

CURRICULUM & COURSE CONTENT FOR PG DIPLOMA –

FIRST SEMESTER

SEM-I

Course Name: organization behavior

Course Code:

Course Objectives:

After reading this lesson, you should be able to:

- Understand the Nature of Management
- Identify and Describe the Functions of Management
- Understand the Social Responsibilities of Business
- Appreciate the Interests of Various Stakeholders in The Business.

Module 1:

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

Module 2:

- Organizing - Organization Structure and Design
- Authority and Responsibility Relationships - Delegation of Authority and Decentralization
- Interdepartmental Coordination - Emerging Trends in Corporate Structure
- Strategy and Culture - Impact of Technology on Organizational design
- Mechanistic vs Adoptive Structures - Formal and Informal Organization.

Module 3:

- Perception and Learning - Personality and Individual Differences
- Motivation and Job Performance
- Values, Attitudes and Beliefs
- Stress Management
- Communication Types-Process – Barriers
- Making Communication Effective.

Module 4:

- Group Dynamics - Leadership - Styles - Approaches - Power and Politics
- Organizational Structure - Organizational Climate and Culture - Organizational Change and Development.

Module 5:

- Comparative Management Styles and approaches
- Japanese Management Practices
- Organizational Creativity and Innovation - Management of Innovation
- Entrepreneurial Management
- Benchmarking
- Best Management Practices across the world
- Select cases of Domestic & International Corporations
- Management of Diversity.

Reference:

- Drucker, Peter, F., 1981. Management: Tasks, Responsibilities and Practices, Allied Publishers, New Delhi.
- Hodgets, Richard M., 1986, Management Theory: process and Practice, Academic Press, London.
- Stoner, James. A.F. and Freeman.E.R., 1989. Management, Prentice Hall of India, New Delhi.
- Katz R.L., 1974. Skills of an Effective Administrator, Harvard Business Review, 52(5) 90- 102.

Course Name: marketing Management

Course Code:

Course Objectives: To make student understand the meaning of marketing, its importance and implementation in hospitality industry. To aware them about segmentation of marketing and various pricing strategies and to give information regarding various sources of promotion and communication and inform them about marketing research, data collection etc.

Module 1: HOSPITALITY MARKETING FUNCTION

- Introduction, meaning marketing vs. selling,
- 7 ps of marketing
- The customer: wants, needs, perception, buying capacity
- understanding services as Product: characteristics of services, challenges involved in service marketing.
- The buying decision process.
- The Hospitality Marketing Function
- Characteristics of hospitality business.
- The concept of marketing Mix

- Products life cycle
- The Hospitality products/services mix.

Module 2: MANAGING THE MARKETING SYSTEM

- Strategic Marketing The concept of strategy
- The concept of strategic planning
- The strategic Marketing system
- Strategy selection
- Problems with strategic plan
- The Marketing Plan
- Marketing Management vs. strategic Planning
- Requirements for a marketing plan
- Step or Development of a Marketing Plan
- The marketing budgets

Module 3: MARKET SEGMENTATION

- What is market segmentation, why segment market?
- Segment identification Segment selection Segment development
- Pricing Factors to consider when setting price
- General pricing approaches
- Pricing strategies

Module 4: MARKETING COMMUNICATION AND PROMOTION

- Advertisement: media, frequency and budget Measuring Advertisement effectiveness.
- Publicity, Public Relation
- Direct/Personal Selling, process of Personal Selling,
- E-commerce marketing.
- Sales Promotion, Merchandizing, Suggestive selling

Module 5: MARKETING RESEARCH

- Meaning, Importance, Process of Research
- Data Collection – Types of Data, Sources of Data collection
- Sampling, Hypotheses – Meaning & Types
- Report Writing – Steps involved, Layout of report , precautions while writing research report

Reference:

- Philip Kotler (1987) Marketing: An Introduction. ...
- Ramaswamy, V.S., 2002, Marketing Management, Macmilan India, New Delhi.
- Kotler P, Armstrong G, 2008, Principles of Marketing, 9th Edition, Prentice Hall, New Delhi.
- Gandhi J.C, 1985, Marketing –A Managerial Introduction, Tata McGraw-Hill , New Delhi.

Course Name: Quantitative Methods

Course Code:

Course Objectives: On completion of this course, the students will be able to

- Understand various quantitative & statistical methods
- Understand data and draw inference from data
- Calculate and interpret statistical values by using statistical tool (correlation & regression)
- Demonstrate an ability to apply various statistical tool to solve business problem

Module 1:

- Permutation and Combination, Matrices and Determinants, Functions.

