross docking warehousing, Agile SCM, Green SCM, Maritime SCMs, Managing Supply Chain Relationships, Internal Supply Chain Relationship Management, Roles and Skills for managing Logistics Relationships, External Relationships in Supply Chain Management, Types of Supply Chain Relationships, Case studies on SCM

Supply Chain Network Design and Demand Management: [3L]

Logistics and SCM Network design, Integrated SCM Planning, Strategic Importance of Logistics/SCM network planning, Factors influencing network design decisions, Major Locational determinants, Framework - Design – and Functions, Types and Functions of Distribution Channel, Physical Distribution Management, Tasks in Physical Distribution Channel, Economic of distribution, Channel Relationships, Logistics service alliances, Alliances, Modelling approaches to Logistics/ Supply chain network design, Strategic Planning of logistics. Supply chain network, Demand Management, Relationship between customer service and demand management, Performance measures for customer service. Demand management process, The Role of forecasting and production, Nature of forecasting, Basic approach to demand forecasting, collaborative planning, forecasting and replenishment (CPFR), Customer service, Elements of customer service, how to establish customer service strategy, Customer service audit, Development of Customer service standards Case studies on Supply Chain Network Design and Demand Management

Customer & Supplier Relationship Management: [3L]

Customer Relationship Management Strategy, Evolution of CRM, The CRM Process, Technical Aspects of CRM, Widening Scope of CRM Systems, Implementing CRM Systems, Supplier Relationship Management, Challenges in Supplier Relationship Management, Supply Chain Relationship Management Software

Supply Chain Planning and Strategies [4L]

Aggregate planning in a supply chain, Aggregate planning strategies, Planning supply and demand in a supply chain, Planning and managing inventories in a supply chain, planning for optimal level of product availability, Supply chain strategies, Strategy classification, Corporate strategy, Logistics strategies, Strategic fit, Achieving strategic fit, Supply chain strategies, Supply chain strategy framework

Strategic Sourcing: [4L]

Supply Chain Sourcing Strategy framework, Developing Successful Sourcing Strategies, The Strategic Sourcing Process, Strategic Sourcing Initiatives

Facility Location and Network Design: [4L]

Facility Location Strategies, Critical Location Factors, Facility Location Models, Strategic Importance of Logistics Network Design, Logistics Network Design Process

Collaborative Planning, Forecasting and Replenishment: [5L]

CPFR Model, CPFR Activities, CPFR Organizational Implications, Supply Chain Integration: Challenges and Good Practices.

Global Logistics for Effective Supply Chain Management: [5L]

Emergence of Global Logistics and Supply Chain, Global Logistics Process, Incoterms, Contain erisation, Types of Containers, Logistics Outsourcing

Global Supply Chain Management: [4L]

Overview of Global Supply Chain, Global Supply Chains under Uncertainties/Risks, Global Competitiveness through Lean SCM, Challenges in Global SCM, Import Supply Chain

IT & IS in Supply Chain Management: [4L]

Information Technology in Supply Chain Management, Barcodes, Internet, Intranet, Extranet, Web Portals, E-Business and the Supply Chain

Suggested Readings:

- Strategic Supply Chain Management: The Five Core Disciplines for Top Performance, Second Editon Hardcover – 16 Jul 2013 by Shoshanah Cohen, Joseph Roussel
- Supply Chain Management Best Practices Hardcover 2010 by David Blanchard
- Essentials of Supply Chain Management (Essentials Series) ,2018 by Michael H. Hugos

Course Outcome:

CO1: Take decisions with regards to the supply chain that reflect the overall corporate strategy that the organization is following.

CO2: Apply theories, concepts, and models to analyze practical situations, suggest improvements in actual practice and design a supply chain management set-up for firms in different industries and situations.

CO3: Identify structure and discuss a complex theoretical issue within the supply chain management arena.

CO4: Ability to give recommendations competently and intelligibly on improvement of corporate supply chain management practice.

CO5: Manage a complex network of companies that we call the supply chain.

