

# **MBA**

## **Financial Statements and Analysis (MS4101)**

**Objective:** This course will help the students to understand the basics of Financial Statements analysis from the perspective of its application in various business decisions.

### **Course Outcomes**

After completing the course, the students will be able to:

- Understand the structure and components of financial statements & Analysis.
- Apply financial analysis techniques to make informed business decisions.
- Understand the limitations and challenges of financial statement analysis.

### **Introduction to Financial Statements**

Financial Statements & Accounting Principles, Overview of financial statements, Users of financial statements, role of accounting in financial reporting, Types of financial statements, Accounting equation & related concepts, Annual Reports & their importance.

### **The Balance Sheet and Income Statement**

Structure of the balance sheet: Assets, cash, inventory, property, and equipment, Liabilities, accounts payable, loans, and long-term debt. Equity, Analyzing liquidity and solvency using the balance sheet, Common size balance sheet analysis. Structure of the Income Statement, Revenues, Expenses, Cost of goods sold, operating expenses, and non-operating expenses., Net Income, EPS, Common Size Income Statement Analysis.

### **Depreciation and Inventory Valuation**

Concept, methods of Depreciation, effects on balance sheet & income statement, Methods of Inventory Valuation, Impact of Inventory Valuation, gross profit, and tax implications, need for adjusting inventory values in financial statements.

### **The Cash Flow Statement**

Components, Operating Activities, Investing Activities, Financing Activities, Importance of Cash Flow in Assessing Financial Health, Distinguishing between cash flow and net income, cash flow cycle and its implications for liquidity, understanding free cash flows.

### **Financial Statement Analysis Techniques**

Vertical & Horizontal Analysis, Ratio Analysis, DuPont Analysis, Interpreting Financial Statements for Decision-Making, Evaluating Company Performance, Benchmarking Against Industry Standards and Competitors, Variation Across Different Industries.

### **Reference Books:**

- “Financial Statement Analysis”, Charles H. Gibson, South-Western, 9781133189404.
- “Financial Statements: A Step-by-Step Guide to Understanding and Creating Financial Reports”, Thomas R. Ittelson, Career Press Incorporated, 9781601638618.
- “Financial Statement Analysis”, K. R. Subramanyam, John Wild, McGraw-Hill Education, 9780073379432.

## **Business Statistics (MS4102)**

**Objective:** To acquaint students with various statistical methods and their applications in different fields.

### **Course Outcomes**

The students shall be able to:

- Explain basic statistical concepts
- Independently calculate basic statistical parameters
- Choose a statistical method for solving practical problems

### **Sampling, sampling distribution and Measurement & Scaling Techniques**

Meaning, Steps, types, Data collection, Sources – advantages/disadvantages. Data collection Methods: Observations, Survey, Interview and Questionnaire design, Qualitative Techniques of data collection, Scales, Criteria for good measurement, attitude measurement, Thurston-equal appearing interval scale. Descriptive statistics, Averages, Partition Values, Comparison of the various Measures of Central Tendencies.

### **Dispersion, Correlation and Regression Analysis**

Measures of Dispersion, Variance Skewness, Karl- Pearson Co-efficient of skewness. Correlation and regression, Karl Pearson's coefficient of Correlation, Rank Correlation, Concurrent Deviation, Regression

### **Probability & Sampling Distribution and Estimation**

Concept and Definition, Sample Space and Events, Probability, Random Variables and Concept of Probability Distribution. Theoretical Probability Distributions: Binomial, Poisson and Normal and problems on it. Baye's Theorem, Sampling distribution of mean and proportion, CLT, sampling techniques. Estimation, determining the sample size.

### **Hypothesis Formulation, Testing of hypothesis and inferences**

Procedure of testing hypothesis, Type I and Type II Errors. Parametric tests: Z- Test, t-test, F-test, Analysis of Variance – One-Way and Two-way classification. Non parametric tests Chi-Square test (Problems)

### **Text Books:**

- Levin, Richard, David S. Rubin. Statistics for Management. Pearson Education.
- Anderson Sweeney and William. Statistics for Business and Economics. Cengage Learning.
- Ken Black. Applied Business Statistics. Wiley Publication.

### **Reference Books:**

- Berenson and Levine. Basic Business Statistics: Concepts and Applications. Pearson Education.
- Siegel Andrew F. Practical Business Statistics. McGraw Hill.
- Vohra N. D., Business Statistics, McGraw Hill.

## Research Methodology (MS4103)

**Objective:** The primary objective of this course is to acquaint students with fundamentals of research methods. The course aims at introducing them to the basic concepts used in research and to scientific social research methods and their approach. It includes discussions on sampling techniques, research designs and techniques of analysis.

### Course Outcome

Students will be able to

- Gain a comprehensive understanding of Research Foundation and Understand various research designs and techniques.
- Identify various sources of information for literature review and data collection and will gather and analyze data using appropriate statistical tools.
- Demonstrate the ability to interpret and present research findings effectively.
- Write structured, coherent, and well-argued research reports or theses, and present research findings effectively using both written and oral communication.

