



**Program: Master of Business Administration.**

**Duration: 2 years**

**Program Outcomes (PO):**

S. NO	Program Objectives (PO)	Program Outcomes (POs)
1	To develop managerial and leadership skills.	Graduates will demonstrate strong decision-making and problem-solving abilities in dynamic business environments.
2	To build analytical and critical thinking abilities.	Graduates will analyze complex business problems using quantitative and qualitative tools for informed decision-making.
3	To enhance knowledge of business functions and their synergy.	Graduates will exhibit comprehensive knowledge of various business functions (e.g., finance, marketing, operations) and their integration in organizational success.
4	To promote global business perspective and ethics.	Graduates will apply ethical considerations and understand global business trends in strategic planning and execution.
5	To foster innovation and entrepreneurial spirit.	Graduates will identify and create opportunities for innovation and entrepreneurship in business scenarios.
6	To nurture effective communication skills.	Graduates will effectively communicate ideas, strategies, and reports in professional settings.
7	To prepare for lifelong learning and adaptability.	Graduates will exhibit continuous learning and adaptability to evolving business environments and technologies.



### MBA SEMESTER I

#### 101: PERSPECTIVES OF MANAGEMENT

##### Course Objectives:

- To help the students gain understanding of the functions and responsibilities of managers.
- To provide them tools and techniques to be used in the performance of the managerial job
- To enable them to analyze and understand the environment of the organization.
- To help the students to develop cognizance of the importance of management principles.

##### Learning outcomes:

- Demonstrate an appreciation of areas which are fundamental to managing people at workplace.
- Outline the major perspectives on managing in organizations.

Unit I: Management – Evolution of Management Thought -Principles of Management – Functions of Management - Social Responsibility of Management.

Unit II: Planning – Nature, Purpose and Importance of Planning-Types of Plans-Steps in Planning-Planning Premises and Forecasting – process of Decision Making-Decision Tree Analysis.

Unit III: Organization – Principles of Organization – Formal and informal Organization – types of Organization Structure – Line and Staff Relations – Delegation – Decentralization –Span of Control.

Unit – IV: Directing- Leadership Theories and Styles –Motivation –Theories: Maslow’s Theory and Herzberg’s Theory.

Unit- V: Control-Importance, Steps, Processes, Techniques-PERT/CPM-Total Quality Management.

(Case Study is compulsory in all Units)

##### Suggested Books:

1. Louis A Allen, Management & Organisation, McGrawHill, New York
2. A.Pardhasardhy & R.Satya Raju: Management Text and Cases, Prentice Hall of India.
3. AS Lather, M Handa, Cases in Management, Wsdom, Delhi
4. Heinz Wehrich & Harold Koontz, Essentials of Management, Tata-McGraw Hill, ND
5. JS Chandan, Management: Theory & Practice, Vikas, New Delhi
6. RW Griffin, Management: Principles and Applications, Cengage, New Delhi
7. Prem Vrat, KK Ahuja & PK Jain, Management Cases, Vikas, New Delhi
8. Laura P Hartman, A Chatterjee, Perspectives in Business Ethics, TMH, ND
9. Earnest Dale, Great Organisers, McGraw Hill
10. Peter F Drucker, The Practice of Management, McGraw Hill



## 102: ACCOUNTING FOR MANAGEMENT

### Course Objectives:

- To develop an insight of postulates, principles and techniques of accounting and utilization of financial and accounting information for planning, and decision-making
- To introduce problems of financial accounting such as measuring and reporting issues related to assets and liabilities and preparing the financial statements.
- Develop the application skills to create adjusting journal entries in rectifying errors

### Learning outcomes:

- Identify and interpret accounting information to inform users and make decisions.
- Apply critical thinking skills by identifying and analyzing accounting issues using relevant accounting frameworks.
- Analyze financial and contextual information to make decisions, estimate costs

Unit-I : Accounting for Management –Nature and Scope – Management Process and Accounting – Financial Accounting Vs Cost Accounting Vs Accounting for Management – Role of Accountant in Modern Organization

Unit – II: Financial Accounting System – Generally Accepted Accounting Principles and Accounting Standards Governing Financial Statements – Contents of Profit and Loss Account – Balance Sheet (Theory only)

Unit- III: Elements of Cost–Cost Sheet Preparation – Absorption Vs Marginal Costing –Cost – Volume – Profit Analysis – Cost Behaviour – Breakeven Analysis – Contribution Approach – Profit Planning.

Unit-IV: Cost Concepts for Decision making – Decision Making Process – Decision Situations- Sales Volume Decisions – Pricing and Special Order Pricing – Make / Buy Decisions – Product Decisions- Addition, Deletion and Alteration of Mix – Plant Shutdown Decision.

Unit- V: Budgeting – Types of Budgets – Financial Vs Operation Budgets – Short Term Vs Long Term Budgets – Preparation of Sales Budgets – Purchase Budgets- Expenditure Budgets for Material, Labour and Overheads – Construction of Cash Budget- Flexible Budget – Master Budget – Management Control and Budgeting – Performance Budgeting and Zero Based Budgeting.



(Case Study is compulsory in all Units)

Suggested Books:

1. I. M. Pandey : Management Accounting Vikas Publishing House. ND
2. Needles, Financial Accounting, Cengage, New Delhi
3. Jawaharlal, Accounting for Management, Himalaya, Mumbai
4. Hilton, Ramesh & Jayadev, Managerial Accounting, TMH, New Delhi
5. B. Banerjee, Financial Policy & Management Accounting, PHI, New Delhi
6. P Periasamy, A Text Book of Cost & Management Accounting, Himalaya, Mumbai
7. Horngren, C.T., Introduction of Management Accounting, Prentice Hall of India.
8. Khan and Jain, Management Accounting, Tata Mc Graw Hill, Delhi.
9. Blocher, Chen, Cokins and Lin, Cost Management, A Strategic Emphasis, TMH, ND
10. Porwal, LS, Accounting Theory, TMH, New Delhi



### 103: BUSINESS ENVIRONMENT

#### Course Objectives:

- To familiarize the students with the business environment conditions prevailing in India and understand its implications to business.
- To enable students to evaluate Indian economy and its environment
- To understand the policies that shaped Indian Economic Growth

#### Learning outcomes:

- Examine how different factors and trends in the external environment are likely to impact upon business
- To familiarize with students economic policies of India
- To have a critical study of liberalization, privatization and globalization.

Unit-I Business Environment: Components and Significance - Socio Cultural, Economic, Legal, Political, Technological and External Factors Influencing Business Environment, Dimensions of International Business Environment and Challenges

Unit-II: Structure of Indian Economy; Economic systems- Economic planning with special reference to last three plans, public, private joint and cooperative sectors Multinational Corporations, Impact of Multinational Corporations in Indian Economy.

Unit-III Industrial policies of the Govt., Policy resolutions of 1956 and 1991 and subsequent changes, Monetary and Fiscal policies, Export and Import policies with reference to latest policies.

Unit IV: Public Sector and Small Industry in India, Past, Present and Future of Public Sector. Performance, Problems, Privatisation, disinvestment, SEZs- their role, Role of SSIS, Procedure for establishing SSIS, Role of DICS, Problems of SSIS, Sickness in SSIs..

Unit V: Stock Markets, SEBI, its rules and regulations, Stock Exchange, Functions of Stock Exchanges, Primary and Secondary markets, Competition Act 2002 Competitiveness. Foreign Exchange Management Act, Social Responsibilities and Ethics in Business.

(Case Study is compulsory in all Units)

#### Suggested Books:

1. Francis Cherunilam :Business Environment (Text & Cases), Himalaya Publishing House Bangalore.
2. S.K. Misra & V.K. Puri Economic Environment of Business, Himalaya Publishing House Mumbai.
3. Suresh Bedi Business Environment, Excel, New Delhi.
4. K. Aswathappa - Essentials of Business environment Himalaya Publishing House Bangalore
5. Govt. of India - Latest Economic Survey.
6. latest, Handbook of Industrial policy and Statistics-2009-2010
7. Competition Act
8. Foreign Exchange Management Act.



### 104: MANAGERIAL COMMUNICATION SKILLS

#### Course Outcomes:

- To equip the students with the necessary techniques and skills of communication to inform others, inspire them enlist their activity and willing cooperation in the performance of their jobs.
- To provide an overview of Prerequisites to Business Communication
- To equip students with report writing skills and organizing reports.

#### Learning outcomes:

- Demonstrate the use of basic and advanced business writing skills.
- Produce clear and concise written business documents.
- Develop interpersonal communications skills that are required for social and business interaction.
- Plan and conduct effective meetings.
- Employ proper public speaking techniques

Unit – I : Role of Communication in Business – Objective of Communication – The Process of Human Communication – Media of Communication, Written Communication – Oral Communication – Visual Communication, Audio Visual Communication – Silence - Developing Listening Skills – Improving Non-verbal Communication skills – Understanding Cultural Effects of Communication.

Unit – II: Managing Organization Communication - formal and Informal Communication- Intra and Personal Communication – Models for Inter Personal Communication – Exchange Theory, Johari Window and Transactional Analysis.

Unit-III: Managing Motivation to Influence Interpersonal Communication – Inter-Personal Perception – Role of Emotion in Inter Personal Communication- Communication Styles – Barriers of Communication – Gateways to Effective Interpersonal Communication

Unit-IV: Business Writing Skills – Significance of Business Correspondence, Essentials of Effective Business Correspondence, Business Letter and Forms, Oral Presentations – Meetings, Telephone Communication – Use of Technology in Business Communication, E-mail Messages.

Unit-V: Report Writing – Meaning and Significance; Structure of Reports; Negative, Persuasive and Special Reporting; Informal Report – Proposals; Formal Reports; Organization of Press Report.