[OP403]: PROJECT MANAGEMENT (OPERATIONS)

Course Objective:

The objectives of this course are to make the students able to plan monitor and control project and project related activities.

Project Management Concepts: [4L]

Concept and Characteristics of a Project, Meaning, Nature, Importance of Project Management, Types of Projects and Project Life Cycle, Project Management, Nature and scope of Project Management, Project Management as a Profession, Role of Project Manager.

Resource Allocation and Levelling: [2L]

Project Planning &Scheduling: [10L]

Importance of Project Planning, Steps of Project Planning, Project Scope, Work Breakdown Structure (WBS) and Organization Breakdown Structure (OBS). Importance of Project Scheduling, Work Breakdown Structure and Organization Breakdown Structure, Scheduling Techniques - Gantt chart and LOB, Network Analysis - CPM/PERT. Case Studies.

Project Buying: [4L]

Projects Procurement Process, Life – cycle Costing, Project Cost Reduction methods, Project Stores, Organization & HRD issues, Computerization.

Investment Feasibility Studies: [6L]

Managing Project Resources Flow; Project Cost – Capital & Operating; Forecasting Income, Estimation of Investment & ROI, Project Evaluation, Financial Sources, Appraisal Process. Case Studies**.**

Issues in Project Management: [4L]

Project Monitoring & MIS, Cost Control, Real Time Planning, Intangibles

Project Quality Management: [4L]

Concept of Project Quality, TQM in Projects, Project Audit.

Case study: [1L]

Suggested Readings:

- Gopalkrishnan P. and Rama Mmoorthy: Textbook of Project Management, Macmillan
- Nicholas John M.: Project Management for Business and Technology - Principles and Practice, Prentice Hall India, 2nd Ed.
- Levy Ferdinand K., Wiest Jerome D: A Management Guide to PERT/CPM with GERT/PDM/DCPM and other networks, Prentice Hall India, 2nd Edn.
- Mantel Jr., Meredith J. R., Shafer S. M., Sutton M. M., Gopalan M. R.: Project Management: Core Textbook, Wiley India, 1st Indian Edn.
- Maylor H.: Project Management, Pearson, 3rd Edn.
- Nagarajan K.: Project Management, New Age International Publishers, 5th Edn.
- Kelkar. S.A, Software Project Management: A concise Study, 2nd Ed., PHI
- Chandra, Prasanna – Projects (6th Edition); TMH
- Clements and Gido – Effective Project Management; Thomson Learning

Course Outcomes:

CO1: The students can apply scope, cost, timing, and quality of the project.

CO2: To analyze project management knowledge, processes, life cycle and the embodied concepts, tools and techniques to achieve.

CO3: To apply technology tools for communication, collaboration, information management and decision support.

CO4: Understand the entrepreneurial decision-making process – from business model design to the launch of the new venture.

CO5: The students can apply entrepreneurial and teamwork skills in finding, evaluating and beginning the process of implementing new venture concepts.

DATA SCIENCE AND DATA ANALYTICS SPECIALISATION

[DSA401]: R PROGRAMMING FOR DATA SCIENCE

Course Objective:

This course is designed to introduce management students to R programming as a fundamental tool for data analysis and business decision-making. The focus is on developing programming skills to manipulate, analyze, and visualize business data efficiently. By the end of the course, students will be able to apply R programming techniques to solve real-world business problems in marketing, finance, operations, and HR analytics.

Introduction to R & Business Applications: [5L]

Overview of R Programming and its Relevance in Business Analytics, Installation and Setup of R and RStudio, Basic Syntax, Data Types, and Operators in R, Writing Functions, Control Structures (Loops & Conditionals), Business Use Cases of R Programming

Data Structures in R for Business Analytics: [5L]

Understanding Data Types: Numeric, Character, Logical**,** Data Structures: Vectors, Matrices, Lists, and Data Frames**,** Indexing and Sub setting Data for Business Applications**,** Handling Missing Data and Data Cleaning**,** Case Study: Customer Data Processing

