

MBA Semester 1

Course Name: **Organisational Behaviour**

Syllabus

Unit 1: Introduction

- Management and Organizational Behavior
- Individual and Cultural Differences

Unit 2: Perception

- Perception and Job Attitudes
- Learning and Reinforcement

Unit 3: Diversity in Workforce

- Diversity and Workforce
- Challenges of Diversity
- Recommendations for Managing Diversity
- Managerial Decision Making

Unit 4: Optimising Decision Making, Motivation and Performance Management

- Barriers to Effective Decision Making
- Improving Quality of Decision Making
- Work Motivation for Performance
- Process Theories for Motivation

- Performance Appraisals and Reward

Unit 5: Building and Managing Diverse Work Teams

- Group and Intergroup Relations
- Managing Effective Work Group
- Understanding and Managing Work Team, Multicultural Team

Unit 6: Strategic Leadership and Effective Communication

- Managerial Communication and Corporate Reputation
- Leadership Needs in the 21st Century
- Approaches to Leadership

Unit 7: Navigating Power, Politics and Conflicts in Organisation

- Power in Interpersonal Relationships
- Political Behavior in Organization
- Resolving Conflicts in Organization

Unit 8: Adapting to Environmental Changes: Negotiation, Structure and Dynamics

- Negotiation Behavior

- External and Internal Organizational Environment
- Organization Structure and Change

Unit 9: HRM and Entrepreneurship

- Human Resource Management and Compliance
- Coping with Work-Related Stress
- Overview of Entrepreneurship
- Optimal Support for Entrepreneurship

Course Name: **Principles of Accounting**

Syllabus

Unit 1: Introduction to Accounting

- Introducing
- Meaning, utility
- Definition of Accounting
- Types of Accounting

Unit 2: Accounting Principles & Concepts

- Financial Accounting vs. Management Accounting
- Accounting Principles
- Kinds of Accounting Principles

- Accounting Concepts

Unit 3: Introduction to Journal

- Introduction, Meaning
- Journalizing
- Format of Journal
- Opening entry

Unit 4: Journal Entries

- Types of Journal Entry
- Advantages of Journal
- Debit & Credit

Unit 5: Subsidiary Books - I

- Introduction, Meaning
- Needs
- Uses of Subsidiary Book
- Purchase Book

Unit 6: Subsidiary Books - II

- Purchase Return Book
- Sales Book
- Sales Return Book
- Cash Book

- Petty Cash Book

Unit 7: Introduction to Trial Balance

- Introduction, Meaning
- Objective of Trial Balance
- Advantages & disadvantages
- Purpose of Trial Balance

Unit 8: Preparation of Trial Balance

- Preparation of Trial Balance
- Format
- Methods of preparation
- Types of Trial Balance
- Balancing
- Meaning of balances

Unit 9: Final Accounts

- Introduction, Meaning
- Objectives and importance of Final Accounts
- Trading Account
- Balancing of Trading Account
- Profit & Loss Account
- Balance Sheet

- Features of Balance Sheet
- Difference between Trial Balance and Balance Sheet
- Adjustments - Closing stock, Prepaid expenses, Outstanding expenses & Depreciation

Course Name: **Managerial Economics**

Syllabus

Unit 1: Introduction to Managerial Economics

- Nature and scope of Managerial Economics
- Nature and scope of Managerial Economics, its relationship with subjects.
- Objective of Firm

Unit 2: Basic Economic Concepts

- Fundamental Economic concepts - Opportunity cost concept,
- Incremental concept,
- Principle of the perspective,
- Discounting principle and Equimarginal principle.

Unit 3: Demand and Elasticity of Demand

- Demand Analysis: Concept and importance of Demand & its determinants,
- Income & Substitution effect,
- Various elasticities of demand,
- Using elasticities in managerial decisions.

Unit 4: Concept of Revenue and Demand Forecasting

- Revenue concepts,
- Relevance of demand forecasting,
- Methods of demand forecasting.

Unit 5: Concept of Cost

- Cost Concept and Production Theory: Various cost concepts & classifications,
- Cost output relationship - in short run and in long run (cost curves).

Unit 6: Production Function and Indifferent Curves

- Economies of scale,
- Cost control and cost reduction,
- Managerial uses of production function,
- Indifferent curves.

Unit 7: Pricing Decisions

- Pricing Decisions: Pricing methods,
- Price Discrimination.

Unit 8: Price and Output Decisions Under Different Market Structures

- Price and output decisions under different market structures - Perfect competition,
- Monopoly and Monopolistic Competition,
- Oligopoly.

Unit 9: Concept of Profit & Inflation

- Profit & Inflation: Profit,
- Functions of profit,
- Profit maximization.
- Break Even analysis,
- Inflation - Types, in terms of demand pull & cost factors,
- Effects of inflation.

Course Name: **Principles of Management**

Syllabus

Unit 1: Basic concepts of management

- Definition of Management
- Need of Management Principles
- Management Science or Art
- Management as an Art
- Management as Science
- Management as both Science and Art

Unit 2: The working of management

- Functions of Management
- Needs of Levels of Management
- Levels of Management
- Managerial Skills
- Managerial Roles

Unit 3: Different approaches to management

- Early Approaches to Management
 - o Robert Owen: Human Resource Management Pioneer
 - o Charles Babbage
 - o Andrew Ure & Charles Dupin
 - o Henry Robinson Towne
- Classical Approach
- Scientific Management

- o 4 Steps of Scientific Management
- o Taylor's Approach to Management
- o Limitation of Scientific Management
- Administrative Theory
 - o Fayol Outlined 14 Principles of Management

Unit 4: Additional approaches to management

- Bureaucratic Management
 - o Mary Parker Follet: Focusing on Group Influences
 - o Elton Mayo: Focusing on Human Relations
 - o Four Parts of Hawthorne Studies / Experiments
 - o Conclusions of Hawthorne Studies / Experiments
 - o Criticism of Hawthorne Studies / Experiments
 - o Abraham Maslow: Focusing on Human Needs
 - o Douglas McGregor
 - o Chris Argyris
- Quantitative Approach
 - o Management Science o Operations Management
- Modern Approaches to Management→

- o Systems Theory
- o Contingency Theory

Unit 5: Social responsibilities of management

- Social Responsibilities of Management
- Arguments for Social Responsibilities of Business
- Arguments Against Social Responsibilities of Business
- Social Stakeholders

Unit 6: Social responsiveness and managerial ethics

- Measuring Social Responsiveness
 - o Social Audits
- Managerial Ethics
 - o Factors that Influence Ethical Behavior
 - o Stages of Moral Development
 - o Ethical Guidelines for Managers
 - o Geographic Segmentation.

Unit 7: Span of Control

- Meaning of Span of Control
- Importance of Span of Control
- Factors Affecting Span of Control
- Graicuna's Formula

Unit 8: Rational decision making and decision making process

- Introduction
- Significance of Rational Decision Making
- Limitations of Rational Decision Making
- Managers as Decision Makers
 - o The Rational Model
 - o Non-Rational Model
- Decision Making Process
- Types of Managerial Decisions
 - o Decision Making Under Certainty
 - o Decision Making Under Risk
 - o Decision Making Under Uncertainty
 - o Modern Approaches to Decision-making under Uncertainty

Unit 9: MIS, DSS and approaches to decision making

- Management Information System Vs Decision Support System
- The Systems Approach to Decision Making
- Group Decision Making

- o List of the advantages of Group Decision Making
- o List of the disadvantages of Group Decision Making
- o Forms of Group Decision Making
- Decision Making Techniques.