(Case Study is compulsory in all Units)

#### Suggested Books:

1. K Bhardwaj, Professional Communication, IK Int Pub House, New Delhi
2. Krizan, Merrier, Logan and Williams, Effective Business Communications, Cengage, New Delhi
3. HC Gupta, SG Telang, Business Communication, Wisdom, Delhi
4. Penrose, Business Communication for Managers, Cengage, New Delhi
5. McGrath, Basic Managerial Skills for All 5<sup>th</sup> ed., Prentice Hall of India.
6. Urmila Rai & S.M. Rai, Business Communication, Himalya Publishers,
7. Meenalshi Raman—Business Communication Oxford University Press.
8. Lesikar I Flatley, Basic Business Communication, Tata McGraw Hill.



## 105: MANAGERIAL ECONOMICS

### Course Outcomes

- To enable the students to understand economic concepts and theories and their application in management decision-making.
- The purpose of this course is to apply micro economic concepts and techniques in evaluating business decisions taken by firms.
- Develop an understanding of the applications of managerial economics.

### Learning outcomes:

- Apply supply and demand analysis to economic and business strategy issues;
- Explain how economies of scale, scope and learning determine the boundaries of a firm and market structure
- Identify the main characteristics of different market types, such as perfect competition, monopoly, monopolistic competition and oligopoly.

Unit I- Introduction: Nature and Scope of Managerial Economics; Objectives of the Firm- Traditional Theory, Sales and Revenue Maximizing Theories, Managerial Theories and Behavioral Theories; Profit Maximization. Vs. Wealth Maximization.

Unit II- Demand Analysis : Demand-Meaning, Determinations Of Demand, Demand Function; Law of Demand; Elasticity of Demand –Price, Income, Cross and Promotional or Advertising Elasticity of demand, Managerial Uses of Elasticity of Demand; Demand Forecasting. Demand Forecasting Methods for Existing and New Products, Criteria for Good Forecasting Method.

Unit III- Production Analysis: Production Function –Law of Variable Proportions, Isoquant and Isocost Curves, Least Cost Combination, and Returns to Scale; Economies of Large Scale; Cobb-Douglas Production Function and Constant Elasticity of Substitution - Production Function; Cost concepts and Cost Oriented Pricing Methods.

Unit-IV Market Analysis: Price and Output Determination under Perfect Competition; Profit-Meaning and Profit Theories-Profit Planning-Measurement.

Unit – V: Economic Optimization: Economic Problems and Optimization Techniques – Unconstrained and Constrained Optimization; Unbounded Maxim – Optimization of Functions of One Variable and Optimization with Multivariate Function;

(Case Study is compulsory in all Units)

### Suggested Books:

1. Dean, Joel: Managerial Economics, PHI., New Delhi
2. DN Dwivedi, Managerial Economics, Vikas, New Delhi
3. Trivedi M.L: Managerial Economics, Theory and Applications, TMH, ND
4. Mark Hirschey, Managerial Economics: An Integrative Approach, Cengage, New Delhi
5. Mehta, P.L: Managerial Economics, Text and Csaes, S.Chand & Co
6. Mittal A., . Managerial Economics, Text and Csaes, Wisdom, Delhi
7. Mithani, D.M: Managerial Economics, Theory and Applications, Himalaya Publishing.
8. Attmanad; Managerial Economics, Excel publications.
9. G.S.Gupa, Macro Economics: , Theory and Applications, Tata McGraw Hill.
10. Dwivedi, D.N. Macro Economics: Theory and Applications, Tata McGraw Hill



**106: ORGANIZATIONAL BEHAVIOUR**

**Course Outcomes:**

- To teach the student about the organizational dynamics
- To deeply understand the role of individual, groups and structure in achieving organizational goals effectively and efficiently.
- To understand the ways to motivate others and be self-motivated
- To familiarize with the concepts of conflict, change, culture

**Learning outcomes:**

- To discuss the development of the field of organizational behavior and explain the micro and macro approaches
- Analyze and compare different models used to explain individual behavior related to motivation and rewards
- Identify the processes used in developing communication and resolving conflicts
- Explain group dynamics and demonstrate skills required for working in groups (team building)
- Identify the various leadership styles and the role of leaders in a decision making process.

Unit-I: Meaning and scope of OB-Challenges and opportunities – Foundations of Individual behavior, values, attitude, job satisfaction, personality, perception and emotions.

Unit – II: Motivation-Theories, Group dynamics – Leaderships styles..

Unit –III: Organizational conflict-causes and consequences-conflict and Negotiation.

Unit-IV: Organizational change, change process resistance to change and Organizational Development

Unit–V: Organizational Culture-Creating an Ethical Organization-Managing Stress-Organizational Effectiveness..

(Case Studies are Compulsory)

**Suggested Books:**

1. Udai Pareek, Organizational Behaviour, Oxford University Press.
2. Karam Pal, Management Process and Organisational Behaviour, IK Int Pub House, ND
3. Moorhead & Griffin, Introduction to Organizational Behaviour, Cengage, New Delhi
4. Arun Kumar and Meenakshi, Organisational Behaviour, Vikas, ND
5. Fred Luthans, Organisational Behaviour, McGraw Hill, New Delhi
6. RK.Suri, Organizational Behaviour, Wisdom Publication
7. Aswathappa K, Organisational Behaviour, Himalaya, Mumbai
8. Neeraj Kumar, Organisational Behaviour, Prentice Hall





### 107: QUANTITATIVE TECHNIQUES FOR MANAGEMENT

#### Course Outcomes:

- To make the students familiar with the statistical and mathematical techniques and their applications in business decision making.
- To provide basic knowledge of analyzing data using various statistical and mathematical techniques for business decisions
- To orient the students to various hypotheses testing methods as to how and where appropriately they can be applied.

#### Learning outcomes:

- Demonstrate a professional understanding of the basic mathematical and statistical techniques needed for quantitative analysis
- Apply the concepts of probabilistic distributions in solving problems.
- Recall the knowledge of hypothesis testing for large and small samples.

Unit-I: Functions, Linear, Quadratic, Logarithmic and Exponential Functions- Permutations and Combinations – Matrices - Solving System of Equations with Matrix Methods – Differentiation and Integration of Simple Functions and their Applications.

Unit – II: Measures of Central Tendency – Measures of Dispersion – Simple Correlation and Regression Analysis – Concept and Applications of Multiple Regressions.

Unit –III: Concept of Probability- Probability Rules – Joint and Marginal Probability – Baye's Theorem- Probability Distributions- Binomial, Poisson, Normal and Exponential Probability Distributions.

Unit-IV: Sampling and Sampling Distributions – Estimation – Point and Interval Estimates of Averages and proportions of small and Large Samples – Concepts of Testing Hypothesis – One Sample Test for Testing Mean and Proportion of Large and Small Samples.

Unit – V: Tests Two Samples – Tests of Difference between Mean and Proportions of Small and Large Samples – Chi-square Test of Independence and Goodness of Fitness- Analysis of Variance.

#### Suggested Books:

1. K.V.Sivayya and K.Satya Rao Business Mathematics
2. Anderson, Quantitative Methods for Business, Cengage, ND
3. Nagar, Das – Basic Statistics, Oxford University press
4. CR Kothari, Quantative Techniques, Vikas, ND
5. Shenoy, Sarma and Srivatsava, Quantitative Techniques for Management, New Age, ND
6. N.D.Kothari, Quantitative Techniques, in Management, Tata McGraw Hill, 2001.
7. S.P.Gupta Statistical Methods for Management
7. Anand Sharma, Quantitative Techniques for Decision Making, Himalaya, Mumbai



## SECOND SEMESTER

### 201: MARKETING MANAGEMENT

#### Course Outcomes:

- Develop an understanding of the concepts, issues and strategies in marketing and its management.
- Students will demonstrate analytical skills in identification and resolution of problems pertaining to marketing management.
- Gain insights on developing marketing strategies for business success

#### Learning Outcomes:

- Apply the knowledge, concepts, tools necessary to overcome challenges, and issues of marketing in a changing technological landscape.
- Creative Problem Solving: Develop creative solutions to marketing problems.
- To consider the various decision areas within marketing and the tools and methods used by marketing managers for making decisions.
- Identify the scope of marketing covering different functions of a marketing manager.

Unit 1 Importance and Scope of Marketing: Concepts of Marketing; Marketing Management Tasks; Marketing Environment; Marketing and Customer Value - Industrial Marketing, Services Marketing, Global Marketing.

Unit -II: Marketing Information System and Marketing Research; Consumer Behaviour and Buying Decision Process - Organization Buyer Behaviour -Market Segmentation and Targeting.

Unit - III: Development of Marketing Offerings Strategy - New Product Development- Product line and Decisions-Product-mix-Product Differentiation- Product Life Cycle Management - Brand Management - Packaging.

Unit IV: Pricing Strategies and Programs; Setting the Price- Adapting the Price - Initiating Response to Price Changes - Delivering Value: Designing and Managing Value Networks - Channels of Distribution.

Unit - V: Communicating Value: Designing and Managing Marketing Communications - Advertising - Direct Marketing and Personal Selling - Sales Promotion - Events and Public Relations and Public Relations- Competitive Marketing Strategies- Emerging Trends in Marketing: Networking Marketing- Viral Marketing-Ambush/Guerilla Marketing-Green Marketing-Direct Marketing etc.