Importing and Exporting Business Data: [6L]

Importing Data from CSV, Excel, JSON, and Databases, Writing and Exporting Data for Business Reporting, Data Manipulation using dplyr (Filtering, Sorting, Aggregating), Case Study: Preparing Marketing Data for Analysis

Data Visualization for Business Insights: [8L]

Introduction to ggplot2 for Business Data Visualization, Creating Bar Charts, Line Graphs, Pie Charts, and Heatmaps, Financial & Market Trend Visualizations, Interactive Dashboard Development in R with Shiny, Case Study: Sales Trend Analysis Using Visuals

Business Statistics in R: [8L]

Descriptive Statistics for Business Decision Making, Probability Distributions and Business Applications, Correlation and Regression Analysis for Business Forecasting, Hypothesis Testing: t- Test, ANOVA, and Chi-Square Test, Case Study: Customer Satisfaction Analysis

Basic Predictive Analytics in R: [8L]

Introduction to Predictive Analytics for Business, Simple & Multiple Linear Regression for Business Forecasting, Logistic Regression for Customer Churn Prediction, Model Performance Evaluation: RMSE, R^2, Case Study: Predicting Employee Attrition.

Suggested Readings:

- Grolemund, G., & Wickham, H. (2017). R for Data Science: Import, Tidy, Transform, Visualize, and Model Data. O'Reilly Media.
- Thareja, R. (2021). Data Science and Machine Learning with R. McGraw Hill.
- James, G., Witten, D., Hastie, T., & Tibshirani, R. (2021). An Introduction to Statistical Learning with Applications in R. Springer.

Course Outcomes (COs)

CO1: Develop proficiency in R programming for business data manipulation, analysis, and visualization.

CO2: Import, clean, and preprocess business data for statistical analysis and predictive modeling.

CO3: Apply data visualization techniques to extract meaningful business insights for decision-making.

CO4: Use basic statistical methods and regression models to forecast business trends and automate data-driven decision-making.

[DSA402]: MACHINE LEARNING ALGORITHMS IN BUSINESS

Course Objectives

This course aims to introduce management students to machine learning techniques and their applications in solving business problems. The focus is on developing an understanding of various supervised and unsupervised learning algorithms, their implementation in a business context, and their impact on decision-making. The course will equip students with the ability to apply machine learning models to real-world business scenarios such as customer segmentation, demand forecasting, and fraud detection.

Introduction to Machine Learning & Business Applications: [5L]

Overview of Machine Learning in Business Decision Making, supervised vs. Unsupervised Learning: Key Concepts & Differences, Business Applications of Machine Learning: Marketing, Finance, HR, Operations, Introduction to ML Workflow: Data Collection, Pre-processing, Model Building, and Deployment, Implementing ML Models.

Data Pre-processing& Feature Engineering using Python: [6L]

Understanding Business Data and Identifying Key Features, Handling Missing Values and Outliers in Business Data, Feature Scaling and Normalization, Feature Selection Techniques for Business Problems, Encoding Categorical Variables and Handling Imbalanced Datasets

Supervised Learning – Regression Models for Business in Python: [8L]

Simple & Multiple Linear Regression for Business Forecasting, Logistic Regression for Classification Problems (Customer Churn, Fraud Detection), Evaluating Regression Models: RMSE, R^2, MAE, Case Study: Predicting Customer Lifetime Value (CLV)

Supervised Learning – Classification Algorithms for Business in Python: [8L]

Decision Trees & Random Forest for Customer Segmentation, Support Vector Machines (SVM) for Credit Scoring and Risk Assessment, Naïve Bayes for Spam Detection and Sentiment Analysis, Evaluating Classification Models: Confusion Matrix, Precision, Recall, F1-Score, Case Study: Fraud Detection in Financial Transactions

Unsupervised Learning – Clustering & Association Rule Mining: [8L]

K-Means Clustering for Market Segmentation, Hierarchical Clustering for Customer Profiling, Principal Component Analysis (PCA) for Dimensionality Reduction in Business Data, Association Rule Mining for Market Basket Analysis (Apriori & FP-Growth), Case Study: Product Recommendation System in E-Commerce