Course Name: **Quantitative Techniques**

Syllabus

Unit 1: Introductions

- Introducing
- Meaning
- Definition and Characteristics of Statistics
- Statistics as a Scientific Method
- Statistics as a Science or an Art

Unit 2: Importance and Scope of Statistics

- Importance of Statistics
- Scope of Statistics
- Limitations of Statistics

Unit 3: Introduction to Classification and Types

- Classification
- Types of Classification
- Formation of a Frequency Distribution
- Construction of a Discrete Frequency Distribution
- Construction of a Continuous Frequency Distribution

Unit 4: Frequency Distribution

- Relative or Percentage Frequency Distribution
- Cumulative Frequency Distribution
- Frequency Density
- Bivariate and Multivariate Frequency Distributions

Unit 5: Tabulation

- Objectives of Tabulation
- Difference between Classification and Tabulation
- Main Parts of a Table
- Type of Tables
- Methods of Tabulation

Unit 6: Diagrammatic Presentation of Data

- Diagrammatic Presentation - Advantages, Limitations, General Rules for Making Diagrams, Choice of a Suitable Diagram
- Bar Diagrams
- Circular or Pie Diagrams

Unit 7: Methods and Source of Data Collection

- Pictogram and Cartogram (Map Diagram)
- Collection of Data
- Method of Collecting Data - Drafting a Questionnaire or a Schedule
- Sources of Secondary Data - Secondary Data

Unit 8: Average and Arithmetic Mean

- Introduction
- Average - Functions of an Average, Characteristics of a Good Average, Various Measures of Average
- Arithmetic Mean - Calculation of Simple Arithmetic Mean, Weighted Arithmetic Mean, Properties of Arithmetic Mean, Merits and Demerits of Arithmetic Mean

Unit 9: Median and Mode

- Median - Determination of Median, Properties of Median, Merits, Demerits, and Uses of Median
- Mode - Determination of Mode, Merits and Demerits of Mode, Relation between Mean, Median, and Mode

Course Name: AI & Data-Driven Decision Making

Syllabus

Chapter 1: Foundations of AI & Machine Learning for Managers

- Introduction to AI, Machine Learning, and Deep Learning
- Types of AI: Narrow AI, General AI, Generative AI
- Supervised vs Unsupervised Learning
- AI lifecycle: Data → Model → Deployment → Feedback
- Business implications of AI adoption
- Limitations and risks of AI systems

Chapter 2: Data-Driven Decision Frameworks (PwC Methodology)

- Evolution from intuition-based to data-driven decision-making
- PwC decision intelligence frameworks
- Data maturity models
- KPI design and performance analytics
- Decision trees and scenario analysis
- Role of dashboards and business intelligence tools

Chapter 3: GenAI Tools Landscape: ChatGPT, Claude & Gemini

- Overview of the Generative AI ecosystem
- Comparative analysis: ChatGPT, Claude, Gemini
- Fundamentals of prompt engineering
- Applications of GenAI in business workflows
- Limitations: hallucination, reliability, and data privacy

Chapter 4: Identifying AI Use Cases Across Business Functions

- AI applications in Marketing, Finance, HR, Operations, and Supply Chain
- Value identification: efficiency vs innovation

- Use case prioritisation frameworks
- ROI estimation and feasibility analysis
- Case studies of AI adoption in Indian enterprises

Chapter 5: AI Ethics, Bias Detection & Fairness Frameworks

- Ethical challenges in AI
- Types of bias: data bias, algorithmic bias, societal bias
- Fairness metrics and evaluation techniques
- Explainability and transparency in AI
- Responsible AI frameworks (PwC, OECD, UNESCO)

Chapter 6: India's DPDP Rules 2025 & EU AI Act Overview

- Digital Personal Data Protection (DPDP) Act – India
- Key provisions: consent, data fiduciaries, penalties
- EU AI Act and risk-based classification
- Compliance requirements for organisations
- Cross-border data governance challenges

Course Name: **Business Law & AI Governance**

Syllabus

Unit 1: Corporate Governance

Issues, need of corporate governance code. Code of Corporate Practices. Social Responsibility of Corporates. Corporate Social Reporting. Corporate Governance and the Role of Board (BOD). Corporate Governance System Worldwide, Corporate Disclosure and Investor Protection in India The Indian Contract Act: Essentials of a valid contract, void agreements, performance of contract, breach of contract and its remedies. Quasi -Contracts

Unit 2: Moral Values and Ethics

Values - Concepts Types and Formation of Values
Ethics and Behaviour

Values of Indian Managers, Managerial Excellence through Human Values: Development of Ethics
Ethical Decision Making, Business Ethics- The Changing Environment and Stakeholder Management, Relevance of Brics and Values in Business, Spiritual Values Modern Business Ethics

and Dilemmas Overview of Corporate Social Responsibility (CSR) and Sustainability

Unit 3: The Sale of Goods Act

Contract of sale of goods condition and warranties, transfer of property, rights of an unpaid seller; the negotiable instruments act: nature and types, negotiation and assignment; holder in due course, dishonour and discharge of a negotiable instrument, arbitration

Unit 4: The Companies Act, 2013

Nature and types of company's formation memorandum and articles of association, prospectus, shares and share capital, allotment of shares

Unit 5: Corporate Governance & AI

borrowing powers; management and meetings accounts and audit, compromise arrangements and reconstruction: prevention of oppression and mismanagement, winding up:

Role of AI in Corporate Governance (AI in board decision-making, automated compliance monitoring)

Algorithmic Accountability in Corporate Management (legal responsibility for AI-driven decisions)

AI-related Risks in Corporate Structures (bias, opacity, governance challenges)

Legal Implications of AI in Mergers, Reconstruction and Corporate Restructuring

Unit 6: Cyber & AI Laws

Consumer Protection Act and Cyber Law: RTI Act 2005 Purpose, Right to Information and Obligation of Public Authorities. Exemption from disclosure of information

Digital Personal Data Protection (DPDP) Act & Rules 2025 – Key Provisions and Compliance for AI Systems

Overview of EU AI Act – Risk-based Classification and Compliance Requirements

Regulation of Deepfakes and AI-generated Content under Indian and Global Laws

AI Liability and Legal Frameworks (accountability for automated decisions and harm)