(Case Study is compulsory in all Units)

#### Suggested Books

1. Kotler, Keller, Koshy & Jha, Marketing Management, Pearson, New Delhi
2. William J Stanton, Fundamentals of Marketing, McGraw-Hill, New Delhi.
3. Arun Kumar and Meenakshi, Marketing Management, Vikas, New Delhi
4. Pride and Ferrell, Marketing Management: Planning, Implementation & Control, Cengage, ND
5. Rajan Sexena, Marketing Management: Text cases in Indian Context.
6. Keith Blois - Oxford Textbook of Marketing Oxford University Press.
7. Zinkota & Kotabe: Marketing Management, Prentice Hall of India.
8. Joel R.Evans & Barry Berman : Marketing, Wiley India, New Delhi



### 202: FINANCIAL MANAGEMENT

#### Course Outcomes:

- To equip the students with basic principles of Financial Management and Techniques.
- Provide an in-depth view of the process in financial management of the firm
- Develop knowledge on the allocation, management and funding of financial resources.
- Enhancing student's ability in dealing short-term dealing with day-to-day working capital decision; and also longer-term dealing, which involves major capital investment decisions and raising long-term finance.

#### Learning Outcomes:

- Use finance concepts, techniques and models for qualitative and quantitative analysis.
- Communicate financial information and analysis effectively
- Apply financial knowledge/skills as a compass to guide business decisions

Unit 1: Nature, Scope and Objectives of Financial Management, Goals of FM-Profit Maximization Vs Wealth Maximization -Finance Functions - Financial Planning and Forecasting -Role of Financial Manager -Funds Flow Analysis -Cash Flow Analysis.- Ratio Analysis.

Unit-II: Financing Decision: Financial Leverage - EPS-EBIT Analysis -Cost of Capital - Weighted Average Cost Capital - Capital Structure- Factors Affecting Capital Structure- Theories of Capital Structure.

Unit III: Investment Decision: Nature and Significance of Investment Decision- Estimation of Cash Flows - Capital Budgeting Process - Techniques of Investment Appraisal: Pay Back Period; Accounting Rate of Return, Time Value of Money- DCF Techniques -Net Present Value, Profitability Index and Internal Rate of Return.

Unit-IV: Dividend Decision: Meaning and Significance -Theories of Dividend- Determinants of Dividend - Dividend policy - Bonus Shares - Stock Splits.

Unit V: Working Capital Decision: Meaning - Classification and Significance of Working Capital Component of Working Capital - Cash Management Models - Cash Budgeting - Accounts Receivables - Credit Policies - Inventory Management.

(Case Study is compulsory in all Units)

#### Suggested Books:

1. Brealey, Myers, Allen and Mohanty, Principles of Fin Management, TataMcGrawhill,ND
2. Pandey IM Financial Management, Vikas, New Delhi
3. JC Varshney, Financial Management, Wisdom, Delhi
4. Brigham and Houston, Fundamentals of Financial Management, Cengage, New Delhi
5. Banerjii, B., Fundamentals of Financial Management, PHI, New Delhi
6. Weston & Brigham, Managerial Finance, The Dryden Press, Illinois
7. James C.Van Horne -- Financial Management & Policy, Prentice Hall of India.
8. Khan & Jain - Financial Management, Tata McGraw Hill.
9. RM Srivasthava: Financial Management and Policy, Himalaya Publication.
10. Robert F Bruner, Case Studies in Finance: Managing for Corporate Value Creation, TMH



### 203: HUMAN RESOURCE MANAGEMENT

#### Course Outcomes:

- To equip the students with basic concepts of Human Resource Management and the various functions of HRM including Industrial Relations in the liberalized environment
- To develop the understanding of the concept of human resource management and to understand its relevance in organizations.
- To Enable the students to integrate the understanding of various HR concepts along with the domain concept in order to take correct business decisions

#### Learning Outcomes:

- Describe the basic knowledge and skills of the disciplines that comprise the human resources field; including: recruitment and selection, compensation and benefits, employee training and development, workforce planning and talent management, and performance management
- Understand the role of human resources in shaping the future of organizations
- Apply the principles and methods of HRM gained through this course for managing human resources at the workplaces.

Unit-I: Introduction: Definition and Functions of HRM; Principles of HRM; Changing Environment of HRM; Challenges; Ethical Aspects of HRM.

Unit -II: HR Planning; Concepts; Factors Influencing HR planning; HR Planning Process; Job Analysis; Recruitment and Selection; Tests and Interview Techniques.

Unit -III: Training and Development - Need, Process, Methods and Techniques, Evaluation, Management Development; Evaluating Employee Performance; Career Development and Counselling.

Unit - IV: Compensation - Concepts and Principles; Influencing Factors; Current Trends in Compensation - Methods of Payment - Incentives and Rewards.

Unit -V: Managing Industrial Relations - Trade Unions - Employee Participation Schemes - Collective Bargaining - Marketing Knowledge Workers.

(Case Study is compulsory in all Units)

Suggested Books:

1. Venkata Raman C.S., and Srivastiva BK Personnel / Human Resource Management, TMH,ND
2. Cynthia D. Fisher & Lyle F. Schoenfeld; / Human Resource Management, Wiley India, New Delhi.
3. DK Tripathi, Human Resource Management: Text & Cases, Wisdom, Delhi
4. Fisher, Managing Human Resource, Cengage, ND
5. N.K.Singh / Human Resource Management, Excel Publications.
6. Jyothi-/Human Resource Management, Pearso Education, New Delhi.
7. Biswajeet Pattnayak / Human Resource Management, Prentic hell of India New Delhi.
8. P.S Rao, Essentials of Human Resource Managemen & IR, Himaliya,Mumbai
9. Dwivedi & Agarwal, Human Resource Management, Vikas, ND
10. R. Wayne Mondy and Robert M.Noel, Human Resource Management, Pearson



## 204: RESEARCH METHODOLOGY FOR MANAGEMENT

### Course Outcomes:

- To equip the students with the basic understanding of research methodology
- To provide insight into the application of modern analytical tools and techniques for the purpose of management decision making.
- To provide participants with an introduction to research methods and report writing.

### Learning Outcomes:

- Demonstrate the ability to choose methods appropriate to research aims and objectives.
- Understand the limitations of particular research methods.
- Develop skills in qualitative and quantitative data analysis and presentation.
- Develop Research Report writing skills

Unit - I: Meaning and Importance of Research - Research Process - Types of Research - Defining Research Problem - Formulation of Hypothesis - Testing of Hypothesis.

Unit II: Research Design -Exploratory Research - Descriptive Research -Causal Research - Sampling and Sampling Design - Sampling Methods - Simple Random Sampling - Stratified Sampling Systematic Sampling - Cluster Sampling - Multistage Sampling, Non- Probability Sampling - Convenience Sampling - Judgement Sampling - Quota Sampling.

Unit - III: Data Collection - Primary and Secondary Data - Designing of Questionnaire - Measurement and Scaling - Nominal Scale - Ordinal Scale - Interval Scale Ratio Scale - Guttman Scale-Likert Scale - Schematic Differential Scale.

Unit - IV: Editing - Coding - Classification of Data - Tables and Graphic Presentation - Preparation and Presentation of Research Report.

Unit V: Non Parametric Tests – Kolmogorov- Smirnov Test-Runs Test for Randomness -Sign Test - Median Test - Multivariate Analysis - Multiple Regression Analysis - Concepts and Application of Discriminate Analysis and Factor Analysis.

### Suggested Books:

1. Mark Saunders, Philip Lewis, Adrian Thornbill, Research Methods for Business Students, Pearson,ND
2. Churchill, Iacobucci & Israel, Marketing Research: A South Asian Perspective, Cengage, New Delhi
3. C.R. Kothari, Research Methodology, New Age International.
4. Carver & Nash, Data Analysis with SPSS, Cengage, New Delhi
5. Alan Bryman & Emma Bell, Business Research Methods, Oxford University Press.
6. Donald R. Cooper & Pamela S. Schindler, Business Research Methods 8th Edition, Tata McGraw Hill.
7. K.V.S. Sarma, Statistics made sample, do it yourself on PC, Prentice Hall.
8. VP Michael, Research Methodology in Management, Himalaya, Mumbai



## 205: OPERATIONS MANAGEMENT

### Course outcomes:

- To acquaint the students with decision making process and various aspects of Production Management.
- An understanding of the different types of operations process types on which operational capability can be based
- Logically analyse and integrate knowledge to work with and apply operations management models and theories at the introductory level in both manufacturing and service environments.

### Learning Outcomes:

- Know how to use different technical instruments for the analysis of operations
- Knowledge and skills required to determine and optimal inventory management policy.
- Knowledge and skills in the application of key operations scheduling methods to various types of processes.
- Learn the application of computers In production and operations management

Unit 1 Introduction: Nature and Scope of Production and Operation Management- Historical Evolution -Types of Manufacturing Systems - Differences Between Manufacturing and Service Operations -Role of Production and Operation Manager.

Unit-II: Production Planning and Control: Stages in PPC - Gantt- PPC in Mass, Batch, and Job Order Manufacturing-Aggregate Planning -Maintenance Management -Industrial Safety.

Unit-III: Plant Location: Facility Location and Layout Planning -Types of Layouts - Material Handling Equipment's - Material Handling Principles - Models Used in Lay Out Designs.

Unit- IV: Productivity: Factors, Affecting Productivity - Job Design - Process Flow Charts - Methods Study Work Measurement - Engineering and Behavioural Approaches.

Unit -V: Material Management -Cost Associated with Inventory - Economic Order Quantity - ABC Analysis- Materials Requirement Planning - Just In Time Production- Total Quality Management - Acceptance Sampling -Control Charts – Quality circles-Zero Defects Programmes - ISO 9000 - Application of Computer in Production and Operations.