Capstone Project & Business Case Studies: [5L]

Solving Real-World Business Problems using Machine Learning, Case Studies in Marketing, Financial, HR, and Operational Analytics, Industry-Based Capstone Project Presentation

Suggested Readings:

- Géron, A. (2019). *Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow*. O'Reilly Media.
- Motwani, B. (2020). *Data Analytics using Python*. Wiley.
- Pradhan, M., & Kumar, U. D. (2019). Machine Learning using Python. Wiley.

Course Outcomes (COs)

CO1: Understand and apply machine learning algorithms to solve real-world business problems in marketing, finance, operations, and HR analytics.

CO2: Develop predictive models for business forecasting, customer segmentation, and risk assessment.

CO3: Utilize unsupervised learning techniques such as clustering and association rule mining for strategic business insights.

CO4: Implement AI and ML applications for enhancing customer experience, automating business processes, and optimizing decision-making.

[DSA403]: APPLICATION OF AI IN BUSINESS

Course Objectives

This course aims to provide management students with a comprehensive understanding of Artificial Intelligence (AI) and its applications in various business domains. The focus is on leveraging AI- driven techniques to improve decision-making, optimize business processes, enhance customer experiences, and gain a competitive advantage. Students will gain hands-on experience in applying AI technologies such as machine learning, deep learning, natural language processing, and automation in business scenarios.

Introduction to AI and Business Applications: [5L]

Overview of Artificial Intelligence and its Evolution, Role of AI in Business Decision-Making, AI vs. Traditional Business Analytics, Key AI Technologies: Machine Learning, Deep Learning, NLP, Computer Vision, Business Use Cases of AI in Marketing, Finance, HR, and Operations

AI in Data-Driven Business Decision Making: [5L]

Understanding Data-Driven Decision Making, AI-Powered Predictive and Prescriptive Analytics, AI for Business Forecasting and Trend Analysis, Case Study: AI in Financial Market Prediction

AI in Marketing and Customer Experience: [8L]

AI-Powered Customer Segmentation and Targeting, Recommendation Systems (Collaborative Filtering, Content-Based Filtering), AI in Chatbots and Virtual Assistants, Sentiment Analysis for Customer Feedback, Case Study: AI-Based Personalized Marketing Campaigns

AI in Operations and Supply Chain Management: [8L]

AI for Inventory Management and Demand Forecasting, Intelligent Automation in Logistics and Warehousing, AI for Risk Management and Fraud Detection, AI in Process Optimization and Quality Control, Case Study: AI-Driven Supply Chain Optimization

AI in Human Resource Management: [8L]

AI for Talent Acquisition and Recruitment Automation, AI in Employee Performance Analysis, AI- Based Workforce Planning and Attrition Prediction, Sentiment Analysis for Employee Engagement, Case Study: AI in HR Analytics

Ethical Considerations and Future Trends in AI: [6L]

Ethical Challenges and Bias in AI Decision-Making**,** Regulatory and Compliance Aspects of AI in Business**,** Explainable AI (XAI) and Trustworthy AI**,** Future of AI: Trends, Challenges, and Opportunities in Business**,** Case Study: Ethical Dilemmas in AI Adoption

Suggested Readings:

- Pradhan, M., & Kumar, U. D. (2019). *Artificial Intelligence and Machine Learning for Business Applications*. Wiley.
- Russell, S., &Norvig, P. (2020). *Artificial Intelligence: A Modern Approach*. Pearson.
- Daugherty, P., & Wilson, H. J. (2018). *Human + Machine: Reimagining Work in the Age of AI*. Harvard Business Review Press.
- Sharda, R., Delen, D., & Turban, E. (2020). *Business Intelligence, Analytics, and Data Science: A Managerial Perspective*. Pearson.

Course Outcomes (COs)

CO1: Understand and apply AI-driven techniques to solve complex business challenges across marketing, finance, HR, and operations.