Course Name: **Business Communication & Executive Presence**

Syllabus

Module 1: Introduction

Effective Business Communication

Delivering your message

Principles of Verbal Communication

Language Can be an Obstacle to Communication

Emphasis Strategies

Improving Verbal Communication

Understanding Your Audience

Differences in Perception

Effective Business Writing

Principles of Written Communication

Module 2: Business Writing

Writing Preparation – Checklist for business message

Research and Investigation

Ethics, Plagiarism, and Reliable Sources

Organizing Principles

Paraphrase and Summary versus Plagiarism

Revising and Presenting Your Writing

Proofreading and Design Evaluation

Feedback in the Writing Process

Qualitative and Quantitative Research

Feedback as an Opportunity

Module 3: Business Writing in Action

Resumes, Cover Letters

Business Proposals

Reports and Sales Messages

Memorandums and Letters

Developing Business Presentations

Overcoming Obstacles in Your Presentation

Nonverbal Delivery, Movement in Your Speech

Visual Aids, Nonverbal Strategies for Success with Your Audience

Organization and Outlines

Module 4: Fundamentals of Presentations & Communication

Presentations to Inform

Types of Presentations to Inform and uses

Presentation to Teach

Preparing Your Speech to Inform

Presentations to Persuade

Principles of Persuasion

Making an Argument

Module 5: Applied Business Presentations & Communication

Sample Persuasive Speech

Elevator Speech

Business Presentations in Action

Telephone/VoIP Communication

Sound Bites and Quotables, Celebrations: Toasts and Roasts, Meetings

Intrapersonal and Interpersonal Business Communication

Module 6: Crisis, International and Group Communication

Negative News and Crisis Communication

Intercultural & International Business Communication

Group Communication, Teamwork, and Leadership

Writing Effective Routine and Positive Messages

MBA Semester 2

Course Name: **Human Resource Management**
Syllabus

Unit 1: Understanding HRM

Concept of HRM

Characteristics of HRM

Scope of HRM

Importance of HRM

Unit 2: HRM Functions and Roles

Objectives of HRM

Functions of HRM

Roles of HRM

Origin, Evolution, and Development of HRM

Unit 3: Human Resource Planning

Concept of HRP

Factors affecting HRP

Process of HRP

Unit 4: Job Design Fundamentals

Concept of Job Design

Approaches to Job Design

Factors affecting Job Design

Unit 5: Techniques of Job Design

Techniques for optimizing job roles

Ergonomic considerations in job design

Unit 6: Job Analysis & Description

Significance of Job Analysis

Process of Job Analysis

Methods of information collection for Job Analysis

Components of Job Description

Creating effective job descriptions

Job Specification

Unit 7: Recruitment

Concept of Recruitment

Importance of Recruitment

Recruitment Process

Sources of Recruitment

Unit 8: Employee Selection and Placement

Meaning of Employee Selection

Selection Procedure

Effective employee placement

Unit 9: Induction and Onboarding

Meaning of Induction

Induction in Indian companies

Conducting Effective Induction Programme

Course Name: **Strategic Management**

Syllabus

Unit 1: Introduction to Strategies

Introduction to Strategies

Fundamentals of Strategy

Conceptual Evolution of Strategy

Scope and Importance of Strategies

Unit 2: Purpose of Business

Introduction to Purpose of Business

Understanding the purpose of business

Difference between Goals and Objectives of Business

Unit 3: Strategic Intent

Strategic Intent through Vision and Mission Statements

Core Competencies of Business

Unit 4: Strategic Management Overview

Introduction to Strategic Management

Need, Scope, Key Features, and Importance of Strategic Management

Role of Strategists in Decision Making

Unit 5: Types of Strategies

Types of Strategies

Differentiating strategies at various management levels

Limitations of Strategic Management

Unit 6: Strategy Analysis and its Importance

Strategy Analysis and its Importance

Environmental Appraisal and Scanning Techniques

Organizational Position and Strategic Advantage Profile

Strategic Management Model

Unit 7: Strategy Formulation Process & Strategy Implementation

Strategy Formulation Process

Steps involved in Strategy Formulation

Strategy Implementation

Stages of Strategy Implementation

Reasons for Strategy Failure and Methods to Overcome

Unit 8: Strategy Leadership and Strategic Business Units (SBUs)

Strategy Leadership in Organizations

Overview and Management of Strategic Business Units

Unit 9: Strategy Evaluation and Strategic Control

Introduction to Strategy Evaluation and Strategic Control

Difference Between Strategic Control and Operational Control

Concept of Synergy and Its Meaning

Key Stakeholder's Expectations

Understanding Strategic Alliances

Types of Strategic Alliances and Business Decisions

Problems Involved in Strategic Alliances

Course Name: Financial Management

Syllabus

Unit 1: Understanding Finance and Financial Management

Definition of Finance

Concept of Business Finance

Introduction to Financial Management: Goals & Objectives

Unit 2: Financing for the Long Term

Sources of Long-Term Financing

Shares

Debentures

Term Loans

Lease & Hire Purchase

Retained Earnings

Public Deposits

Bonds (Types, Features & Utility)

Unit 3: Financing for the Short Term & Internal Sources of Financing

Sources of Short-Term Financing

Bank Finance

Commercial Paper

Trade Credit

Bills Discounting

Utilizing Retained Earnings for Business Financing

Unit 4: Time Value of Money and Capital Budgeting

Concept of Time Value of Money, Compounding & discounting

Nature and significance of Capital Budgeting

Techniques of Capital Budgeting - Pay Back Method, Accounting rate of return, Internal Rate of Return, Net Present Value and profitability index

Unit 5: Analyzing Financial Ratios

Introduction to Ratio Analysis

Liquidity Ratios (Current, Quick, Cash Ratio)

Unit 6: Evaluating Financial Ratios (Cont'd)

Debt Ratio

Interest Capital Ratio

Profitability Ratios (Inventory Turnover, Gross Profit Ratio)

Unit 7: Interpreting Financial Statements

Meaning of Analysis of Financial Statements

Significance of Analysis of Financial Statements

Objectives of Analysis of Financial Statements

Tools of Analysis (Comparative Statements,
Common Size Statement)

Unit 8: Effective Working Capital Management

Concept of Working Capital

Significance and Types of Working Capital

Ensuring Adequate Working Capital

Factors Affecting Working Capital Needs

Unit 9: Managing Working Capital Efficiently

Methods for Forecasting Working Capital
Requirements

Significance and Management of Accounts
Receivable

Course Name: **Principles of Marketing**

Syllabus

Unit 1: Foundations of Marketing

Introduction to marketing

Marketing concepts

Marketing process

Unit 2: Marketing Environment and Buyer Behavior

Marketing environment

Buyer behavior

Unit 3: Market Segmentation and Positioning

Market segmentation, targeting, and positioning

Introduction to marketing mix

Unit 4: Product Decision and Concepts

Product decisions

Concept of a product

Unit 5: Product Strategies and Life Cycles

Product mix decisions

Product life cycle strategies

Brand decision

New Product Development Strategies

Unit 6: Pricing Fundamentals

Pricing decisions

Pricing objectives and approaches

Unit 7: Pricing Policies and Methods

Pricing policies and constraints

Pricing methods

Unit 8: Marketing Channels, Retailers and Wholesalers

Nature of marketing channels

Structure and design of marketing channels

Retailers and wholesalers

Unit 9: Promotion Mix and Strategies

Promotion decision

Promotion mix

Advertising decision

Objectives and campaign

Ad effectiveness

Sales promotion and publicity

Sales force decision

Course Name: **Production & Operation Management**

Syllabus

Unit 1: Production Management Fundamentals

Definition of production and its functions.

Functions and Responsibilities of Production Management.

The relationship between Production Management and other management functions, Automation.

Overview of automation in production.

Unit 2: Service vs. Manufacturing

Differences between service and manufacturing operations.

Impact on management strategies and challenges.

Strategies for managing service and manufacturing operations.

Competitive strategies and productivity assessment.

Unit 3: Competitiveness Strategy and Productivity

Defining competitiveness in operations.

Strategies for achieving competitiveness.

Computation of productivity and its importance.

Tools and methods for measuring and improving productivity.

Unit 4: Product Design

Objectives of product design.

Legal and environmental considerations in design.

Product lifecycle stages and management.

Standardization and mass customization.

Delayed differentiation in product design.

Unit 5: Product Design Processes

Phases in product design and development.

Modular design principles.

Enhancing product reliability.

Concurrent Engineering and its significance.

Design for manufacturing, concurrent Engineering, CAD, and Recycling Component Commonality.

Unit 6: Service Design

Understanding the differences between product and service design.

Key considerations in service design.

Strategies for delivering high-quality services.

Role of customer experience in service design.

Unit 7: Location Decisions

Importance and need for location decisions.

Nature of location decisions in production and operations.

Factors influencing location and site decisions.

Methods for selecting a suitable site.

Location decision procedures, including factor rating, center of gravity, and least-cost methods.

Unit 8: Capacity Planning

Defining and measuring capacity.

Determinants of effective capacity.

Calculating capacity requirements.

Make or buy decisions in capacity planning.

Developing capacity alternatives.

Challenges in planning service capacity.

Cost-Volume-Profit (CVP) analysis in capacity decision-making.

Strategies for optimizing capacity utilization.