(Case Study is compulsory in all Units)

### Suggested Books:

1. Gaither & Frazier, Operations Management, Cengage, New Delhi
2. Panner Selvem, Production and Operation Management, Prentice Hall of India.
3. Chunnawals, Production & Operation Management Himalaya, Mumbai
4. Kanishka Bedi, Production & Operation Management, University Press.
5. Upendra Kachru: Operation Management, Excel Publications.
6. Adam, E.E& Ebert; R.J. Production and Operation Management, 6th Ed., Prentice Hall
7. Chary, S.N.Production and Operation Management, New Delhi, Tata McGraw Hill
8. K Aswathappa & Sridhar Bhatt, Production & Operations Management, Himalaya, Mumbai



## 206: CORPORATE LEGAL FRAMEWORK

### Course outcomes:

- To assist students in understanding basic laws affecting a Business Enterprise.
- To appreciate the relevance of corporate law to individuals and businesses and the role of law in an economic, political and social context.
- Identify the fundamental legal principles behind contractual agreements.
- Apply basic legal knowledge to business transactions.

### Learning Outcomes:

- Develop comprehensive understanding about the existing law in India
- Have basic knowledge about case law studies.
- Demonstrate an understanding of the contract act and partnership act of Business
- To make the students aware regarding consumer rights

UNIT-I: Significance of Business Laws-Indian Contract Act, 1872: Meaning and classification of contracts-Essential elements of a valid contract- performance of a contract-Discharge of a contract-Void agreements- Breach and remedies of a contract.

UNIT-II: The Sale of Goods Act, 1930: Meaning and Essentials of contract of sale- Sale and Agreement to sell-Conditions and Warranties-Transfer of property Performance of a contract of sale-Unpaid seller.

UNIT-III: The Indian Partnership Act, 1932: Meaning and Essentials of partnership-- Registration of partnership-Kinds of partners Rights and Liabilities of Partners -Relations of parties to third parties-Dissolution.

Unit-IV: The Consumer Protection Act, 1986: Meaning of Consumer, Service, Goods, Deficiency, Defect, Unfair Trade Practices-Rights of Consumers-Machinery For Redressal of Grievances-Remedies available to injured consumers

UNIT-V: The Companies Act, 1956: Nature and Registration-Kinds of Companies- Memorandum of Association-Article of Association-Kinds of Shares- Powers and duties of Directors-winding up.

### SUGGESTED BOOKS:

1. N.D.Kapoor-Commercial Law-Sultan chand publishers, New Delhi.
2. S N Maheswaru & Suneed Maheswari-Commercial Laws-Mayoor Paper Backs— NOIDA
3. Tulisian P.C.-Business Laws-Tata Mc Graswhill Publishing house - New Delhi
4. Kucchal-Business Law-Vikas Publishing House, New Delhi.
5. Avatar Singh-Mercantile Law--EBC-New Delhi.



### 207: E-BUSINESS

#### Course outcomes:

- To provide basic concepts of e-business and equip the student with the skill of integrating business process with electronic technology.
- Analyse E-Business models and understand the nature of E-Businesses that are succeeding in the Virtual Market place
- Know about the different payment systems and ways to management e-payment risk.
- Familiarize with E-Marketing tools to improve Business success.

#### Learning Outcomes:

- Understand the basic concepts and technologies used in the field of E-Business
- Understand the risks around Security when doing business online
- Gain insights into the impact of E-commerce on business models and strategy.
- Knowledge about Technology resources available to meet E-commerce business needs

#### UNIT -I

Introduction- Traditional Business Vs. E-Business - E-Business, E-Commerce, E- Marketing and M-Commerce -Internet, WWW and Evolution of E-Business - Growth of E-Business in India

#### UNIT - II

Infrastructure for E-Business - Internet Protocols, Web-Based Client/Server, Internet Security, Media Convergence, Multimedia -Architectural Framework for E-Business- WWW as the Architecture

#### UNIT - III

E-Business Models based on Relationship of Transaction Parties and based on Relationship of Transaction Types - E-Business for Service Industry - Travel and Tourism, Employment Placement, Real Estate, Stocks Trading, Publishing - Mobile Commerce through different Apps

#### UNIT-IV

E-Payment Systems - Classification of Payment Systems - Risk and E-Payment Systems - E- Security- Privacy, Integrity, Authentication, Non Repudiation, Technical Attacks and Non-Technical Attacks

#### UNIT -V

E- Advertisement - E-Business Strategies and Implementation - E-Supply Chain Management - Legal Ethical Issues of E-Business





### SUGGESTED READINGS:

Ravi Kalakota & Marcia Robinson, E-Business Road map for success, Pearson Education, Asia.

Ravi Kalkota & Andrew B. Whinston, Frontiers of Electronic Commerce, Addison Wesley.

P.T. Joseph, S.J. E-Commerce: An Indian Perspective, Prentice Hall of India

Kenneth C. Laudon, Carol Guercio Traver, E-Commerce: Business, Technology, Society, Pearson Education

Efraim Turban, Jae Lee, David King and H. Michael Chung, Electronic Commerce, Pearson Education

C.S.V. Murthy, e-commerce: concepts, models and strategies, Himalaya Publishing/

C.S. Rayudu, E-Commerce and E-Business, Himalaya Publishing House.

Kamalesh Bajaj and Debjani Nag, E-Commerce, Tata McGraw Hill.

N. Bandopadhyaya, E-Commerce Context, Concepts and Consequences, Tata McGraw Hill.

Abhjit Choudhary, E-Business and E-Commerce Infrastructure Technologies supporting



### THIRD SEMESTER

#### 301-STRATEGIC MANAGEMENT

##### Course Objectives:

- To introduce the concepts of strategic management and understand its nature in competitive and institutional landscape.
- To expose students to various perspectives and concepts in the field of Strategic. Management.

##### Learning outcomes:

- Demonstrate an appreciation of areas which are fundamental to the development of successful strategy.
- Outline and critique the major perspectives on the conduct of strategy

Unit-I : Overview of Strategic Management -Business Policy and Strategic Management – strategic Management Model - Business Ethics and Strategic Management

Unit-II: Business Vision, Mission, Objectives - Characteristics of Mission Statement Types of Strategies - Integration strategies –intensive strategies - Diversification strategies- Diversification strategies- Michael porter Generic Strategies

Unit-III : Strategic formulation: Environmental Analysis - External and industry analysis - Internal analysis -Strategic analysis and choice - Input stage -Matching stage - decision stage -Cultural aspects of strategy choice.

Unit-IV: Strategic Implementation: The nature of strategic implementation resource allocation -Strategy and structure -Creating - Supportive culture - Implementing strategies in functional areas.

Unit - V: Strategy Evaluation: The nature of strategy evaluation -Review and Control - Characteristics of effective evaluation systems -Criteria for strategy control -Mechanism for strategic control.



(Case Study is compulsory in all Units)

### Text Books

1. Hill & Jones, An Integrated Approach to Strategic Management , Cengage, N D
2. Glueck, William F. Strategic Management and Business Policy, New York McGraw Hi ll.
3. Suku l Lamesh, Business Policy and Strategic Management, Vikas, ND
4. Hugh McMillan- Strategic Management, Oxford University Press.
5. Budhiraja, S.B. and Athereya, MB.Cases in Strategic Management, Tata McGraw-Hill,ND
6. Hax A.C and Majluf, N.S. Strategic Management, Englewood Cliffs, New Jersey , Prentice Hall of India.
7. Mathur U.C. Strategic Management, Macmi llan .
8. Gupta, Strategic Management, Prentice Hall of India.

## 302- DESIGN THINKING

### Course Objectives

- Inculcate the fundamental concepts of design thinking
- Develop the students as a good designer by imparting creativity and problem solving ability
- Conceive, conceptualize, design and demonstrate innovative ideas using prototypes

### Course Outcomes

- Demonstrate the critical theories of design, systems thinking, and design methodologies
- Produce great designs, be a more effective engineer, and communicate with high emotional and intellectual impact
- Understand the diverse methods employed in design thinking and establish a workable design thinking framework to use in their practices

### Unit 1: INTRODUCTION TO DESIGN THINKING

A brief insight to Design Thinking and Innovation- People Centered Design & Evoking the 'right problem'- Purpose of Design Thinking- Design Thinking Framework

### UNIT-2 : PROCESS IN DESIGN THINKING (EMPATHY, DEFINE)

Design Thinking Process – Empathy – Uncovering and Investigating Community Concerns - Define: Examine and reflect on the problem

### UNIT 3: CONCEPTING AND BUILDING (IDEA, CREATE)

Generating Ideas-Identifying top three ideas-Bundling the Ideas and create concepts-Rapid Prototyping

### UNIT 4: TESTING, REFINING AND PITCHING THE IDEAS

Importance & Testing the Design with People-Retest and Redefine Results-Creating a Pitch for the design

### UNIT 5: VALUE PROPOSITION DESIGN

Business Vs Startup-Briefing the Problem-Problem Validation and User Discovery- Challenge Brief- Patents and Intellectual Property

#### Text Book:

1. Robert A Curedale, Design Thinking Process & Methods 4th Edition, December 2017, Design Community College Inc.
2. Andrew Pressman, Design Thinking: A Guide to Creative Problem Solving for Everyone, First Edition, Nov 2018, Routledge

#### Reference Book:

1. Idris Mootee, Design Thinking for Strategic Innovation - What They Can't Teach You at Business or Design School, First Edition, 2017, Wiley



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2. Yves Pigneur, Greg Bernarda, Alan Smith, Trish Papadacos Alex Osterwalder, Value Proposition Design: How to Create Products and Services Customers Want, 2015, Wiley

3. Brown, Tim, and Barry Katz. Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation, 2009, Harper Business



### 303-OPERATIONS RESEARCH

#### Course Objectives:

- To expose the students to understand various skills required for decision making through scientific and systematic methods.
- To develop skills in formulating and structuring decision making problems as mathematical models.
- To understand the use of software for obtaining solutions of the models formulated and interpretation of results for better decision making.