CO2: Develop AI-based predictive and prescriptive models to enhance business decision-making and strategy formulation.

CO3: Implement AI solutions such as recommendation systems, fraud detection, and chatbot automation to improve customer and employee experiences.

CO4: Assess the ethical, regulatory, and risk considerations of AI implementation in business environments.

HEALTHCARE AND HOSPITAL ADMINISTRATION

[MHH401]: PUBLIC HEALTH SYSTEM & OUTREACH PROGRAMMES

Course Objectives:

The objective of the course is to equip students with the knowledge and skills required to manage hospital operations efficiently and effectively. It focuses on enhancing students' understanding of healthcare systems, optimizing operational processes, and ensuring quality patient care while maintaining cost-effectiveness. Students will gain insights into planning, resource allocation, and evaluation of hospital services.

Basic concepts of Epidemiology: [10L]

Basic concepts of Epidemiology and methods of Epidemiology and application to the variety of disease problems – Health for all and primary Health care, Clinical trials – community trails – ethical considerations, inference from epidemiological studies.

National Health Programmes: [10L]

NHP related to Communicable diseases- Malaria, Filarial, Tuberculosis, Leprosy, AIDS, and STD National Health Programmes related to non-communicable diseases – Cancer, Blindness, Diabetes, and Mental Health-Reproductive and child health programme (RCH)-Health related national programmes, Integrated Child development scheme, water supply and sanitation, minimum needs programme.

Alcoholism and Drug Dependency: [7]

Alcohol and alcoholism, opiod drug use, cocaine and other commonly abused drugs, nicotine addiction – setting up de-addiction and rehabilitation centers.

Environmental and Occupational hazards: [5L]

Hazards of environment and work place, Sterilizations, Autoclaves, Waste disposal management (Solids and Liquids), Incinerators.

Emergency Epidemic Management System: [8L]

Safety systems, Immunization and Isolation systems, Communication systems, Public Health Service Systems, Health and Population policy and Strategies, District Health Organization, Regionalization of health care.

Suggested Readings:

- Gilienfeld, FOUNDATION OF EPIDEMIOLOGY
- Brilliant Lawrence, SMALLPOX ERADICATION IN INDIA
- Ronald Gold et.el., PRE-TEST SELF ASSESSMENT AND REVIEW PRINCIPLES OF INTERNAL MEDICINE HARRISONS Volume 2

Course Outcome:

CO1: Develop a comprehensive understanding of the structure and functioning of healthcare systems, including hospital departments, workflows, and patient management.

CO2: Apply techniques for improving operational efficiency, including resource planning, supply chain management, and process optimization in a hospital setting.

CO3: Evaluate and implement quality control measures to ensure high standards of patient care and satisfaction.

CO4: Analyze data to make informed decisions regarding hospital operations, budgeting, and policy development.

CO5: Demonstrate the ability to leverage technology and innovation for hospital operations, including the use of electronic health records (EHRs), telemedicine, and hospital information systems.

[MHH402]: ORGANIZATION AND MANAGEMENT OF SUPPORT & UTILITY SERVICES

Course Objective:

The course provides a framework for health systems and managing Hospital Support Services, covering the concepts of medical tourism, provides basic knowledge of disasters and their consequent effects and basic skills of managing situations during and after disasters. The objectives of this course is to enable the students, gain insights into various aspects like importance, functions, policies and procedures, equipping, controlling, co- ordination, communication, staffing, reporting and documentation of different support and utility areas and understand the processes and details related to effective patient care and to further increase the satisfaction level of patients.

Diagnostic Services Radiology: [10L]

Types of services, functional areas, radiation hazards and its preventive measures Laboratory: Functional components of Lab, laboratory hazards, quality assessment in Labs, NABL accreditation Blood Bank & Transfusion services: Blood donation criteria, transfusion reaction, blood components, organization of a blood donation camp. Nuclear Medicine: Imaging Services offered, administrative and legal considerations.