Unit 9: Quality Management and Quality Control Systems

Importance of quality assurance in operations.

Inspection and its role in quality control.

Statistical process control (SPC) and its application.

Control charts and their significance.

Acceptance sampling concept and associated risks.

Cost of quality control and its components.

ISO Quality Systems, including ISO 9000 and ISO 14000.

Total Quality Control (TQC) concept.

Introduction to KAIZEN and Six Sigma for quality improvement.

Course Name: **Supply Chain Management & Automation Tool**

Syllabus

Module 1: 21st Century Supply Chains

Introduction and Concepts,

Generalized Supply Chain Model,

Financial Sophistication,

Logistics Value Proposition, the Work of Logistics,

Logistical Operations,

Logistical Operating Arrangements,

Flexible Structure,
Supply Chain Synchronization.

Module 2: Customer Accommodation

Customer-focused Marketing,
Customer Service,
Customer Satisfaction,
Customer Success,
Forecasting,
CPFR,
Procurement and Manufacturing.

Module 3: Inventory

Functionality and Definitions,
Inventory Carrying Cost,
Planning Inventory,
Managing Uncertainty,
Inventory Management Policies and Practices.

Module 4: Transportation and Warehousing

Transportation Infrastructure;
Transport Functionality,
Principles & Participants, Regulations,

Transport Structure, Transport Service,
Transport Operations; Transport Economics and
Pricing,
Transportation Administration, Documentation.

Warehousing:

Strategic Warehousing,
Warehouse Operations,
Ownership Arrangements,
Warehouse Decisions,
Warehouse Management Systems.

Module 5: Supply Chain Digitalization & Automation Tools

Introduction to Automation in Supply Chains
Enterprise Systems (ERP, SCM Software)
Data-Driven Supply Chains
Emerging Technologies in Automation
Integration of Systems

Module 6: Advanced Automation & Future Trends in Supply Chain

Robotics and Intelligent Automation
Smart Warehousing & Logistics

Decision Automation

Risk Management through Automation

Future Trends

Course Name: **Business Technology & Data Platforms**

Syllabus

Module 1: Management Information Systems

The Need for Information Systems

Digital Convergence and the changing Business Environment

Information and Knowledge Economy

Contemporary Approach to IS and Management Challenges

Module 2: Information Systems in the Enterprise

Types of Information Systems in the Organization

TPS, DSS, MIS and ESS. Functional Perspective of IS

Enterprise Systems

Strategic uses of Information Systems

Economic Organisational and Behavioural Impacts

IT Impact on Decision Making;
Leveraging Technology in the Value Chain
MIS and Core Competencies
Strategic Information Systems (SIS).

Module 3: Electronic Commerce

Introduction to Electronic Commerce
Internet based Business Models
B2B, EDI and B2C Models
Role of Intranets
Networks and their Types
Protocols; Internet Networking Services

Module 4: Digital Organization

Introduction to Digital Organisation
Business Networks and Telecommunications
Communication Technologies in Business
Videoconferencing, Wireless Payments
Bandwidth and Media
Broadband telephony, VOIP, RFID and
Convergence.
Future of Networking Technologies

Module 5: Databases and Data Warehouses

Traditional vs Database approach

Database Models, Relational Model, and Object-Oriented Model

Relational Operations SQL

Data Modelling

Databases on the Web

Data Warehousing.

Module 6: The Wireless Revolution

Introduction. Business Value

Wi-Max and EVDO; M-Commerce

Applications in CRM ,

Supply Chain and Healthcare.

Course Name: **Sales Management**

Syllabus

Module 1: Sales Management

- Definition of sales management
- Nature of sales management
- Key Aspects of Sales Management

- Sales Management Scope
- Importance of Sales Management
- Objectives of sales management

Module 2: Sales organization

- Sales organisation – its purpose
- Setting up a sales organisation
- Types of sales organization

Module 3: Personal selling

- Objectives and theories of personal selling
- Analysis market potential
- Sales potential and sales forecasting
- Method and evaluation
- Determining sales related marketing policies – product policies
- Distribution policies and pricing policies

Module 4: Sales operations

- Sales budget
- Sales territories
- Sales Quota's
- Control of sales

- Sales meeting and sales contest
- Organising display, showrooms and exhibitions

Module 5: Salesmanship

- Sales manager – qualities and functions
- Types of salesman
- Prospecting
- Pre-approach and approach
- Selling
- Sequence
- Psychology of customers

Module 6: Sales force management

- Recruitment and selection
- Training, formulation and conduction of sales training programme
- Motivation of sales personnel
- Compensation of sales personnel
- Evaluation and supervision of sales personnel

MBA Semester 3

Course Name: **International Business**

Syllabus

Unit 1: Introduction to International business

- IB – Introduction
- A Global Village
- What is International Business?
- Internationalization of Business
- Advantages of Internationalization
- Factors Causing Globalization of Businesses
- IB – Country Attractiveness: Adapting to Changing Needs

Unit 2: Protectionism in International Business

- IB – Protectionism
- Liberalization Vs Deregulation
- Liberalization, Privatization, and Globalization
- Revolutionary Economic Trends

Unit 3: International institutions and agreements

- General Agreements on Tariffs and Trade
 - GATT – Major Principles

- Role of GATT in Promoting International Trade
- World Trade Organization
 - Reasons behind the Formation of WTO
 - Role of WTO in Promoting International Trade
 - Role of Developing Countries
- Global Trade – Major Challenges

Unit 4: Theories of international trade

- IB – Modern Theories
 - The Heckscher and Ohlin Model
 - The Samuelson and Jones Model
 - The Krugman and Obsfeld Model
 - The Michael Porter Model
- Global Competetiveness

Unit 5: Regional Blocs in international trade

- Regional Trading Blocs
 - What are Regional Trading Blocs?
 - Regional Trading Blocs – Advantages?
 - Regional Trading Blocs – Disadvantages
- Major Trade Blocs: ASEAN; EU; MERCOSUR; NAFTA.

Unit 6: Strategic approaches

- Strategic Compulsions
 - Areas of Strategic Compulsions
 - Standardization Vs Differentiation
 - Strategic Options
 - Factors that Affect Strategic Options
- Global Portfolio Management
 - Factors Affecting Global Portfolio Investment
 - Modes of Global Portfolio Management
 - Drawbacks of Global Portfolio Management

Unit 7: Modes of international trade

- IB – Modes of Entry: Exporting, Licensing, Franchising, Turnkey Project, Mergers & Acquisitions, Joint Venture, Wholly Owned Subsidiary
- IB – Organizational Structures:
 - Centralization vs. Decentralization
 - Use of Subsidiary Board of Directors
 - Organizational Structures
 - Mixed Matrix

- IB – Control Mechanisms: Objectives of Control; Types of Control Mechanisms; Approaches to Control Mechanisms; Constraints of Control Approaches.
- IB – Performance Issues

Unit 8: Business Operations

- IB – Production Issues: Factors that Affect Production; Facility or Location; Scale of Operations; Cost of Production; Make-or-Buy Decisions.
- IB – Supply Chain Issues:
- Global Marketing Mix
- IB – Financial Aspects:
 - Foreign Investment by International Companies
 - International Investment Outcomes
 - Factors for Investment Decisions
 - Funding the International Business
 - Sources of Funds
 - Foreign Exchange Risks
 - Hedging Forex Risks – Internal Techniques
 - Hedging Forex Risks – External Techniques

- IB – HRM Issues:
 - Recruitment and Selection
 - Development & Training
 - Performance Evaluation
 - Management of Expatriates

Unit 9: Conflict management and negotiation

- IB – Conflict Management
- IB – Negotiations.
- IB – Ethical Issues.
- Moral Obligations