Module 2: Meaning and Classification of Quantitative techniques, Statistics:

- Meaning, Scope and Limitations, Collection, Classification, Tabulation and Presentation of Statistical Data
- Characteristics of Frequency Distributions
- Measures of Central Tendency, Partition Values, Measures of Dispersion.

Module 3: Probability:

- Concepts, Sample Space, Rules of Probability
- Independent Events, Bayes' Rule, Random Variable
- Simple-Correlation and Regression analysis.

Module 4: Time Series:

- Analysis and its Components
- Measurement of Secular Trend
- Measurement of Seasonal Variation
- Forecasting with Moving Average.

Module 5:

- Linear Programming, formulation and Graphical Solution
- Transportation problems and Solutions by North-West Corner rule
- Least Cost method and Vogel's approximation method
- Optimum Solution by MODI method
- Assignment Problem and its solution.

Reference:

- Quantitative Methods: An Introduction for Business Management by Author(s): Paolo Brandimarte
- "Quantitative Methods for Decision Making Using Excel" by Branko Pecar and Glyn Davis
- "Quantitative and Decision Making Techniques" by A K Bewoor and D R Waghole

Course Name: human resource management

Course Code:

Course Objectives: The primary concern of this course is to develop an appreciation effective of effective management of human resources and to enable the students to meet HR challenges in present scenario.

Module 1:

- Strategic importance HRM; objectives of HRM; challenges to HR professionals; role, responsibilities and competencies of HR professionals;
- HR department operations;
- Human Resource Planning - objectives and process;
- Human resource information system.

Module 2:

- Talent acquisition; recruitment and selection strategies, career planning and management, succession planning, socialization and induction of new employees;
- Training and development, investment in training, training need assessment, designing and administering training program; executive development program, evaluation of T & D program.

Module 3:

- Appraising performance; developing and instituting performance appraisal system, assessment and development centers, potential appraisal;
- Rewarding performance; linking rewards to organizational objectives,
- Determine compensation structure, pay for performance and incentive plans, ESOP, executive compensation, designing and administering benefits and services.

Module 4:

- HR in knowledge era; HR in knowledge industry, HR in virtual organizations, HR in mergers and acquisitions, outplacement, outsourcing HR functions, employee leasing,

Reference:

- Human Resource Management by Gary Dessler
- HR from the Outside In: Six Competencies for the Future of Human Resources by Dave Ulrich, Jon Younger, Wayne Brockbank, Mike Ulrich



CURRICULUM & COURSE CONTENT FOR PG DIPLOMA –

SECOND SEMESTER

Course Name: MANAGERIAL ECONOMICS

Course Code:

Course Objectives: The course in Managerial Economics attempts to build a strong theoretical foundation for Management students. The course is mainly analytical in nature and focuses on clarifying fundamental concepts from microeconomic viewpoint. The students are expected to study and analyse the dynamics of managerial decision making through this course. Also wherever possible, students are expected to study, analyse and interpret empirical evidence and case studies available currently on various basic concepts.

Unit 1. Introduction of Managerial Economics and Demand

- Definition, Nature and Scope of Managerial Economics
- Managerial Economics and Microeconomics and macroeconomics
- Managerial Economics and decision-making
- Uses and Significance of Managerial Economics

Unit 2. Introduction of Demand

- Meaning and Determinants of Demand
 - Demand Function
 - Law of Demand Market Demand
 - Elasticity of Demand
 - Types and Measurement of Elasticity
- Demand Forecasting
 - Meaning, Significance
 - Methods of Demand Forecasting

Unit 3. Production

- Production Function
- Law of Variable Proportions
- Law of Supply
- Elasticity of Supply
- Measurement of Elasticity of Supply.
- Costs of Production.
 - Short run and long run costs
 - Economies of Scale
 - Cost estimation and cost forecasting
 - Breakeven analysis.



Unit 4. Pricing Under Various Market Forms

- Perfect competition
- Monopoly Monopolistic Competition
- Oligopoly
- Price Discrimination
- Pricing Strategies and Methods
 - Cost plus Pricing
 - Marginal cost Pricing
 - Price Leadership
 - Transfer Pricing
 - Seasonal
 - Cyclical Pricing

Unit 5. Need For Government Intervention in Markets

- Price Support
- Price Controls
- Prevention and Control of Monopolies
- System of Dual Prices

➤ **Reference Books:**

- Managerial Economics – Analysis, Problems and Cases, P.L.Mehta, Sultan Chand and Sons, New Delhi.
- Managerial Economics - Varshney and Maheshwari, Sultan Chand and Sons, New Delhi.
- Managerial Economics – D. Salvatore, McGraw Hill, New Delhi.
- Managerial Economics – G.S. Gupta – T M H, New Delhi.
- Managerial Economics - Mote, Paul and Gupta T M H, New Delhi.
- Managerial Economics – H L Ahuja, S Chand & Co. New Delhi.