#### Learning outcomes:

On successful completion of this course, students will be able to:

- Identify and formulate operations research models that represent real world problems
- Understand the mathematical tools that are needed to solve decision making problems
- Use Excel-Solver to solve the proposed models.
- Develop reports that describes the model and the solving technique
- Analyze the results and propose recommendations to the decision-making processes

**Unit – I:** Importance and Scope of Operations Research - Linear Programming - Graphic Method - Simplex Method - Big-M Method - Dual L.P. and Its Applications.

**Unit-II:** Transportation Problem - Assignment Problem - queuing Theory - M/MII and MIMIC Models.

**Unit – III:** Dynamic Programming - Applications of D.P. (Capital Budgeting, Production Planning, Solving Linear Programming Problem) - Integer Programming - Branch and Bound Method.

**Unit – IV :** Game Theory - Two Person Zero sum Games - Pure Strategies - Mixed Strategies - Dominance Principle - Graphic and Algebraic Method - Linear Programming Approach - Simulation - Simulation Inventory and Waiting Lines.

**Unit – V:** Project Management - PERT and CPM - Crash Time - Crash Cost Trade Off - Resource Leveling and Resource Allocation - Non-Linear Programming Model Formulation - Graphic Method of Solving Simple Problems.

(Case Studies are compulsory in all units)

Textbook: Quantitative methods for Business (10e) - Anderson, Sweeney & Williams.

References: 1. Introduction to Operations Research- Hillier, F. S. and Lieberman, G. J. (8th ed.), New York: McGraw-Hill.

2. Quantitative Techniques for Managerial Decisions- Sharma, McMillan.
3. Operations Research: An introduction-Taha, H., Pearson Education.
4. Introduction to Management Science – Anderson, Sweeney & Williams.
5. Quantitative Techniques in Management – Vohra, N. D., TMH.



### 304- INTERNATIONAL BUSINESS

#### Course Objectives:

- The objective of this course is to acquaint the students to emerging global trends to Business environment.
- The course covers patterns of world trade, internationalization of the firm, and Operating procedures of the multinational enterprise

#### Learning Objectives:

- Demonstrate an in-depth understanding of environmental forces affecting International Business.
- Identify the critical issues in International Business.

Unit - I: International Business: Significance, Free Trade Vs. Protection. Emerging Trends, Trade Barriers, Trade Strategies.

Unit -II: Balance of Payments: Concept, Disequilibrium in BOP, Structural Cyclical and Monetary Disequilibrium, Methods or Correction; 1990 BOP Crisis.

Unit -III: Foreign Exchange Markets: Foreign Exchange Market Mechanism; Exchange Rate Determination, Convertibility or Rupee and its Implications.

Unit -IV: Globalization: Role of Multinational Corporations -Impact on India -Role of GDRs, FII -Export Promotion Zones - Special Economic Zones.

Unit - V: International Liquidity: Problems of Liquidity; Role of IMF and IBRD in Managing International Liquidity Problems.

#### Suggested Readings:

1. Crinkota, Ronkainen and Moffett, International Business, Cengage, New Delhi
2. Andrew Harrison -International Business, Oxford University Press.
3. E.Bhattacharya: international Business, Excel Publications.
4. Francis Cherunilam, International Business: Text and Cases, Prentice Hall or India.
5. S. Sundaram & Black, International Business Environment -The Text and Cases,
6. Prentice Hall, India.
7. Bhalla, V.K., & S. Sivaramu, International Business Environment and Business, Annual Publications.
8. Daniel John D and Redebough, Lee.H., International Business, Addison Wesley India.



## 305- EXPORT- IMPORT MANAGEMENT

### Course Objectives:

The course aims to provide a comprehensive view of Export-Import Management

- Relevant procedures with practical inputs are given to understand the operational procedures and documentation formalities
- To enable student to be an integral part of Export-Import Management division of any

### Learning Outcomes:

- The student shall develop understanding of customer value through export and import from a network perspective.
- The student shall understand the role of export and import in a country
- The students will learn about policy and laws regarding export-import in foreign market

Unit I Title: Introduction Foreign Trade Policy Framework No of Hours- 10 Foreign Trade Policy framework, objectives of Foreign Trade Policy, and overview of the Policy . Export Promotion Schemes, Export Facilities, Licenses & Incentives. Special Economic Zones, Status holders 100% EOUs, Foreign market entry modes, Global strategy

Unit II Title : Export Contract and International Commercial Terms (INCOTERMS) No. 10 Export contract, Terms of Delivery, INCOTERMS 2010, Payment Terms: Documentary Collection & Export Costing, Export Finance, Documentary Credits, Uniform Customs and Practice for Documentary Credits (UCPDC), Uniform Rules for Collection (URC 522) in India, Roles of banks in Export-import

Unit III Title : Key Risks in International Trade (Transit Risk, Credit & Country Risk) No.10 Types of Risks in International Trade: Transit Risks covered by Marine Cargo insurance, Credit & Country Risks Management covered through Export Credit Insurance by Export Credit Guarantee Corporation of India and role of ECGC in export credit risk management

Unit IV Title : Need and Importance of Export Documentation No.10 Export documentation, need and importance of documentation, study of three types of documentation process (Commercial documents, Regulatory documents, Incentive Documents) A step-by-step approach to shipment process an export order

Unit V Title : Import Regulations and Procedures of Customs Clearance No.10 Imports, Regulations, Open General and Special Licenses, Customs Act 1962, Rules of origin, Valuation, Assessment procedure Customs Tariff, Import Clearance procedure: Documentation, Customs House Agents (CHA)

### REFERENCES:

1. **Export and Import Management Text and cases**, Ram Singh, Sage/Texts ISBN: 9789353884833
2. **Export Import Policy**, Publisher: Ministry of Commerce, Government of India, New Delhi.





## 306- BUSINESS ANALYTICS

### Course Objectives:

- To introduce students to problem solving with Business Analytics and the use of spreadsheets for descriptive analytics, data queries and visualization
- To introduce students to statistical sampling, sampling distributions, confidence intervals and statistical inference
- To familiarize students with various types of regression including simple linear regression and multiple linear regression

### Course outcomes:

After completion of the course the student should be able to:

- Describe data and models used for Business Analytics and apply various descriptive analytic techniques to analyze data
- Estimate population parameters, interval estimates, construct confidence intervals and perform hypothesis testing
- Estimate and interpret the parameters of simple linear regression and multiple linear regressions

**Unit 1: Foundations of Business Analytics:** Evolution of Business Analytics, Scope, data and models for Business Analytics, problem solving with Business Analytics, Analytics on spreadsheets, Excel functions for Database queries, Add-ons for Business Analytics. Descriptive Analytics: Data visualization, creating charts in MS Excel, Data Queries, Tables, sorting and filtering, Data summarization with statistics, Data exploration using Pivot tables

**Unit 2: Statistical Sampling:** methods, estimating population parameters, sampling error, sampling distributions, interval estimates, confidence intervals, using confidence intervals for decision making, prediction intervals Statistical Inference: Hypothesis testing, one-sample Hypothesis testing, two-tailed test of Hypothesis for mean, two-sample Hypothesis testing, Analysis of variance, chi-square test for independence

**Unit 3: Trendliness and Regression:** Modeling Relationships and trends in data, Simple linear regression, least squares regression, regression on analysis of variance, testing hypothesis for regression coefficients, Confidence intervals for regression coefficients, Residual analysis and regression assumptions, Multiple linear regression, building regression models, regression with categorical independent variables with two or more levels, regression with nonlinear terms, advanced techniques for regression modeling



**Unit 4: Forecasting Techniques:** Qualitative and judgmental forecasting, statistical forecasting models, forecasting models for stationary time series, forecasting models for time series with linear trend, forecasting models for time series with seasonality, selecting appropriate time-series-based forecasting models, regression forecasting with casual variables, practice of forecasting

**Unit 5: Spreadsheet modeling and Analysis:** Strategies for predictive decision modeling, Implementing models on spreadsheet, spreadsheet applications in Business analytics, Model assumptions, complexity and realism, developing user-friendly applications, analyzing uncertainty and model assumptions, model analysis using analytics solver platform

### Text Book

1. "Business Analytics: Methods, Models, and Decisions" James R. Evans, Pearson Publications, Second edition

### Reference Book

1. "Business Analytics: The Science of Data-Driven Decision Making", U. Dinesh Kumar, Wiley Publications



## 307-R PROGRAMMING

### COURSE OBJECTIVES:

After taking the course, students will be able to

- Use R for statistical programming, computation, graphics, and modeling,
- Write functions and use R in an efficient way,
- Fit some basic types of statistical models
- Use R in their own search,
- Be able to expand their knowledge of R on their own.

### COURSE OUTCOMES:

At the end of this course, students will be able to:

- List motivation for learning a programming language
- Access online resources for R and import new function packages into the R workspace
- Import, review, manipulate and summarize data-sets in R
- Explore data-sets to create testable hypotheses and identify appropriate statistical tests
- Perform appropriate statistical tests using R Create and edit visualizations

UNIT-I: Introduction, How to run R, R Sessions and Functions, Basic Math, Variables, Data Types, Vectors, Conclusion, Advanced Data Structures, Data Frames, Lists, Matrices, Arrays, Classes.

UNIT-II: R Programming Structures, Control Statements, Loops, - Looping Over Nonvector Sets, - If-Else, Arithmetic and Boolean Operators and values, Default Values for Argument, Return Values, Deciding Whether to explicitly call return-Returning Complex Objects, Functions are Objective, No Pointers in R, Recursion, A Quicksort Implementation-Extended Example: A Binary Search Tree.