Course Name: **Research Methodology**

Syllabus

Chapter 1: The Nature and Scope of Business Research

Introduction to Business Research

The role of managers in research

Differences between internal and external consultants/researchers

Enhancing managerial effectiveness through research knowledge

Chapter 2: Fundamentals of Scientific Research in Management

The hallmarks of scientific research

Challenges to conducting scientific research in management

The Hypothetico-Deductive method

Overview of other types of research

Information Needs of Business

Commonly Used Technologies in Business Research

Literature Survey

Managerial Implications

Ethical issues in the preliminary stages of investigation

Chapter 3: Designing the Research Framework

Understanding the research process for applied and basic research

The importance of preliminary data collection

Developing a theoretical framework

Hypotheses Development

Hypothesis Testing with Qualitative research

Chapter 4: Advanced Research Design and Validation

Review of elements of research design

Exploring various experimental designs

Laboratory and field experiment control

Assessing external and internal validity

Measurement of variables and operational definition and scaling

Chapter 5: Foundations of Statistical Analysis

Introduction to distributions and statistical inference

Understanding more distributions

Basic concepts of analysis of variance (ANOVA)

Chapter 6: Measurement, Data Collection, Sampling

Scaling, reliability, and validity

Developing guidelines for questionnaires

Exploring electronic questionnaire and survey

Other methods of data collection

Ethical considerations in data collection

Understanding normality of distribution

Probability and non-probability sampling methods

Special considerations for sampling in cross-cultural research

Chapter 7: Analyzing and Interpreting Data

Techniques for data analysis and interpretation

Research Done in Excelsior Enterprises

Utilizing software for data analysis

Role of data analysis as an integral part of research reporting

Chapter 8: Reporting and Presenting Research

Structuring and writing a research report

Effective oral presentation techniques

Assessing the quality of research conducted

Case study analysis as a reporting method

Chapter 9: Research and Managerial Decision Making

Understanding the impact of scientific research on managerial decision making

The consulting team and its approach to problem-solving

Recommendations and implications for business strategies

Course Name: **Project Management**

Syllabus

Chapter 1: Fundamentals of Project Management

Definition and Introduction to Project Management

The role and responsibilities of a Project Manager

Project Management as a profession

Selection of a Project Manager

Fitting Projects into Parent Organization

Chapter 2: Dynamics of Project Management

Introduction to the Project Management Team

Phases of Project Management

Understanding the Project Environment

The 7S of Project Management and their implications

Chapter 3: Understanding the Project Life Cycle

Concept and detailed explanation of the Project Life Cycle

The stages and significance of each phase in the Project Life Cycle

Chapter 4: Project Classification and Extended Life Cycles

Detailed Project Classification

Extended Project Life Cycles and their impacts on management practices

Chapter 5: The Strategic Context of Projects

Introduction to the selection process of projects

Project selection criteria and its importance

Chapter 6: Project Selection Models

Nature of Project Selection Models

Types of Project Selection Models

Analysis under certainty in project selection

Chapter 7: Project Initiation and Feasibility Analysis

Introduction to project initiation and resource allocation

Why is Resource Allocation needed?

Market analysis and demand analysis for new projects

Chapter 8: Technical and Regulatory Considerations

Criteria for a good forecasting method

Technical Analysis

Material Inputs and Utilities

Basis of Government Regulatory Framework

The project proposal and project portfolio process

Chapter 9: Functions of a Project Manager

Fundamental functions of a Project Manager

Roles and Responsibilities of a Project Manager

Delegation of Authority

Building an effective project team

Overview of project organization and matrix organization structures

The impact of human factors on the project team

Course Name: **Entrepreneurship Essentials & AI Driven Innovations**

Syllabus

Chapter 1: Conceptual Framework of Entrepreneurship

- Concept, definition, and role of entrepreneurship
- The importance of entrepreneurship in the Indian economy
- Review of various theories of entrepreneurship
- Entrepreneurial traits and motivation
- Comparison between Entrepreneurs and Professional Managers
- Future challenges in entrepreneurship

Chapter 2: Entrepreneurial Development

- Meaning and importance of the entrepreneurial environment
- The role of private enterprise in economic development
- Significance of Entrepreneurial Development Programmes
- Meaning, Evolution and Objectives of EDP
- Institutional efforts to develop entrepreneurship
- Operational problems of EDPs

Chapter 3: Project Management

- Searching for a business idea
- Concepts of projects and their classification
- Project identification strategies
- Project formulation and design
- Network analysis and project reporting
- Project appraisal including financial analysis, risk, and return
- Factory design and plant layout considerations

Chapter 4: Finance and Marketing

- Sources of development finance
- Project Financing Institutions- Financial Institutions, Consultancy, Organizations.
- Marketing: Methods, Channel of Marketing
- Marketing institutions and assistance for entrepreneurs

Chapter 5: Setting Up a Small Industry

- Considerations in selecting the form of organization
- Sole Proprietorship.
- Partnership

- Joint Stock Company
- Cooperative Organisations-Their Merits, Demerits, Suitability, Brief
- Procedure of Incorporation: Location of a Small Industry

Chapter 6: Entrepreneurship and Small Industry Management

- Steps of starting a small industry
- Incentives and subsidies available to entrepreneurs
- Exploring export possibilities for small industries
- Problems commonly faced by entrepreneurs

Chapter 7: AI as an Innovation Lever Across Industries

- Role of AI in driving innovation
- Industry use cases: healthcare, finance, retail, education, manufacturing
- AI-enabled products and services
- Competitive advantage through AI
- Challenges in AI adoption
- Future trends in AI-driven innovation

Chapter 8: Human-AI Co-Creation & Generative Ideation

- Concept of human-AI collaboration
- Generative AI for idea generation and creativity
- Co-creation workflows using AI tools
- Prompting techniques for ideation
- Enhancing innovation through AI augmentation
- Ethical considerations in AI-assisted creation

Chapter 9: Innovation Frameworks: Blue Ocean, Jobs-to-Be-Done

- Blue Ocean Strategy and value innovation
- Jobs-to-Be-Done (JTBD) framework
- Identifying unmet customer needs
- Competitive differentiation strategies
- Applying frameworks to product innovation
- Case-based applications

Course Name: **Cost & Management Accounting**

Syllabus

Chapter 1: Foundations of Management Accounting

Definition, scope, and functions of Management Accounting

Comparative analysis between Management Accounting and Financial Accounting

Roles and responsibilities of the Management Accountant

Chief Financial Officer and Controller

Strategic decisions, planning, and control

Decision Making

Cost Benefit Approach

Chapter 2: Understanding Costs and Cost Structures

Detailed cost terminology: Direct Costs, Indirect Costs, Variable Costs, Fixed Costs, Total Cost and Unit Cost

Cost drivers and their relevance to management accounting

The concepts of Prime Cost and Conversion Cost, Inventoriable Costs and Period Costs, Relationship of types of costs

Cost allocation methods and their impact on financial statements

Chapter 3: Cost Determination and Elements

Introduction to the fundamental concepts of costs
Determination of costs and their behavior
Elements of Cost: Material, Labor, and Expenses
Cost classification techniques and their significance

Chapter 4: Practical Applications of Cost Concepts

Preparation of cost sheets and their importance in pricing
Tendering processes and cost-based decision making
Using cost information for pricing and product planning
Cost estimation techniques in production

Chapter 5: Overhead Management

Introduction to overhead costs
Allocation, Apportionment, and Absorption of overheads
Principles of overhead control

Chapter 6: Advanced Overhead Management

Managing Factory, Administration, Selling, and Distribution Overheads
Overhead rates and their impact on cost accuracy