Course Name **Business Communication**

Course Code:

Course Objectives:

To distinguish among various levels of organizational communication and communication barriers while developing an understanding of Communication as a process in an organization. CO5. To draft effective business correspondence with brevity and clarity.

Unit 1. Communication and Mass Communication

- Meaning, definition and scope
- Introduction to Communication Theory
- significance and objectives of communication in organizations



- Principles of Communication

Unit 2. Introduction to Business Communication, Effective Communication Skills and Process

- Definition and importance of Business Communication
- Introduction, Objective of Business Communication
- Effective Communications Skills
- Process of communication

Unit 3. Channels and Media of Communication

- Channels of communication
 - Means or media of communication
 - written communication
 - Oral communication
 - face to face communication
 - Visual communication
 - Audio-visual communication
 - Silence – as communication media
- Interpersonal/intrapersonal Business Communication
- Business correspondence
 - Business letters/reports (annual committee etc.) précis/summarizing etc.

Unit 4. Type of Communication

- Organizational structure and patterns
- Downward communication; upward communication; horizontal communication;
- Grapevine; consensus and group communication committee, conference, listening, public speech and seminar

Unit 5. Barriers to Effective Communication

- Concept of barriers
- types of barriers – Media barrier, physical barrier, semantic barrier, situation barrier, socio-psychological barrier
- Guidelines for effective communication
- Negotiation Skills: Introduction to Negotiation Skills

Reference Books:

- Business Communication by K. K. Sinha. Galgotia Publishing Company., New Delhi.
- Business Communication by C. C. Pattensheti. R. Chand and Company Publishers., New Delhi.
- Essentials of Business Communication by Rajindra Pal and J. S. Korlahalli. Sultan Chand and Sons., New Delhi.16
- Effective Business Communication by Herta A. Murphy and Charles E. Peck. Tata McGraw Hill Publishing Company Limited., New Delhi.
- Essentials of Business Communication by Pettett and Lesikar. Tata McGraw Hill Publishing Company Limited., New Delhi.



Course Name: FINANCIAL AND MANAGEMENT ACCOUNTING

Course Code:

Course Objectives: The objective of this course is to:

- Develop a thorough understanding of Accounts and Finance functions of an organization.
- Develop financial leadership qualities.
- Collate and integrate systems of Accounts and Finance.
- Become proficient in using information technology and accounting tools in decision making

Unit 1. Introduction – Accounting:

- Basic Concepts of accounting transactions
- Principles, types of accounts, journal, ledger, trial balance
- final accounts (Emphasis on Clarification of account P & L account, Balance sheet
- Introduction to requirement of Schedule VI

Unit 2. Using Financial Statements

- Statement of Financial Information
- Statement of Changes in Financial Position
- Financial Statement Analysis

Unit 3. Cost Accumulation/Determination

- Cost Concepts
- Costing and Control of Materials
- Costing and Control of Labour
- Costing and Control of Factory Overheads
- Job order, batch and contract costing
- Process Joint and by-product costing
- Unit/single/output and operating costing
- Variable costing and absorption costing
- Uniform costing and interfirm comparison
- Reconciliation and integration

Unit 4. Profit Planning:

- Cost-Volume-Profit Analysis
- Budgeting; Capital Budgeting

Unit 5. Cost Control & Decision Making

- Standards costs
- Variance Analysis
- Cost Variances
- Variance Analysis: Revenue Variances
- Responsibility Accounting



➤ **Reference Books:**

- Introduction to Management Accounting –Horn green and Sundlem.
- Principles of Management Accounting – Manmohan & Goyal.
- Management Accounting – S.M. Inamdar.
- Management Accounting – Dr. Mahesh Kulkarni.
- Double Entry Book Keeping – T.S. Grewal. 6. Cost Accounting – Khan & Jain.
- Management Accounting 3rd Ed.- Khan & Jain.
- Theory & Problems in Management & Cost Accounting – Khan & Jain.
- Cost Accounting – Jawaharlal.

Course Name: Information Technology Management

Course Code:

Course Objectives:

To familiarize Students with the basic concepts of Information Technology. Students should be able to operate MS-Office independently and effectively.