UNIT-III: Doing Math and Simulation in R, Math Function, Extended Example Calculating Probability- Cumulative Sums and Products-Minima and Maxima-Calculus, Functions for Statistical Distribution, Sorting, Linear Algebra Operation on Vectors and Matrices, Extended Example: Vector cross Product- Extended Example: Finding Stationary Distribution of Markov Chains, Set Operation, Input /output, Accessing the Keyboard and Monitor, Reading and writer Files,

UNIT-IV: Visualization and Graphics for analytics, Creating Graphs, The Workhorse of R Base Graphics, the plot () Function – Customizing Graphs, Saving Graphs to Files.



UNIT-V: Probability Distributions, Normal Distribution- Binomial Distribution- Poisson Distributions Other Distribution, Basic Statistics, Correlation and Covariance, T-Tests,- ANOVA.-Linear Models, Simple Linear Regression, - Multiple Regression Generalized Linear Models, Nonlinear Models, Splines- Decision- Random Forests

#### TEXT BOOKS:

- 1) The Art of R Programming, A K Verma, Cengage Learning.
- 2) R for Everyone, Lander, Pearson
- 3) The Art of R Programming, Norman Matloff, No starch Press.

#### REFERENCE BOOKS:

- 1) R Cookbook, Paul Teetor, O'Reilly.
- 2) R in Action, Rob Kabacoff, Manning



### 308-LOGISTICS AND SUPPLY CHAIN MANAGEMENT

#### Course Objectives:

- The objectives of this course are to develop an understanding of Supply Chain and Logistics system
- support planning, ensuring logistics support is effectively considered in a system from a total life-cycle perspective
- to understand the implications of an extended supply chain.

#### Learning outcomes:

- Apply foundational business skills needed in logistics and Supply chain management settings.
- Distinguish cross-functional business processes in supply chains.
- Practice analytical business skills to address logistics and supply chain management challenges.

#### Unit 1- INTRODUCTION TO SUPPLY CHAIN

Supply Chain Concepts: Objectives of a Supply Chain, Stages of Supply chain, Cycle view of Supply Chain Process, Key issues in SCM, logistics & SCM, Supply Chain Drivers , Supply chain strategies with relation to strategic, Tactical, Operation view of Business Best practices in SCM with respect to manufacturing, service industry .

#### Unit 2-FUNDAMENTALS OF SUPPLY CHAIN PLANNING

Components of Supply Chain Planning, Supply Chain Operations Reference Model (SCOR), Understanding role of Logistics in SCM and Determining Supply Chain cost , Case Studies .

#### Unit 3-Supply Chain Performance:

Bullwhip effect , Supply Performance measurement: Dimen. Understanding Demand with respect to various supply chain in industry, Forecasting- Concept of Demand Forecasting Unit( DFU), SKU, Forecast Approaches- Time Series , Profile based forecasting, Dependent Demand Forecasting, Forecast Accuracy. Drum Buffer Rope Model, TOC, Case Studies

#### Unit 4-PRODUCTION PLANNING

Definition – Objectives of production Planning and Control – Functions of production planning , Scheduling –Sales and operations planning- enterprise resource planning.

#### UNIT 5-MATERIAL MANAGEMENT

Fundamentals of material management- Significance of Materials Management, EOQ model, ABC analysis, ROP-Re-Order Point determination, Material Management with respect to warehouse, manufacturing, service industry.



### **Suggested Readings:**

1. Chopra, Sunil, Meindl, Peter and Kalra, D. V.; Supply Chain Management: Strategy, Planning and Operation; Pearson Education
2. Altekhar, Rahul V.; Supply Chain Management: Concepts and Cases;
3. Ballou, Ronald H.; Supply Chain Management; Pearson Education
4. Sahay, B.S.; Supply Chain Management; Macmillan
5. Ballou, R.H. Business Logistics Management. Prentice-Hall Inc.
6. Bowersox D.J., Closs D.J., Logistical Management, McGraw-Hill, 1996
7. TOC [Eliyahu M. Goldratt](#)



### 309-PURCHASE MANAGEMENT AND LOGISTICS FINANCE

#### Course Objectives:

- To understand how the knowledge of procurement management can be an advantage to logistics and supply chain operations.
- To know processes required to prepare effective RFPs and those required to respond successfully to RFPs

#### Learning outcomes:

- Develop appropriate selection criteria for vendor selection
- To understand and apply their knowledge of the procurement management and process.

#### Unit 1: Framework of Procurement Management

Introduction to Sourcing, Sourcing v/s Procurement, purchasing: Purchasing Cycle, 8 R's of Purchasing, RFX (Process), Placing Orders, Budgets and Expense Allocation, E Make or Buy Decision, Types and Methods of Sourcing, Centralized decentralized Approaches, Single Sourcing vs Multiple Sourcing, Day-to-Day vs Long Term Sourcing, Case Studies and Latest Updates.

#### Unit 2: Vendor Selection in Procurement

Vendor Selection Process, Evaluation of Existing Vendors, Developing Vendor Performance Measures, New Vendor Development Process, Working with Suppliers to Manage Quality, JIT and TQM in Sourcing, Case Studies and Latest Updates.

#### Unit 3: Processes in Procurements

Market Analysis and Supplier Research, Identifying Prime Sources of Suppliers' Information, Request for Proposal, Different Methods of Buying, Fundamental Steps of the Buying Process, Terms and Condition of Purchase, Buying Documentation, Negotiation in Procurement, Use of IT in Sourcing, Global Tenders and E-Procurement, Reverse Auctions, Overview of Global Purchasing,



### **Unit 4 : Aligning Inventory Objectives with Procurement**

Role of purchasing in Supporting Inventory Objectives, Hedging vs. Forward Buying, Managing Price Fluctuation and Volatility in International Finance, Payment Modes, Matching Supply with Customer Demand, INCO TERMS. Case Studies and Latest Updates.

### **Unit 5 Global Procurement Management**

Global Trade Barriers, Dealing with International Suppliers, UNO and GATT conventions, Legal, Socio-Cultural Issues in International Buying, Environmental Issues & Green Purchasing, Case Studies and Latest Updates.

#### **Suggested Readings**

1. Sollish, F. and Semanch, J. Strategic Global Sourcing: Best Practices, Wiley Publications
2. Chopra and Miendl, Supply Chain Management: Strategy, planning and operation, Pearson Books
3. by Sherry R. Gordon, Supplier Evaluation and Performance Excellence: A Guide to Meaningful Metrics and Successful Results.
4. B S Sahay, Emerging Issues in Supply Chain Management (McMillan)
5. Alan Harrison, Logistics Management and Strategy (Pearson)





### FOURTH SEMESTER

#### 401-CROSS CULTURAL MANAGEMENT

##### Course Objectives:

- This course explores the effect of cultural differences on management in organizations.
- It aims to provide students with an understanding of the challenges and opportunities that arise when people of diverse cultural backgrounds interact in the workplace

##### • Learning Outcomes:

- Understanding of the changing global business environment, emerging business and cross cultural issues, and implications for management.
- Critically analyse cultural differences, conduct comparative analyses and consider the impact on global business organisations
- Work cohesively in a cross-cultural team and demonstrate understanding of problem solving strategies in diverse teams.

Unit I : Dimensions of Culture – a management perspective - Definitions and Classification of Culture and Culture Code, Modalities of Cross-Cultural Dimensions- Hofstede's Cultural Dimensions, Hall's Cultural Dimensions -Religion and its implication on business -A comparison of world views: East and West -The importance of World views and international management

. Unit II: Cross Cultural Communication -Characteristics of Communication- Culture and Communication -Major Obstacles to Cross Cultural Communication- Non-verbal communication – across cultures –Hall and Hall's concept of Low and High Context communication - Cross – Cultural Conflict -Source and Type of Conflicts - Cross Cultural conflict and resolution.

Unit III :Leadership Use of Power and Authority in Different Cultures-Defining leadership – Models of Leadership, Use of power and Authority in different cultural set up, Various Behavioural Styles of leaders across cultures, Leadership in different cultures -Motivation and Culture

Unit IV :Organizational Culture in Multi-National Corporations (MNCs) -Organizational Culture & National Culture - Family culture - Eiffel Tower culture -Guided Missile culture -Incubator culture -Managing Multiculturalism and Diversity, Phases of Multicultural Development.

Unit V :Doing Business Across Cultures Managing across Cultures - Cross Cultural differences and similarities in doing business -Parochialism and Simplification -Cultural differences in selected countries and regions - Doing Business in China -Doing Business in India - Doing Business in France- Doing Business in Arab Countries Doing Business in Africa



### REFERENCES

Madhavan, Shobhana, 2016, Cross-cultural Management – Concepts and Cases, Oxford University Press. Second Edition. New Delhi

1. Browaeys, Marie Joelle and Roger Price, 2010, Understanding Cross-cultural Management, Pearson Education, New Delhi

2. Sinha, Jai B.P. 2004. Multinationals in India. Managing the Interface of Cultures. Sage Publications. New Delhi



## 402-CUSTOMS CLEARANCE PROCEDURES FOR FOREIGN TRADE

### Course Objectives:

- To acquire and improve their skills of clearing & forwarding procedures along with stowage techniques
- To Perform more productively in their cargo management activities through a stowage techniques and cargo management process
- To demonstrate the skills meet the challenges of cargo terminal management.

### Learning outcomes:

- Explain the concepts in custom clearance in international business with respect to foreign trade
- Apply the current custom clearance phenomenon and to evaluate the global business environment in terms of economic, social and legal aspects
- .Analyse the principle of international business and strategies adopted by firms to for exporting products globally

Unit I Title : Freight Forwarding and Stowage Process Session : No.10 Stowage and Freight forwarding, World Custom Organization (WCO) Customs Act 1962 ITC (HS) HSN codes, SION norms of Import & Exports under customs procedures. Freight Forwarding, procedures for Pre-Operating Shipment Checks / consignment – shipping documents Air way bills Freight Forwarding. Regulations

Unit II Title : Customs Valuation and Assessment Sessions : No. 10 Customs Valuation & Assessments Calculation of Customs Duty and Duty calculator Customs Clearance Documentations, Shipping Bill, Bill of Entry etc.