Valuation of Inventories: Impact of overheads

Techniques for efficient overhead management

Chapter 7: Fundamentals of Marginal Costing

Introduction and definition of Marginal Costing

Distinctions between absorption costing and marginal costing

Cost-volume-profit (CVP) analysis

Chapter 8: Analytical Tools in Marginal Costing

Break-Even Analysis: Concepts and calculations

Margin of Safety and its importance in risk assessment

Decision-making using marginal costing

Practical applications of CVP analysis in real scenarios

Chapter 9: Budgeting and Budgetary Control

Core concepts and objectives of budgeting

Production, Sales, and Cash Budgets: Preparation and analysis

Advantages and limitations of budgeting

Introduction to flexible budgeting

Preparing and using flexible budgets

Comparing flexible budgets to static budgets

The role of flexible budgeting in modern management accounting

Course Name: **Operations Research & AI-Powered Optimisation**

Syllabus

Chapter 1: Introduction to Operations Research

- Introduction to Operations Research
- History and evolution of Operations Research
- Overview of techniques and tools used in Operations Research
- Significance of Operations Research in problem solving
- Interdisciplinary nature of Operations Research

Chapter 2: The Scope and Challenges of Operations Research

- The role and relationship between an O.R. specialist and a manager
- Typical applications of Operations Research in various fields
- Phases and processes of an O.R. study

- Limitations of Operations Research
- Ethical considerations in Operations Research
- Career prospects in Operations Research

Chapter 3: Fundamentals of Probability, Probability Distributions and Statistics

- Introduction to Probability
- Concepts of random experiments and probability outcomes
- Random Variables: Understanding discrete and continuous types
- Events and their probabilities
- Independent and dependent events
- Probability distribution fundamentals and summary statistics
- Key discrete and continuous probability distributions
- Expectation and variance of distributions
- Applications of probability distributions in real-world scenarios
- The role of statistics in Operations Research

Chapter 4: Introduction to Linear Programming & Solving Problems Graphically

- Introduction and definition
- Formulating a Linear Programming Problem
- Various types of constraints in linear problems

- The importance of linear programming in optimization
- Assumptions underlying linear programming
- Graphical analysis and solutions
- Exploring multiple, unbounded solution, and infeasible problems
- Practical applications in business and industry
- Interpreting graphical solutions
- Limitations of the graphical method

Chapter 5: The Simplex Method Principles, Advanced Simplex Techniques and Sensitivity Analysis

- Introduction to the Simplex Method
- The computational aspects of the Simplex Method
- Simplex method with several decision variables
- The tableau format in Simplex method
- Basis and non-basis variables
- Two Phase and M-method
- Multiple solutions, unbounded solutions, and infeasible problems in Simplex
- Sensitivity analysis and dual linear programming problems
- The concept of shadow prices in sensitivity analysis
- The economic interpretation of dual variables

- AI-assisted Linear Programming Solvers (use of Python, Excel Solver with AI enhancements)
- Machine Learning Approaches to Optimization Problems
- Real-time Decision Optimization using AI Algorithms
- Application of AI in Sensitivity Analysis and Scenario Simulation

Chapter 6: Basics and Methods of Transportation Problems & Advanced Techniques

- Introduction to transportation problems
- Basic Feasible Solution of a Transportation Problem
- Modified Distribution Method
- Stepping Stone and Degenerate Transportation Problem
- Formulation of transportation models
- Cost reduction methods in transportation
- AI-based Route Optimization and Logistics Planning
- Use of Heuristic and Metaheuristic Algorithms (Genetic Algorithms, Ant Colony Optimization)
- Demand Forecasting for Transportation using AI
- Integration of Transportation Models with Real-time Data Systems

- Unbalanced and Transshipment Problems
- Maximization in transportation problems
- Real-world applications of transportation models
- Sensitivity analysis in transportation models
- Use of software tools in solving transportation problems
- AI-driven Supply Chain Optimization Models
- Simulation and Digital Twin Applications in Transportation Systems
- Reinforcement Learning for Dynamic Routing and Allocation Problems
- AI-enabled Decision Support Systems for Logistics and Distribution

Course Name: **AI-Powered Digital Marketing & Growth**

Syllabus

Module 1: Introduction of Digital Marketing

- What is marketing?
- What is Digital Marketing?
- Understanding Marketing Process
- Understanding Digital Marketing Process
- Increasing Visibility,
 - o What is visibility?

- o Types of visibility
 - o Examples of visibility
- Visitors Engagement
 - o What is engagement?
 - o Why it is important Examples of engagement
- Bringing Targeted Traffic
- Inbound and outbound marketing
- Converting Traffic into Leads
 - o Types of Conversion
 - o Understanding Conversion Process Tools Needed
- Digital Marketing VS Traditional Marketing
 - o What's the difference between digital marketing and traditional marketing, and why does it matter?
 - o Benefits of Traditional Marketing
 - o The Downside to Traditional Marketing
 - o Benefits of Digital Marketing
 - o Why Digital Marketing Wins Over traditional Marketing ?
 - o Tools of Digital Marketing
 - o How We Use Both Digital & Traditional Marketing

Module 2: Website Planning Process

- What is Internet?

- Understanding domain names & domain extensions
- Different types of websites
 - o Based on functionality
 - o Based on purpose
- Planning & Conceptualizing a Website
 - o Booking a domain name & web hosting
 - o Adding domain name to web Server
 - o Adding webpages & content
 - o Adding Plugins Building website using CMS in Class
 - o Identifying objective of website
 - o Deciding on number of pages required
 - o Planning for engagement options
 - o Landing Pages & Optimization
 - o Creating blueprint of every webpage
- Best & Worst Examples

Module 3: Search Engine Optimization (SEO) & Search Engine Marketing (SEM)

- Introduction to SEO
- How Do Search engines work?
- Search Engine Algorithms
- Google Algorithm Updates
- Google Search Console
- Keyword Research Process

- Keyword Research Tools
- Competition Analysis
- On page Optimization strategies
- Content development strategy
- Title & Meta Tags
- Semantic SEO
- Rich Snippets Integration
- Speed Optimization
- Off Page Optimization
- Link Building Techniques as per latest standards
- Local SEO Strategies
- Penguin & Panda update recovery process
- Reports and SERP Management

Module 4: Social Media and Email marketing

- Introduction to social media marketing Facebook marketing
 - o Facebook advertising
 - o YouTube marketing
 - o Twitter marketing
 - o LinkedIn marketing
 - o Pinterest marketing
 - o Instagram Marketing
 - o Quora Marketing
- What is Email Marketing Benefits of email marketing

- o Basic terminology in email marketing
- o Email Marketing Software's
- o Building email marketing strategy
- o Building subscriber lists
- o Designing Newsletters
- o Types of Campaigns
- o Reports and analysis

Module 5: Google Analytics

- Purpose of website analytics
- Tools for website analytics
- Installing Google Analytics
- Google Tag Manager
- How to use Google Tag Manager
- Implement Conversion Tracking
- Basic terminology and KPI's
- Audience Reports
- Customer Acquisition Reports
- Behavior Reports
- Goals and Conversion Reports
- Segmentation and Filters
- AI-powered Analytics and Predictive Insights (GA4 predictive metrics, churn probability)
- Automated Customer Segmentation using AI Tools
- AI-driven Funnel Analysis and Conversion Optimization

- Integration of Analytics with Marketing Automation Platforms

Module 6: Google AdSense and Affiliate Marketing

- What is adsense?
 - o How to get approved for adsense?
 - o Cool trick to get adsense approval by Google
 - o Using your adsense account interface
 - o Placing ads on your blog
- What is Affiliate Marketing
 - o Types of Affiliate Marketing
 - o Making Money using Affiliate Marketing
 - o Popular Affiliate Networks
 - o Freelancing Business Strategies
- AI-generated Content Strategies for AdSense and Affiliate Marketing (blogs, SEO content)
- AI-driven Ad Optimization and Programmatic Advertising Basics
- Predictive Targeting and Personalization in Affiliate Marketing
- Growth Hacking using AI Tools (automation, A/B testing, performance scaling)