Unit 1. Fundamentals of Computer

- CPU, Basic logic gates, Computer Memory and Mass storage devices,
- Computer Hierarchy, Input Technologies, Output Technologies
- Number Systems and Arithmetic: Decimal, Binary, Octal, and Hexadecimal Number Systems, Binary Arithmetic

Unit 2. Introduction to Computers Software

- System Software
- Application Software and Packages
- Introduction to Embedded Software

Unit 3. Commonly used Software Packages like

- Microsoft Word
- Microsoft Excel
- Microsoft Power Point
- Microsoft Access
- Tally

Unit 4. Introduction to World Wide Web

- Internet operations
- Introduction to Electronic Commerce and Electronic Business

Unit 5. Functional and Enterprise Systems



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- Data, Information and Knowledge Concepts
 - Decision Making
 - Process, Physical Components of Information Systems
 - Classification of Information Systems
 - Overview of Security Issues in Information Technology
 - Emerging Trends in Information Technology
-
- ***Reference Books:***
 - Management Information Systems by Ken J. Sousa, Effy Oz
 - “Essentials Of Information Technology As Per Cce Guidelines Vol 2, Pb” by Sharma V

Post Graduate Degree in Business Analytics

CURRICULUM & COURSE CONTENT FOR BUSINESS

ANALYTICS – SECOND YEAR

SEM - III

Course Name: RISK MANAGEMENT

Course Code:

Course Objectives:

- To appreciate the need for the management and review of risk.
- To provide a framework & process for the management of risk.
- To understand a variety of techniques to identify, assess, manage & monitor risks.

Module I: Introduction to Risk Management

- Definition of Risk
- Types of Risks
- The Risk Management Process
- The Risk Management Professional
- Quality Qualitative Evaluations of Risk
- Practical Process of Managing Risk
- Risk Management with No Data
- Collecting Qualitative data
- Risk Matrix and Risk Log
- The R Language as a Tool for Risk Management
 - Reading-In Data
 - Summarizing Data
 - Data Selection
 - Data Classes
 - Plotting Data
 - Basic Analytics
 - Advanced Analytics and Expansion

Module II: Expectations and Deviations

- Expected Value
- Deviations and Risk
- Risk and Expected Return
- Market Beta
- Risking It in the Financial Markets
 - Capital Asset Pricing Model
 - Diversification and the Riskless Portfolio
 - The Efficient Frontier

- Forward-looking Numbers
- Valuing Risk through Value at Risk
 - Defining Value at Risk
 - Calculating Value at Risk
 - Strengths and Weaknesses
 - Expected Shortfall
 - The Global Crisis and the VaR and RM controversy

Module III: Random Variables and Distributions

- Understanding Distributions and Their Role
- The Normal Distribution
- The Power Law and Exponential Distributions
- Distributions with Fat Tails
- Deciding on Distributions
- Monte Carlo Methods for Risk Management
- Operational Risk
 - Definitions and Types
 - Measuring Operational Risk
 - The Log-normal Distribution
 - Modelling Operational Risk
 - Providing for Risk

Module IV: Classifying Credit Risks

- Credit Scoring and Coefficients
- Traditional Classification Approaches
- Machine Learning Algorithms
- Big Data Implications
- Black Swans and Forecasting
 - Structure of Time Series
 - Forecasting with ARIMA models
 - Forecasting with VAR models
 - Limitations of Historical Data

Module V: Modelling Risk with Risky Models

- Model Risks
- Model Fault
- Implementation Problems
- Continuous Improvement
- Risk Aversion and Risk Seeking
 - Preferences and Utility
 - The Arrow-Pratt Measure
 - Constant Relative Risk Aversion
 - Insights from Behavioral Economics
- Concluding Comments

Reference Book:

- Risk management Book by Michel Crouhy

Course Name: DATA MINING

Course Code:

Course Objectives: To introduce students to basic applications, concepts, and techniques of **data mining**.

Module 1: Introduction

- Data Mining – Overview
 - What is Data Mining?
 - Data Mining Applications
 - Market Analysis and Management
 - Corporate Analysis and Risk Management
 - Fraud Detection
- Data Mining – Tasks
 - Descriptive Function
 - Class/Concept Description
 - Mining of Frequent Patterns
 - Mining of Association
 - Mining of Correlations
 - Mining of Clusters
- Classification and Prediction
- Data Mining Task Primitives
- Data Mining - Issues

Module 2: Data Mining - Evaluation

- Data Warehouse
- Data Warehousing
- From Data Warehousing (OLAP) to Data Mining (OLAM)
- Data Mining - Terminologies

Module 3: Data Mining - Knowledge Discovery

- What is Knowledge Discovery?
- Data Mining – Systems
- Integrating a Data Mining System with a DB/DW System
- Data Mining - Query Language

Module 4: Data Mining - Classification & Prediction

- Defining Classification & Prediction
- How Does Classification Works?
- Classification and Prediction Issues
- Comparison of Classification and Prediction Methods
- Data Mining - Decision Tree Induction
- Data Mining - Bayesian Classification
- Data Mining - Rule Based Classification
- Miscellaneous Classification Methods