Unit III Title : Categories of Customs Clearance, Factory, Dock & Warehouse Stuffing No.10 Categories of Customs Clearance Procedure by Case study analysis : Export by Factory stuffing & Dock Stuffing, Export of Warehoused goods without payments of duty, First Check procedure & second Check Procedure in Import, Export 106 on re-import and Import on Re-export

. Unit IV Customs Bonding Process Session : No.10 Customs Bonding Procedure: Unclear goods (Unclaimed by buyer), Warehoused goods (In-bond & Ex-bond), KYC norms for Customs House Agent – (CHA)

5. Unit V Foreign Trade Policy / EXIM policy and Schemes of Incentives Session : No.10 Foreign Trade Policy / Exim Policy Incentives, Customs Duty Draw Back claims and settlements under Section 74, Section 75 Customs Rules for Search, Seizure, confiscation & Arrest in case of any mis-appropriation.

### Text Books:

Harrison, A. and Van Hoek, R., (2011). Logistics management strategy: competing through the supply chain, Fourth edition. Harlow: Financial Times Prentice Hall

● Cousins, P. D., Lamming, R., Lawson, B. and Squire, B. (2008). Strategic Supply Management: Principles, Theories and Practice, First edition. Harlow: Financial Times Prentice Hall.

● Christopher, M. (2011). Logistics & Supply Chain Management, Fourth Edition



### 403-INTERNATIONAL MARKETING

#### Course Objectives:

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

#### Learning Outcomes:

- Develop an understanding of and an appreciation for basic international marketing concepts, theories, principles, and terminology.
- Be able to demonstrate an awareness and knowledge of the impact of environmental factors (cultural, economic, institutional, legal and political) on international marketing activities.
- Be capable of identifying international customers through conducting marketing research and developing cross-border segmentation and positioning strategies.

UNIT - I Introduction to International Marketing -Introduction to Global Marketing, Globalization and Global Marketing, Management orientations, Driving &restraining forces, Global cultural environment

UNIT - II Global Market Research and Analysis -Research requirements in International Marketing, Global marketing information system

UNIT - III Developing Global Marketing Strategies: Internationalization: Process & Theories, International Market Entry: Modes & Strategies, Firm Competitiveness in the International Market, Global Market Segmentation, Targeting and positioning.

UNIT - IV Creating Global Marketing Programs: Global Product & Brand Strategy, Global Pricing Strategy, Global Distribution & Supply Chain Strategies, Global integrated marketing communications.

UNIT - V Managing Global Marketing Operations -Global organization and leadership: managing the global marketing effort, the future of global marketing: major trends and directions

#### REFERENCES

- "Global Marketing Management" by Warren J. Keegan &GautamDutta, 8th Edition, Pearson Education.
- "International Marketing" by Cateora, Philip R., Mary C. Gilly& John L. Graham, 16th Edition, New York: McGraw-Hill/Irwin, 2013.
- "Global Marketing Management" by Kiefer Lee & Steve Carter, Latest Edition, Oxford University Press

## 404-BIG DATA ANALYTICS

### Course Objectives:

- To introduce Big Data and the Data analytics lifecycle to address business challenges that leverage big data.
- To understand the importance of mining data streams and social network graphs.
- To introduce big data analytics technology and tools including MapReduce and Hadoop.

### Course Outcome:

- Reframe a business challenge as an analytics challenge.
- Apply appropriate analytic techniques and tools to analyze big data.
- Create models and identify insights that can lead to actionable results.
- Effectively participate in big data and other analytics projects.
- Use tools such as MapReduce / Hadoop.

**UNIT I: Big Data Concepts and Environment:** Big Data Overview-Big Data Challenges and Opportunities- Data analytics lifecycle overview – Phases of Data Analytics: Discovery, Data preparation, Model planning, Model building.

**UNIT II: Overview of Hadoop and HDFS:** Introduction to Hadoop - The Distributed File System: HDFS, GPFS – The Design of HDFS – HDFS-Concepts-Blocks, Name Nodes and Data Nodes; Components of Hadoop- Hadoop Cluster Architecture-Batch Processing- Serialization - Hadoop ecosystem of tools-NoSQL

**UNIT III: Map Reduce:** MapReduce Basics - Functional Programming Roots - Mappers and Reducers - The Execution Framework -MapReduce Algorithm Design –Shuffling, Grouping, Sorting- Custom Partitioners and Combiners- MapReduce Formats and Features.

**UNIT IV: Data Stream Mining:** The Stream Data Model: A Data-Stream-Management System, Examples of Stream Sources, Stream Queries, Issues in Stream Processing. Sampling Data in a Stream, Filtering Streams (The Bloom Filter), Counting Distinct Elements in a Stream, Counting Ones in a Window, Decaying Windows.

**UNIT V: Big Data Clustering:** Overview of clustering techniques, Hierarchical Clustering, Partitioning Methods, CURE algorithm, Clustering stream- Mining Social Network Graphs: Link Analysis: Page Rank- Efficient computation of Page Rank-Topic Sensitive Page Rank- Link Spam- Hubs and Authorities. Mining Social Network Graphs: Web Advertising: Online and Offline Algorithms; Social Network Graphs: Clustering of Social Network Graphs- Direct Discovery of Communities- Partitioning of Graphs- Finding overlapping communities- Simrank Counting Triangles- Neighborhood properties of Graphs.

### Text Book:

1. Radha Shankarmani, M Vijayalakshmi, “Big Data Analytics”, 2<sup>nd</sup> Edition, Wiley

### Reference Books:

1. Anand Rajaraman and Jeffrey David Ullman, Mining of Massive Datasets, Cambridge University Press, 2014.
2. Data Warehousing in the Age of Big Data, Krish Krishnan Elsevier Inc, 2013

## 405-Machine Learning

### Course Objectives:

- The objective of the course is to learn what machine learning is and how it is related to data analysis and statistics.
- The course will impart knowledge on how various machine learning algorithms search for data patterns which can be used to make decisions and predictions for practical problem solving.

### Course Outcomes:

At the end of course student will be able to:

- Learn the basic concepts and techniques of machine learning.
- Use machine learning concepts to solve practical problems.
- Understand the functioning and applications of some popular machine learning algorithms.
- Understand the concepts of supervised, unsupervised and reinforcement learning.

### Unit 1: Introduction to Machine Learning

Learning Issues, Designing a learning system, perspectives & issues in machine learning, concept learning and general to specific ordering. Overview of different tasks: classification, regression, clustering.

### Unit 2: Categorization of Machine Learning Techniques

Categories of machine learning techniques with brief introduction of each category: Decision trees, Bayesian learners, Ensemble learners, neural networks, support vector machines, rule-based learning, search-based techniques.

### Unit 3: Decision Trees and Artificial Neural Networks

Decision Trees: Introduction, Tree representation, Appropriate problems, Hypothesis space search, inductive bias, issues. Artificial Neural Networks: Introduction, Network representation, appropriate problems, perceptrons, back-propagation.

### Unit 4: Bayesian Learners

Bayesian learners: Introduction, Bayes theorem and concept learning, maximum likelihood and least-squared error hypothesis, maximum likelihood hypothesis for predicting probabilities, minimum description length principle.

### Unit 5: Unsupervised Learning

Introduction, Clustering & Association, k-nearest neighbor learning, Apriori algorithm for association rule learning problems.-Reinforcement Learning-Introduction, The learning task, Q learning, Non-deterministic rewards & actions, temporal difference learning.

### Text books:

- Mitchell, T. (2013), Machine Learning, McGraw Hill.
- Malhotra, R. (2016). Empirical Research in Software Engineering: Concepts, Analysis & Applications, CRC press.



### Reference Book

- I.H. Witten & E. Frank (2005), Data Mining: Practical Machine Learning Tools & Techniques, Elsevier, Second Edition.
- Murphy, K.P. (2012), Machine Learning: A probabilistic perspective, MIT Press.
- Mohri, M., Rostamizadeh, A. and Talwalkar, A. (2012), Foundations of Machine Learning, MIT Press.
- Harrington, P. (2012), Machine Learning in Action, Dreamtech Press.

### Suggested Reading

- Bell, J. (2014), Machine Learning for Big Data: Hands-On for Developers and Technical Professionals, Wiley.
- Haykin, S. (2016), Neural Networks and learning Machines, Pearson.



### 406-TABLEAU

#### Course Objective

In this course, you will learn

- The fundamental concepts of data visualization
- explore the Tableau interface - how it is used, how to connect with data sets to build interactive dashboards or reports that help make decisions
- Take actions based on business data.