MBA Semester 4 - OPERATIONS & SUPPLY CHAIN MANAGEMENT

Course Name: **Smart Logistics & Last-Mile Innovation**

Syllabus

Unit 1: Foundations of Smart Logistics

- Evolution of Logistics → From Traditional to Smart Logistics
- Principles of Logistics in the Digital Era
- Role of Logistics in Business Competitiveness
- Logistics as a Value Driver: Cost vs Service Trade-offs
- Introduction to Supply Chain Ecosystems

Unit 2: Digital Transformation in Logistics

- Logistics 4.0: Concepts and Framework
- Role of Technologies:
 - IoT (Internet of Things)
 - AI & Machine Learning
 - Blockchain in Logistics
- Informatics and Optimization Techniques
- Digital Platforms and Smart Infrastructure
- Case Studies on Smart Logistics Systems

Unit 3: Logistics Cost Optimization & Analytics

- Logistics Cost Structure and Components
- Methods for Cost Reduction and Productivity Improvement
- Use of Data Analytics in Logistics Decision-Making
- Predictive and Prescriptive Analytics in Logistics
- KPI Measurement and Performance Benchmarking

Unit 4: Customer-Centric Logistics & Service Design

- Customer Service in Logistics
- Customer Experience (CX) in Delivery Systems
- Service Design: Pre-transaction, Transaction, Post-transaction Phases
- Customer Retention through Service Excellence
- Personalization and Real-Time Tracking Systems

Unit 5: Last-Mile Delivery Systems & Models

- Importance of Last-Mile Delivery in Modern Logistics
- Last-Mile Challenges: Cost, Speed, Density
- Delivery Models:
 - Hyperlocal Delivery
 - Crowdshipping
 - Micro-fulfillment Centers
- Urban Logistics and Smart Cities
- Role of Drones, Autonomous Vehicles, and Robotics

Unit 6: E-Commerce Logistics & Omnichannel Fulfillment

- E-Commerce Logistics Ecosystem
- Fulfillment Centers and Dark Stores
- Omnichannel Logistics Strategy
- Reverse Logistics and Returns Management
- Role of Marketing in E-Commerce Logistics
- Future Trends in Digital Commerce Logistics

Unit 7: Sustainable & Green Logistics

- Environmental Impact of Logistics Operations
- Green Logistics Strategies

- Carbon Footprint Measurement and Reduction
- Sustainable Transportation and Warehousing
- Circular Economy and Reverse Supply Chains

Unit 8: Integrated Logistics, 3PL, 4PL & Platform Economy

- Integrated Logistics Systems
- Role of 3PL, 4PL and Emerging 5PL Models
- Logistics Outsourcing and Procurement
- Platform-based Logistics (Uber Freight, Amazon Logistics)
- Collaboration and Network Optimization

Unit 9: Global Smart Logistics & Emerging Innovations

- Global Supply Chain Dynamics
- Smart Ports, Smart Warehousing, and Multimodal Logistics
- EXIM and Cross-Border Logistics
- Barriers in Global Logistics & Risk Management
- Emerging Innovations:
 - Digital Twins
 - Blockchain-enabled Trade

- AI-driven Supply Chains

Course Name: **E-commerce Fulfilment & Omnichannel Supply Chain**

Syllabus

Unit 1: Foundations of E-Commerce Supply Chains

- Introduction to E-Commerce Supply Chains
- Differences: Traditional Retail vs E-Commerce Supply Chains
- Key Drivers of E-Commerce Logistics
- Essentials of Retail Supply Chain Management
- Role of Fulfilment in Customer Experience

Unit 2: Omnichannel Retailing & Customer-Centric Supply Chains

- Concept of Omnichannel Retailing
- Integration of Online and Offline Channels
- Customization and Adaptation in Supply Chains
- Customer Relationship Management (CRM) in E-Commerce
- Enhancing Customer Experience through Supply Chain Design

Unit 3: Demand Forecasting & Inventory Optimization

- Demand Forecasting in E-Commerce Environments
- Inventory Management Strategies
- Multi-echelon Inventory Optimization
- Real-time Inventory Visibility
- Coordination Across Channels and Functions

Unit 4: Fulfilment Network Design & Operations

- Fulfilment Models:
 - Centralized vs Decentralized Warehousing
 - Dark Stores and Micro Fulfilment Centers
- Order Processing and Allocation
- Warehouse Layout and Automation
- Space Management
- Role of Packaging and Unitization

Unit 5: Warehousing, Transportation & Last-Mile Delivery

- Transportation Strategies
- Multimodal Logistics and Containerization

- Last-Mile Delivery Challenges and Solutions
- Hyperlocal Delivery Models
- Role of Third-Party Logistics (3PL) in Fulfilment

Unit 6: Technology & Digital Infrastructure in E-Commerce Supply Chains

- IT Applications in Supply Chain
- Warehouse Management Systems (WMS)
- Transportation Management Systems (TMS)
- Use of AI, Big Data, and Blockchain
- Automation: Robotics, Drones, and Smart Systems

Unit 7: Reverse Logistics & Returns Management

- Reverse Logistics Concepts
- Returns Handling and Refund Systems
- Circular Supply Chains and Sustainability
- Cost Implications of Returns
- Customer Experience in Reverse Logistics

Unit 8: Risk Management, Performance Measurement & Lean Supply Chains

- Supply Chain Risk Management

- Bullwhip Effect and Demand Variability
- Lean Thinking and Waste Elimination
- SCOR Model and Balanced Scorecard
- KPIs for E-Commerce Supply Chains

Unit 9: Channel Design, Integration & Platform-Based Commerce

- Marketing Channels in E-Commerce
- Channel Design and Strategy
- Platform-Based Supply Chains (Amazon, Flipkart, Shopify)
- Channel Power, Conflict & Coordination
- Performance Evaluation of Channels

Course Name: **Global Supply Chain Resilience & Risk**

Syllabus

Chapter 1: Fundamentals of Supply Chain and Competitive Advantage

Definition and Importance of Supply Chain (SC)

Key Decisions and Processes in SC

Building Competitive Advantage Using SC

Examples of Effective Supply Chains

Supply Chain Drivers

Aligning SC with Competitive Strategies

Chapter 2: Procurement and Outsourcing in Supply Chains

Supply Chain Integration and the Push-Pull Boundary

Pros and Cons of Outsourcing

Decision Framework for Network Design

Chapter 3: Network Design Methodologies and Distribution Systems

Overview of Decision Support Systems for Network Design

Methodologies for Distribution System Design

Chapter 4: Managing Uncertainties in Network Design

Impact of Uncertainties in Network Design

Methodologies

Aggregate Planning Strategies

Managing Capacity, Demand, and Inventory in Predictable setting

Chapter 5: Inventory Techniques, Effective Discounting and Risk Management in Inventory

Inventory Management Techniques

Key Drivers for Reducing Inventory-Related Costs

Centralized vs. Decentralized Distribution Systems

Effective Use of Discounting in Inventory Management

Impact of Uncertainty on Safety Inventory

Continuous vs. Periodic Review Systems

Chapter 6: Performance Metrics and Risk Pooling

Performance Metrics in Inventory Management

Centralization Impact on Supply Chains

Risk Pooling and Supply Chain Design

Chapter 7: Demand Management and Product Availability

Determining Product Availability Levels

Strategies for Seasonal Demand Management

Designing Responsive Supply Chains

Chapter 8: Quick and Accurate Response Systems

Quick Response and Accurate Response

Tailored Sourcing for Seasonal Products

Chapter 9: Sustainable and Resilient Supply Chains

Designing Sustainable Supply Chains

Strategic Approaches for Risk Management

Increasing Speed, Efficiency, and Accuracy of Response in Supply Chains

Course Name: **AI-Predictive Supply Chain & Digital Twins**

Syllabus

Chapter 1: AI in Supply Chain: Landscape & Maturity Models

- Evolution of supply chain analytics and AI adoption
- AI maturity models in supply chain organisations
- Key components: planning, sourcing, manufacturing, logistics
- Role of data in supply chain transformation
- Industry use cases and benchmarks