Module 5: Applications, Trends & Themes

- Genetic Algorithms, Rough Set Approach, and Fuzzy Set Approach.
- Data Mining - Cluster Analysis
- Data Mining - Mining Text Data
- Data Mining - Mining World Wide Web
- Data Mining - Applications & Trends
- Data Mining - Themes

- **Reference Book:**
- Data Mining: Practical Machine Learning Tools and Techniques (The Morgan Kaufmann Series in Data Management Systems) 3rd Edition by Ian H. Witten (Author), Eibe Frank (Author), Mark A. Hal
- Introduction to Data Mining 1st Edition by Pang-Ning Tan (Author), Michael Steinbach (Author), Vipin Kumar (Author)

Course Name: ANALYTICS, SYSTEMS ANALYSIS & DESIGN

Course Code:

Course Objectives:

Upon successful completion of this course, you will be able to

- gather data to analyze and specify the requirements of a system.
- design system components and environments.
- build general and detailed models that assist programmers in implementing a system.
- design a database for storing data, a user interface for data input and output, and controls to protect the system and its data.

Module I: Introduction

- Systems and computer-based systems
- Types of information system
- System analysis and design
- Role, task and attribute of the system analyst
- Approaches to System development
 - SDLC
 - Explanation of the phases
 - Different models their advantages and disadvantages
 - Waterfall approach
 - Iterative approach
 - Extreme programming
 - RAD model
 - Unified process
 - Evolutionary software process model
 - Incremental model
 - Spiral model
 - Concurrent development model

Module II: Analysis: Investigating System Requirements

- Activities of the analysis phase
- Fact finding methods
 - Review existing reports, forms and procedure descriptions
 - Conduct interviews
 - Observe and document business processes
 - Build prototypes
 - Questionnaires
 - Conduct jad sessions
- Validate the requirements
- Structured walkthroughs
- Feasibility Analysis
 - Feasibility Study and Cost Estimates
 - Cost benefit analysis
 - Identification of list of deliverables

Module III: Modeling System Requirements

- Data flow diagram logical and physical
- Structured English
- Decision tables
- Decision trees
- Entity relationship diagram
- Data dictionary.

Module IV: Design

- Design phase activities
- Develop System Flowchart
- Structure Chart
 - Transaction Analysis
 - Transform Analysis
- Software design and documentation tools
 - Hipo chart
 - Warnier orr diagram
- Designing databases
 - Entities
 - Relationships
 - Attributes
 - Normalization
- Designing input, output and interface
 - Input design
 - Output design
 - User interface design

Module V: Testing, Implementation & Documentation

- Testing
 - Strategic approach to software testing

- Test series for conventional software
- Test strategies for object – oriented software
- Validation testing
- System testing
- Debugging
- Implementation and Maintenance
 - Activities of the implementation and support phase
- Documentation
 - Use of case tools,
 - Documentation – importance, types of documentation

Reference Book:

- “Analysis and Design of Information Systems” : Senn, TMH.
- System Analysis and Design : Howryskiewicz, PHI.
- “System Analysis and Design” : Awad.
- “Software Engineering A practitioners Approach” : Roger S. Pressman
TMH.
- “System Analysis and Design Methods : “Whitten, Bentley.
- “Analysis and Design of Information Systems” : Rajaraman, PHI.

Course Name: PREDICTIVE ANALYTICS

Course Code:

Course Objectives: By taking this course, you will form a solid foundation of predictive analytics, which refers to tools and techniques for building statistical or machine learning models to make predictions based on data.

Module 1: Linear Methods for Regression and Classification

- Overview of supervised learning,
- Linear regression models and least squares
- Multiple regression
- Multiple outputs
- Subset selection
- Ridge regression
- Lasso regression
- Linear Discriminant Analysis
- Logistic regression
- Perceptron learning algorithm.

Module 2: Model Assessment and Selection

- Bias,Variance,and model complexity,
- Bias-variance trade off,
- Optimisim of the training error rate
- Esimate of In-sample prediction error
- Effective number of parameters

- Bayesian approach and BIC, Cross- validation, Boot strap methods, conditional or expected test error.

Module 3: Additive Models, Trees, and Boosting

- Generalized additive models, Regression and classification trees
- Boosting methods-exponential loss and AdaBoost
- Numerical Optimization via gradient boosting,
- Examples (Spam data, California housing, New Zealand fish, Demographic data)

Module 4: Neural Networks(NN) , Support Vector Machines(SVM),and K-nearest Neighbor

- Fitting neural networks,
- Back propagation
- Issues in training NN
- SVM for classification
- Reproducing Kernels,
- SVM for regression
- K-nearest –Neighbour classifiers(Image Scene Classification)

Module 5: Unsupervised Learning and Random forests

- Association rules,
 - Cluster analysis,
 - Principal Components
 - Random forests and analysis.
- **Reference Book:**
- C.M.Bishop –Pattern Recognition and Machine Learning, Springer,2006
 - L.Wasserman-All of statistics.