#### Course Outcomes

- Using Tableau tool can handle the massive amount of data and can produce reports without affecting the performance of the network.
- Learn to make data a simple visualization, making it easy for your clients to understand.
- Learn and practice making or creating of Tableau Basic Reports, Tableau Charts, Custom SQL
- Learn how to create and work on Dashboards

#### UNIT 1: Tableau Course Material:

Start Page, Show Me, Connecting to Excel Files, Connecting to Text Files, Connect to Microsoft SQL Server, Connecting to Microsoft Analysis Services, Creating and Removing Hierarchies Bins, Joining Tables, Data Blending

#### UNIT 2: Learn Tableau Basic Reports:

Parameters, Grouping Example 1, Grouping Example 2, Edit Groups, Set, Combined Sets  
Creating a First Report, Data Labels, Create Folders, Sorting Data, Add Totals, Sub Totals and Grand Totals to Report

#### Unit 3: Learn Tableau Charts:

Area Chart, Bar Chart, Box Plot, Bubble Chart, Bump Chart, Bullet Graph, Circle Views, Dual Combination Chart, Dual Lines Chart, Funnel Chart, Traditional Funnel Charts, Gantt Chart, Grouped Bar or Side by Side Bars Chart, Heatmap, Highlight Table, Histogram, Cumulative Histogram, Line Chart, Lollipop Chart, Pareto Chart, Pie Chart, Scatter Plot, Stacked Bar Chart, Text Label, Tree Map, Word Cloud, Waterfall Chart, Geographic map, Filled map, Crosstab Combines axis, Motion chart, Reference lines

#### Unit 4: Custom SQL, Learn Tableau Calculations & Filters,

Convert to Custom SQL, Calculated Fields, Basic Approach to Calculate Rank, Advanced Approach to Calculate Rank, Calculating Running Total, Filters Introduction, Quick Filters, Filters on Dimensions, Conditional Filters, Top and Bottom Filters, Filters on Measures, Context Filters, Slicing Filters, Data Source Filters, Extract Filters

#### Unit 5: Learn Tableau Dashboards:

Create a Dashboard, Format Dashboard Layout, Create a Device Preview of a Dashboard, Create Filters on Dashboard, Dashboard Objects, Create a Story





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**SRINIVASA INSTITUTE OF MANAGEMENT STUDIES**

(Affiliated to Andhra University & Approved by AICTE, Govt. of INDIA)

**References:**

- <https://www.tableau.com/academic/students>
- <https://community.tableau.com/s/news/a0A4T000002O0vLUAS/tableau-for-students>
- <https://www.tableau.com/learn/training/2022>



## 407-WAREHOUSE AND DISTRIBUTION MANAGEMENT

### Course Objectives:

- To Gain detailed knowledge and understanding of Warehouse Logistics and Distribution Management
- To get the necessary experience and attention to detail to review and identify gaps in current processes and practices related to logistics and/or distribution management and define necessary corrective action
- To develop the potential and analytical mind-set to devise processes or suggest changes or enhancements to reduce organisational costs and maximise profits

### Learning outcomes:

- Formulate and implement Warehouse Best Practices and Strategies
- Plan Warehouse and Logistics operations for optimum utilization of resources.

### UNIT 1: Warehouse Management

Importance of Warehousing and Warehousing Functions, Types of Warehouses, Specialized Warehouse Services, Receiving and Stocking, Order Picking and Shipping. Sizing the Warehouse, Stocking Inventory in Warehouse Locations. Warehouse Automation, Warehouse Management and Environmental Sustainability, Today's Warehouse Challenges.

### UNIT 2: Warehouse Management Process

Receiving and Put Away, Picking Strategies and Equipment, Order Pick Method, Replenishment, Stock Counting, Cycle Counting, Return processing and Dispatch, Documentations.

### Unit 3: Warehouse Costs and Performance Management

Types of Costs in Warehousing, Return on Investment, Traditional vs Activity Based Costing, Logistics Charging Methods, Selecting Right



Performance Measures, Benchmarking and Health and Safety issues in Warehousing.

### **Unit 4 The Distribution Management Environment**

Defining the Distribution Function, Basic Supply Chain Distribution, Distribution Channel Inventory Flows, Substituting Information for Inventory. Reverse Logistics, Sustainability in Distribution.

### **Unit 5: Various Modes of Transportation**

Importance of Various Modes of Transport-Rail, Road, Water, Air, Pipeline with their Characteristics and Cost Structure, The Carrier Selection Decision, Determinants of Carrier Selection, Legal Classification of Carriers, Role of Couriers as Carriers. Transportation Costs -Fixed, Variable, Joint and Common Costs, Product Related & Market Related Factors Influencing Transport Cost. Case Studies and Latest Updates

### **Suggested Readings**

1. Gwynne Richards, Warehouse Management: A Complete Guide to Improving Efficiency and Minimizing Costs in the Modern Warehouse (Kogan Press)
2. David Frederick Ross, Distribution Planning and Control Managing in the Era of Supply Chain Management (Springer)
3. David J. Bloomberg, Stephen LeMay & : Logistics, Prentice-Hall of India Pvt Ltd., Joe B.Hanna New Delhi,
4. Donald J. Bowersox & David J. Closs : Logistical Management, McGrawHill Publishing Co. Ltd, New Delhi
5. Satish C. Ailawadi & Rakesh Singh : Logistics Management, Prentice-Hall of India Pvt Ltd., New Delhi
6. Donald Waters : Logistics. Palgrave Macmillan, New York,
7. Sarika Kulkarni : Supply Chain Management, McGraw Hill Publishing Co Ltd., New Delhi



## 408-TRANSPORT SYSTEM AND LOGISTICS MANAGEMENT

### Course Objectives:

- Understand the role of logistics infrastructure in transportation and the present logistics infrastructure status in the railways, roadways, waterways and port development in India.
- To make the students able to take transportation decisions with the judicious use of modal mix to reduce the transportation cost.

### Learning outcomes:

- Understand the basic concepts of Multimodal Transportation and role of transportation in International business.
- To understand and apply their knowledge and understanding of the status of Indian infrastructure for different transport modes, comparison with International situation and commercial implications

### Unit 1 : Fundamentals of Rail, Road and Cargo Logistics

Modes of Transportations. Importance of Road and Rail Logistics, Characteristics of Different Modes of Logistics Air Freights for Exports and Imports. E-Way Bills. Economic Impacts of Rail and Road Networks. **Case Studies with Latest Updates.**

### Unit 2 : Air Cargo Management System

Introduction to Air Cargo: Aviation and airline terminology, IATA, Aircraft layout, Different Types of Aircraft, Aircraft Manufacturers, International Air Routes, National and International Airports, Various Codes at Airports & Consortium, Process Flow in Air Cargo. **Latest Updates**

### Unit 4 : Shipment Planning in Air Cargo

Strategies and Planning, Management, Consignee Controlled Cargo, Sales leads, Customer service, Advices, Booking, SLI, Labeling , Volume/Weight Ratio , Shipment Planning , TACT , Air Cargo Rates and Charges, Cargo operations, Customs clearance. **Latest Updates.**

### Unit 5 Air Freight and Shipment Handling



Air Freight Forwarding: Air freight Exports and Imports, Special Cargoes, Consolidation, Documentation, Air Way Bill (AWB), Communication in Air Cargo, Handling COD shipments, POD, Conditions of contract, Provisions for Dangerous or Hazardous Goods. **Latest Updates**

### Suggested Readings

1. John J Liu, Supply Chain Management and Transport Logistics (Routledge)
2. John Walter wood, Airports; some elements of designs and future development
3. Simon Taylor, Air transport logistics (Hampton)
4. Paul Jackson and William Brackenridge, Air cargo distributions: a management analysis of its economic and marketing benefits (Gower Press)
5. Peter S. Smith , Air freight: operations, marketing and economics (Faber)
6. Sung Chi-Chu , 4th Party Cyber Logistics for Air Cargo by (Kluwer)
7. Mark Wang , Accelerated Logistics (Santa Monica CA)



### 409-SUPPLY CHAIN ANALYTICS

#### Course Objectives:

- To acquire and improve their skills of clearing & forwarding procedures along with stowage techniques
- To Perform more productively in their cargo management activities through a stowage techniques and cargo management process
- To demonstrate the skills meet the challenges of cargo terminal management.

#### Learning outcomes:

On successfully completing this course you will be able to:

- Understand the importance of the basics of supply chain Analytics
- Analyze the level of uncertainty associated with the supply of products and services to targeted customer segments and justify the choice of a supply chain strategy and its fit with Competitive strategy.

#### Unit 1: Importance of Analytics in SCM

Basic of Supply Chain Management, Important of Analytics in Supply Chain, The Importance of Supply Chain Analytics in the Flows Involving Material, Money, Information and Ownership. **Case Studies and Latest Updates**

#### Unit 2: Framework of Supply Chain Analytics

Supply Chain Analytics Tools, Key Issues in Supply Chain Analytics, Overview of SAP Supply Chain Analytics modules and its Functionalities. Uses of Spreadsheet / Tableau in Supply chain Analytics

#### Unit 3: Modelling and Simulations for Supply Chain Analytics

Understanding of Data and its Role in Analytics of a Transportation Problem in a Supply Chain. Managerial Implications of the Results of Analytics. **Spreadsheet Modelling for Supply Chain**

#### UNIT 4: Predictive Modelling in Supply Chain



Forecasting for Supply Chain Planning and Management-Review of Multiple Regression, Exponential Smoothing Forecasting Models, Introduction to ARIMA Modelling with respect to Demand Inventory.

### **Uses of Spreadsheet for Statistical Analysis (Lab Work)**

### **Unit 5: Foundation of Prescriptive Analytics in SCM**

Network Planning in a Supply Chain, Importance of Network Planning, Design of Logistics Network using Heuristics/optimization, Concept of 3PL/4PL in a Supply Chain. **Case Study with Latest Updates**

### **Suggested Readings**

1. Sunil Chopra and Peter Meindle, Supply Chain Management (Pearson)
2. Jeremy F. Shapiro. Modeling the Supply Chain. Duxbury Thomson Learning
3. D. Simchi-Levi, P. Kaminsky, E. Simchi-Levi, and Ravi Shankar, Designing and Managing the Supply Chain concepts, Strategies and Case studies, Third Edition, TataMcGraw Hill, New Delhi,
4. Rahul Saxena & Anand Srinivasan, Business Analytics Lora M. Cecere, Supply Chain Metrics that Matter(Wiley)