Hospital Support Services Central Sterile Supply Department (CSSD): [10L]

Functional areas, different sterilization processes, supply distribution systems. Pharmacy Services: Role and types of pharmacies, in-patient medication management, drug distribution systems. Medical Records Department: Types of medical records, Importance of medical records, Organizations & management of Medical Records Department; Coding, Indexing, Filing and Storage of Medical records, Statistical information and reports generated by MRD Rehabilitation services; and Mortuary Services.

Utility Services: [7L]

Management of Hospital Dietetics services, Hospital Linen and Laundry Systems, Security and Housekeeping services, Basic and Allied Engineering services.

Disaster Management: [5L]

Classification of Disasters, Effects of disasters, Phases of Disaster Management, Fire Safety, Hospital Disaster Management Plan.

Medical Tourism [8L]

History of medical tourism, Medical Tourism Value Chain, Strategies to develop Medical Tourism in India, Medical Tourism Drivers and factors, Government initiatives in medical tourism.

Suggested Readings:

- Principles of Hospital Administration & Planning: B M Sakharkar.
- Modern trends in Planning and designing of Hospitals: Principles and Practice: Shakti Kumar Gupta, Sunil Kant, R Chandrashekhar.
- Hospitals: Facilities Planning and Management, GD Kunders & Gopinath, by Tata McGraw Hill.
- Management of Hospitals: S L Goel, R Kumar.
- Hospital Management in Tropics & Subtropics: James A William, McMillan, London

Course Outcome:

CO1: Gain insights into various aspects like importance, functions, policies and procedures, equipping, controlling, co-ordination, communication, staffing, reporting and documentation of support services and utility services of a hospital.

CO2: Well versed with the Bio-medical waste management.

CO3: Explain the elements of an organizational crisis and disaster plan.

CO4: Understand foundations of hazards, disasters and associated natural/social phenomena., Familiarity with disaster management theory (cycle, phases), Methods of community involvement as an essential part of successful DM

CO5: Understand the strength, weaknesses, opportunities and challenges of medical tourism in India

[MHH403]: HEALTH PROMOTION APPROACHES AND MANAGEMENT

Course Objective:

The course gives students an understanding of health promotion at individual, group, community, and national levels, as well as their critical thinking around the social determinants of health approaches to health interventions. Course Objective: The objective of this course is to Introduce different models of communication for use in health promotion activities and community-based activities. Course Outcomes: On completion of this course, the students will be able to:

Basics of Health Communication and Health Education [12L]

Communication Process, Functions and Types, Barriers to communication, Methods of Health Communication, Mass communication, Doctor patient communication, Community Participation – Concepts and Types; Health Education – its approaches, principles and models.

Social and Cultural Context to Health [10L]

Health Belief Model, Culture and Health, Cultural Competency, Sociology and Health, Social determinants of Health, Approaches to social perspectives on Health, Medical Anthropology, Factors influencing Healthcare service utilization, Biopsychosocial Model.

Information, Education and Communication (IEC) Strategies [12L]

IEC situation assessment – methods of data collection, Different Mediums of communication and their advantages & disadvantages, Education material development and dissemination; IEC program planning, implementing, monitoring and evaluating; District infrastructure of IEC.

Behaviour Change Communication [6L]

Factors influencing behavior, Phases of Behavior Change, developing effective behavior change communication, Target Audience Segmentation.

Suggested Readings:

- Ahmed Manzoor. Community Participation: The Heart of Primary Health Care, International council for education, Essex.
- Bhat Anil. Community-involvement in Primary Health Care, Public systems group, IIM.
- Behaviour Change through Mass communication, AIDS control and prevention Project, Family Health International, USAID.

Course Outcome:

CO1: Describe the role and importance of communication in health care.

CO2: Identify steps communication planning process and develop a health communication plan and strategy. CO3: Analyze matrix of targeted behaviour, audience, key messages, media choice, indicators of change.

CO4: Describe dimensions of Interpersonal Communication and PLOT.

CO5: Describe approaches to Media Advocacy, basic principles and approaches to Counselling

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