Course Name: SIMULATION MODELLING

Course Code:

Course Objectives: Explain and conduct the transforming of continuous functions and dynamics equations into discrete computer representations. Write pseudo-code for finite difference modeling equations and create a simulation in a computational tool.

Module 1: Introduction

- A Brief History of Simulation
- Application Areas of Simulation
- Advantages and Disadvantages of Simulation
- Difficulties of Simulation
- When to Use Simulation?

Module 2: Modelling Concepts

- System, Model and Events
- System State Variables

- Entities and Attributes
- Resources
- List Processing
- Activities and Delays

Module 3: Model Classifications

- Discrete-Event Simulation Model.
- Stochastic and Deterministic Systems
- Static and Dynamic Simulations
- Discrete vs. Continuous Systems
- A Classic Example of Queue at Bank Counter

Module 4: Computer Workload and Preparation of its Models

- Steps of the Modeling Process
 - Analyze the Problem
 - Formulate a Model
 - Model Abstraction
 - Determine Variables and Units
 - Solve the Model
 - Model Implementation
 - Verify and Interpret the Model's Solution
 - Execution
 - Output Analysis
 - Report on the Model
 - Recommendation

Module 5: Summary

- Summary
- Terminologies : Database, Information Model, Simulation, Extensible Markup Language (XML), Artificial Intelligence, Computer Simulation, Genetic Algorithm, Cognitive Science, Neural Network, Fuzzy Sets, Agent, Crisp Set, Alpha Cuts.

- **Reference Book:**
- “System Simulation and Modeling” by Sengupta
- “Modeling, Simulation and Optimization of Adsorption Process” by Suman Dutta

SEM- IV

Course Name: PROJECT MANAGEMENT

Course Code:

Course Objectives:

- To develop critical thinking and knowledge in project Management's theory and practice.
- To help students develop the competence of analyzing the feasibility of the project.
- To provide the student with analytical skills for solving problems relating to project management.

Module I: Introduction to Project Management

- Definition of a Project
- Why Project Management
- The Project Life Cycle
- Strategic Management and Project Selection
- Project Selection and Criteria
- The Nature of Project Selection Models
- Analysis under Uncertainty
- Project Proposal and Project Portfolio Process

Module II: Role of Project Manager

- Functions, Roles and Responsibilities of a Project Manager
- Delegation of Authority
- Building Project Team
- Project Organisation
- Pure Project Organisation
- Matrix Organisation
- The Project Team and Human Factors
- Generation and Screening of Project ideas – Procedure for Idea Generation, Monitoring the Environment,
- Corporate Appraisal, Project Rating Index

Module III: Market Analysis & Financial Estimates

- Market and Demand Analysis
- Situational Analysis
- Conduct of Market Survey
- Demand and Forecasting
- Technical Analysis
- Social Cost Benefit Analysis
- Rationale for SBCA, UNIDO Approach, Saving Impact and its Values, Little Mirrlees Approach
- Financial Estimates and Projections – Cost of a Project, Means of Finance, Estimates of Sales and Production, Working Capital Requirement, Cost of Capital, Projected Cash Flow Statement, Projected Balance Sheet, Financing of a Project, Equity, Debentures, Term Loans, etc.

Module IV: Measuring Project Profitability

- Payback Period
- Accounting Rate of Return
- NPV
- Internal Rate of Return and BCR Method
- Assessment of Various Methods
- Project Cash Flow, Elements of a Cash Flow Stream, Cash Flow for a Replacement Project, the Cost of Capital, WACC, Optimal Capital Budget

Module V: Conflict & Negotiation

- Need and Importance of Work Break Down Structure
- Project Execution Plan (PEP)
- Network Techniques of Project Management, CPM, PERT, Time Estimation
- Conflict and Negotiation
- The Nature and Type of Negotiation
- Project Review and Administrative Aspects
- Post Completion Audits
- Abandonment Analysis

- **References:**
- “Project Management a System Approach to Planning Scheduling and Controlling” by Harold Kerzner
- “PERT and CPM” by L S Srinath
- “Project Management” by Benington Lawrence
- “Project Management: The Managerial Process” by Erik Larson and Clifford Gray
- “A Guide to the Project Management Body of Knowledge (PMBOK Guide)” by Project Management Institute
- “Project Management: Essential Managers” by DK

Course Name: HR ANALYTICS

Course Code:

Course Objectives: By the end of this hr analytics program, participants will be able to:

- Display a thorough understanding of modern Talent/HR analytics
- Leverage HR data to make insightful business decisions
- Apply basic forecasting tools
- Transform HR into a strategic function
- Apply ‘predictive management’ using the modern tools of talent/HR analytics
- Apply the processes of modern Human Capital management
- Optimise and synchronise the delivery of HR services
- Get acquainted with best practice examples of organisations using talent/HR analytics

Module 1: Introduction to HR Analytics

- The Meaning and Power of Analytics
- Big Data and HR
- The Purpose and Uses of HR Analytics
- Needed Skills and Common Pitfalls to Avoid – The Analytical Leader
- Trend and Regression Analysis

Module 2: Managing the future (tomorrow) – today

- The Language of Metrics and Analytics
- The Evolution of Data Analysis
- Moving from Prescriptive to Predictive Analytics
- Lagging and Leading Indicators
- What we Know about Tomorrow
- The Future of Talent/HR Analytic

Module 3: Human Capital Management Model for Managing Tomorrow, Today

- The Four Processes of Predictive Modern Human Capital
- Scanning the Market and Managing the Risk
- Turning Data into Business Intelligence
- Avoiding Common Metrics Mistakes
- The Levels of Metrics
- Applying Metrics and Analytics to Make a Difference

Module 4: Big Data Applications in HR

- Using Predictive Analysis to Attack Long-Term Turnover and Productivity Problems
- Using Predictive Analysis to Improve Staffing and Retention
- Exploring Data that Indicates How Leading Companies Retain Core Talent in Critical Functions
- Exploring the Impact of Education Level of Employees in Core Functions on a Business' Market Performance

Module 5: Examples of Organisations Using Talent/HR Analytics

- Employee Engagement
- Sales
- Employee Absenteeism
- Retention
- Incentives
- Leadership

➤ **Reference Book:**

- Levenson (2015). Strategic Analytics: Advancing Strategy Execution and Organizational Effectiveness.
- Becker, Huselid & Ulrich (2001). The HR scorecard: Linking people, strategy, and performance.
- Cascio & Boudreau (2008). Investing in People: Financial Impact of Human Resource Initiatives.
- Edwards & Edwards (2016). Predictive HR Analytics: Mastering the HR Metric
- Ulrich, Kryscynski, Brockbank & Ulrich (2017). Victory Through Organization: Why the War for Talent is Failing Your Company and What You Can Do About It

Course Name: STRATEGIC MANAGEMENT

Course Code:

Course Objectives:

- Students will gain the knowledge about basic concepts of strategic management
- Knowledge of Strategic analysis through advanced tools and techniques.
- Getting of knowledge of strategy formulation through different models.
- Quality management systems that will influence the implementation of strategy.
- Evaluation of the strategy through auditing.

Module 1: Introduction to Strategy and Strategic Management

- Introduction to Strategic Management – Definitions -Vision, Mission, Objectives
- Policies – Factors that shape a company's strategy
- Environmental Scanning
- Concepts of Core Competence,
- Crafting a strategy for competitive advantage

Module 2: Strategic Analysis – Choice; Tools and Techniques

- Mc Kinsey 7-S framework
- Porter's Five Force Model
- BCG Matrix
- GE Model
- SWOT Analysis and TOWS Matrix,
- Market Life Cycle Model - Organisational Learning, and the Experience Curve

Module 3: Strategy Formulation

- Formulation of strategy at corporate, business and functional levels.
- Strategic planning institute matrix
- Arthur D Little company's matrix
- Hofer's Product/market evolution matrix
- Shell's directional policy Matrix
- The PIMS Model
- International Portfolio analysis (GD Harrel and RO Keifer, Multinational strategic Market Portfolios)
- Parenting Fit Matrix (Campbell Corporate parenting).

Module 4: Strategy Implementation

- Types of Strategies : Stability Strategy, Growth Strategy, Retrenchment Strategy, and Combination Strategy, Offensive strategy, Defensive strategy, vertical integration, horizontal strategy; Tailoring strategy to fit specific industry and company situations, Strategy and Leadership
- Resource Allocation as a vital part of strategy

- Planning systems for implementation – BPRE –Executive succession – Downsizing – TQM – MBO.