- Challenges in AI adoption

Chapter 2: AI Demand Forecasting & Predictive Analytics

- Fundamentals of demand forecasting
- Time-series models and machine learning approaches
- Data sources and feature engineering
- Forecast accuracy metrics and evaluation
- Handling seasonality and demand variability
- Use cases in retail, FMCG, and e-commerce

Chapter 3: Inventory Optimisation with Machine Learning

- Inventory management principles
- AI-based inventory optimisation techniques
- Safety stock and reorder point optimisation
- Multi-echelon inventory systems
- Cost optimisation and service level trade-offs
- Applications in supply chain operations

Chapter 4: Digital Twin Fundamentals & Architecture

- Concept and evolution of digital twins

- Components of digital twin architecture
- Data integration and simulation models
- Physical vs virtual system mapping
- Platforms and tools for digital twins
- Benefits and limitations

Chapter 5: Supply Chain Digital Twin Applications & Simulation

- Use cases of digital twins in supply chains
- Simulation modelling and scenario testing
- Network optimisation and capacity planning
- Risk analysis and disruption modelling
- Real-time vs batch simulations
- Case studies from industry

Chapter 6: IoT, Sensor Analytics & Real-Time Visibility

- Role of IoT in supply chain digitisation
- Sensors, RFID, and tracking technologies
- Real-time data collection and analytics
- Integration with supply chain systems
- Visibility across logistics and warehousing

- Challenges in implementation and data management

Chapter 7: AI-Powered Control Towers & Decision Intelligence

- Concept of supply chain control towers
- Real-time monitoring and decision support systems
- AI-driven alerts and recommendations
- Integration with enterprise systems (ERP, WMS, TMS)
- Decision intelligence frameworks
- Benefits and organisational impact

Chapter 8: Scenario Planning, Optimisation & Resilience Modelling

- Scenario planning techniques in supply chains
- Optimisation models for network and logistics
- Resilience and risk mitigation strategies
- Disruption management and contingency planning
- AI-driven optimisation tools
- Trade-offs between cost, speed, and reliability

Chapter 9: Project/Assignment: Digital Twin Prototype & Business Case

- Identifying supply chain challenges and opportunities
- Designing a digital twin use case
- Data requirements and modelling approach
- Simulation and scenario analysis
- Business case development and ROI estimation
- Final presentation and strategic recommendations

Course Name: **Inventory Management & Demand Intelligence**

Syllabus

Chapter 1: Fundamentals of Inventory

Introduction to the meaning and types of inventory

Definition and purpose of inventory management

Significance of holding inventory

Objectives of inventory management

Factors influencing inventory levels

Chapter 2: Key Concepts in Inventory Management

The role and importance of inventory in business operations

Key terminologies in inventory management

Impact of effective inventory management on supply chain efficiency

Overview of challenges in managing inventory

Chapter 3: Inventory Forecasting Techniques

Understanding inventory forecasting and its importance

Setting forecast boundaries and parameters

Incorporating trends and variables in forecasting models

Forecasting considerations for new products

Introduction to automated inventory forecasting systems

Chapter 4: Purchasing Inventory & Inventory Storage Solutions

Fundamentals of purchasing inventory and procurement strategies

Methods of inventory purchasing: Just-in-time, bulk buying, and consignment

Determining the timing for new inventory orders

Calculating order quantities for optimal inventory management

The role of automated purchasing in inventory management

Overview of broad inventory storage options

Warehouse setup and design considerations

Types of inventory storage equipment

Factors influencing storage choice and layout optimization

Chapter 5: Inventory Analysis and Metrics

Goals and objectives of inventory analysis

Key inventory analysis metrics: turnover ratio, carrying cost, and service level

Techniques for conducting inventory analysis to improve efficiency

Chapter 6: Understanding Inventory Costs

Definition and breakdown of inventory costs: ordering, holding, and shortage costs

Cost implications of holding inventory and its impact on profitability

Methods to reduce inventory-related costs

Chapter 7: ABC Analysis and Classification

Purpose and concept of ABC Analysis in inventory management

The Pareto Principle and its application in ABC Analysis

Criteria for classifying items into A, B, and C categories

Steps for ABC classification and distinctions among A, B, and C items

Practical applications of ABC Analysis in inventory management

AI-driven Inventory Classification (beyond ABC: XYZ, FSN using analytics)

Demand Intelligence in Inventory Segmentation (linking demand variability with classification)

Use of Data Visualization Tools for Inventory Analysis

Dynamic ABC Classification using Real-time Data

Chapter 8: Modern Techniques of Inventory Control

Overview of modern inventory control techniques

Economic Order Quantity (EOQ): calculation and application

Re-order Point: determining optimal re-order levels

Fixing stock levels for effective inventory management

Selective Inventory Control based on usage and value

AI-based Demand Forecasting and Demand Sensing

Automated Replenishment Systems and Smart Inventory Algorithms

Safety Stock Optimization using Predictive Analytics

Real-time Inventory Optimization using AI-enabled Systems

Chapter 9: Traditional Inventory Control Methods

Introduction to traditional inventory control techniques

Inventory Control Ratios and their significance

Two-Bin System: structure and usage

Perpetual Inventory System: continuous tracking of inventory levels

Periodic Order System: timing and management of inventory orders

Integration of Traditional Methods with AI-driven Inventory Systems

Predictive Stockout Prevention using Data Analytics

Inventory Dashboards and KPI Tracking (turnover ratio, fill rate, stockout rate)

Digital Transformation in Inventory Management Systems

Course Name: **Strategic Procurement & Sustainable Sourcing**

Syllabus

Chapter 1: Basics of Procurement

What is Procurement?

Components of Procurement

Procurement Process Flow

Chapter 2: Types and Stages of Procurement

Difference between Indirect, Direct, and Service Procurement

Stages of Procurement

Chapter 3: Differentiating Procurement from Related Concepts

Procurement vs. Purchasing

Procurement vs. Sourcing

Procurement vs. Supply Chain

Chapter 4: Principles and Models of Procurement

Principles of Procurement

Five Pillars of Procurement

Procurement Models

Chapter 5: The Procurement Lifecycle

Types of Procurement: Direct and Indirect

Overview of the Procurement Lifecycle

Ethics in Buying

Chapter 6: Introduction to E-Procurement

Definition and Benefits of E-Procurement

Who Need Hosted E-Procurement?

What Makes a Good E-Procurement System?

Advantages of Online Procurement

Chapter 7: Fundamentals of Demand Planning

What is Demand Planning?

Forecasting Techniques and Their Applications

Benefits of Demand Planning

Chapter 8: Demand Forecasting in Logistics and Negotiation Techniques

Demand Forecasting in the Context of Logistics

Negotiation Strategies and Techniques

Chapter 9: Overview of Procurement KPIs, Specific KPIs and Best Practices in Procurement

Qualitative and Quantitative KPIs

Essential KPIs to Monitor in Procurement

Purchase Order KPIs

Supply KPIs

Return On Investment KPIs

Types of KPIs: Inventory, Employee Learning, Delivery, Quality, and Cost KPIs

Best Practices for Effective Procurement