Module 5: Strategy Evaluation and control

- Establishing strategic controls
- Role of the strategist
- Benchmarking to evaluate performance
- Strategic information systems
- Guidelines for proper control- Strategic surveillance -strategic audit - Strategy and Corporate Evaluation and feedback in the Indian and international context.
- **References:**
 - Crafting and Executing Strategy: Concepts and Cases, Thompson, Gamble, Jain, TMH.
 - Strategic Management Concepts and Cases ,FredR.David, PHI.
 - Strategic Management,Hill, Ireland, manikutty, Cengage.
 - Concepts in Strategic Management and Business Policy,Wheelen& Hunger, Pearson
 - Strategic Management – Text and Cases, V.S.P. Rao, Excel.
 - Strategic Management, Ireland, Hoskinsson, Hitt, Cengage.
 - Strategic Management – Theory and Application, Habergerg, Rieple, oxford .
 - Strategic Management, P. SubbaRao, Himalaya.
 - Business policy and strategic management, SukulLomash, P.K.Mishra, Vikas.
 - Strategic Management – The Indian Context, r.Srinivasan, PHI.

Course Name: – ETHICAL & LEGAL ASPECTS OF ANALYTICS

Course Code:

Course Objectives:

- Foundational abilities in applying ethical and legal frameworks for the data profession
- Practical approaches to data and analytics problems, including Big Data and Data Science and AI
- Applied data methods for ethical and legal work in Analytics and AI

Module 1: Introduction

- Why Analytics?
- The Role of Information Technology

Module 2: Analytics, Data Protection Law & Ethics

- Data Everywhere: The Need for Contextual Examination of Analytics
- Changes in the Environment for Data Protection
- The Ethics of Analytics and “Good Apples”

Module 3: Analytics in Action

- Multichannel Marketing
- Preventing Fraud and Protecting Data Security
- Health Care Research
- Products for Direct Use by Individuals: Financial Software, Flu Trends, Translation Software
- The Different Stages of Analytics

Module 4: The Fit with fair information practices (FIPs)

- Automated Individual Decisions
- Purpose Specification and Use Limitations

Module 5: Revisiting FIPs in the ethical use of analytics

- Overarching Ethical Requirements
- Stage One: Collection
- Stage Two: Integration and Analysis
- Stage Three: Decision-making
- Stage Four: Review and Revision

➤ **References:**

- Legal Aspects Of Business Paperback – 1 January 2007 by Pathak (Author)
- Artificial Intelligence & Legal Analytics by Kevin D. Ashley

Course Name: OPERATIONS & SUPPLY CHAIN ANALYTICS

Course Code:

Course Objectives: On successfully completing this course you will be able to:

- Understand the importance of the basics of Business Analytics and Optimization
- Understand the importance of the basics of Supply Chain Analytics and Optimization
- 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.
- Explain the role and applications of Descriptive Analytics in a Supply Chain
- Explain the role and applications of Predictive Analytics in a Supply Chain
- Explain the role and applications of Prescriptive Analytics in a Supply Chain
- Learn the basics of Modeling through R Language

Module 1: Context of today's supply chains (SC) analytics

- Understanding and defining the supply chain analytics (SCA)

- Revisions of Basic Lessons of Supply Chain Management
- Why is Analytics Important in a supply chain?
- Relating Operations Management with Supply chain concepts with SC Analytics
- The importance of supply chain analytics in the flows involving material, money, information and ownership.

Module 2: Supply chain analytics

- Key issues in supply chain analytics
- What involves in supply chain analytics
- Concept of Descriptive Analytics in a Supply Chain
- Discussion on a Few Supply Chains Analytics applications in India (students participation is expected)
- Decision Domains in in supply chain analytics.

Module 3: Foundation of Business Analytics (BA)

- E2: Introduction to Modeling, Approaches for Optimization and Simulation, Modeling software, Supply Chain (SC) Decisions that requires mathematical or interpretative modeling
- Understanding of Data and its role in Analytics
- Analytics of a Transportation problem in a Supply Chain
- Managerial implication of results of analytics.
- Case Study of SCA

Module 4: Foundation of Prescriptive Analytics in Network Planning in a Supply Chain

- Network Planning in a Supply Chain
- Importance of Network Planning
- Design of Logistics Network using Heuristics/optimization (Exercise 3.4 Levi (2008))
- Concept of 3PL/4PL in a Supply Chain
- Case Study: GATI.

Module 5: Modeling Coordination Decisions

- Foundation of Modeling Coordination Decisions in SUPPLY CHAIN MANAGEMENT
- Foundation of PERFORMANCE MANAGEMENT IN SUPPLY CHAIN MANAGEMENT
- Role of ICT in Supply chains

➤ Reference Books:

- Supply chain management by Sunil Chopra, and Peter Meindl, Pearson
- Jeremy F. Shapiro. Modeling the Supply Chain. Duxbury Thomson Learning
- D. Simchi-Levi, P. Kaminsky, E. Simchi-Levi, and Ravi Shankar, Designing and Managing the Supply Chain concepts, Strategies and Case studies, Third Edition, Tata McGraw Hill, New Delhi, 2008.
- Rahul Saxena • Anand Srinivasan, Business Analytics