**Introduction to Research:** Foundations of Research, Type of Research, Qualities of Researcher, Components of the Research Problem, Research Process, Research Design

**Theory Building & Framework Development:** Research Question, Theory Development Process, Hypothesis Development, Scale Development, Testing the Scale

**Sampling & Questionnaire Development:** Sampling Process and Methods, Data quality issues, Questionnaire Development techniques, Data Collection - Primary Data & Secondary Data, Method of Data Collection, Fieldwork and Data Preparation

**Data Analysis and Report Writing:** Quantitative and Qualitative Data Analysis, Parametric Hypothesis Testing, Non-Parametric Hypotheses Testing, Writing and presenting project report, Oral presentation of the report

### Text Books

- "Research Methodology Methods & Techniques", C. R. Kothari, Fifth Edition, 2023, New Age International Private Limited, ISBN 978-9389802559.
- "Marketing Research", G.C. Beri, Fifth Edition, 2023, McGraw Hill Education, ISBN 978-1259004902.
- "Business Research Methods", W.G. Zikmund, B.J. Babin, J.C. Carr, M. Griffin, Ninth Edition, 2013, Cengage India Private Limited, ISBN 978-9353503260.
- "Business Research Methods", N. Bajpai, Second Edition, 2017, Pearson Education, ISBN 978-9332585515

### Reference Books

- "Business Research Methods", D. Cooper, P. Schindler, Eleventh Edition, 2017, McGraw Hill Education, ISBN 978-1259001857.

## **Economics (MS4104)**

**Objective:** The course focuses on maximizing profitability by applying economic analysis to a wide array of business problems given the fundamental assumption of economic analysis that states people behave rationally, optimally and self-interestedly.

### **Course Outcome**

Students will be able to

- Demonstrate comprehensive knowledge and understanding on the basic concepts, various behaviors and nature of economics
- Explain the Elasticity of demand and supply and its influence on determination of price in the market and to understand how factors of production can be used optimally to produce goods and services
- Gain analytical skills for understanding market structure and to demonstrate the equilibrium price output determination under different market conditions.

### **Fundamental economic concepts & Economic Way of Thinking**

Consumer analysis – Total & marginal Utility; Law of diminishing marginal utility; consumer equilibrium; law of Equi-marginal utility and demand forecasting

### **Demand and Supply and their application**

Law of Demand; movement along the demand curve & shift of the demand curve; Elasticity of demand-Price, income & cross elasticity of demand; Law of Supply; Movement along the supply curve and shift of supply curve

### **Production and cost decisions**

Production function, Variation of output in Short & long run; Law of Variable Proportions; Concept of cost of Production; Behaviour of Cost in short & long-run; Revenue Concept

### **Market Structure and Strategy Decision**

Perfect Competition; Monopoly Competition; Monopolistic Competition; Rules of Profit-Maximization, Business Cycles, Control Measures & Business decisions

### **Text Book:**

- Economics 19<sup>th</sup> Edition by Paul A Samuelson, William D Nordhaus
- Managerial Economics: A Problem-Solving Approach , 2<sup>nd</sup> Edition, Froeb/McCann, (South-Western, 2010).
- Microeconomics (Global Edition) , 8<sup>th</sup>ed., Robert S. Pindyck & Daniel L. Rubinfeld, Pearson/Prentice Hall.

### **References:**

- Charles Wheelan , Naked Economics-Undressing the Dismal Science, Norton
- Steven E. Landsburg , Armchair Economist, Free Press
- Tim Harford , The Undercover Economist, Abacus
- Robert Frank , The Economic Naturalist, Basic Books
- Avinash Dixit and Barry Nalebuff , Thinking Strategically, Norton

## **Management Thought and Environment (MS4105)**

**Objective:** The objectives is to define management, describe the nature and scope of management, difference between management and administration, various levels of management; and to describe the various skills that are necessary for successful managers.

### **Course Outcome**

Students will be able to

- understand how managers manage business organization
- familiarize with the nature of business environment and its components.
- develop conceptual framework of business environment and generate interest in international business.

### **Evolution of Management Thought**

Management Practices. Management as a discipline Concept of Management and Principles of Management

### **Business Environment Analysis**

Introduction to Business Environment Analysis of Business Environment, Internal and External Environment

### **Environment**

Competitive Environment, Michael Porter's Five Forces Analysis, Role of government in Business, Legal framework in India, Economic environment

### **Social Responsibility**

Corporate Social Responsibility Technological environment, Globalization, FDI

### **Text Book/References:**

- Management by Peter Drucker
- Management Policy by Melvin J. Stanford
- The Philosophical Foundations of Management Thought By Jean-Etienne Joullié, Robert Spillane
- A History of Management Thought By Morgen Witzel

## **IT Infrastructure & Service Management (MS 4106)**

**Objective:** To identify how a service can provide value, features of services, Service Management, challenges and recognize the goals and objectives of each Lifecycle.

### **Course Outcomes**

Students will be able to:

- to understand the IT infrastructure and its components.
- gain insights into the current needs of IT-related services in organizations.
- Identify how a service can provide value and will recognize the importance of Service Management and the challenges service providers face.

### **IT infrastructure management**

Evolution of IT infrastructure, Identification of Key IT infrastructure components, IT Infrastructure Audit and regulatory compliance, Developing resilient, responsive, and smart IT infrastructure for organizations, Tracking the Growth and change trajectory in enterprise-level software and service delivery systems, Identification of factors influencing dynamic organizational IT needs, Establishing a Generic IT ecosystem.

### **Information Technology Infrastructure Library (ITIL)**

Revisiting the ITIL v3, Introductory Overview of ITIL v4, Introduction to ITIL best practice, Four dimensions of service management and their key role in effective services, ITIL service value chain, Key benefits of ITIL

### **Service Management**

Concept of Service Management, SIPOC Model/SERVQUAL model, Service level Benchmarking, Introduction to Process Management, Decision Support System, Types of Services: i) Legacy system (On-premises) ii) Infrastructure/Architecture as a service. iii) Platform as a service. iv) Software as a service.

### **Continual Service Improvements**

Introduction to Continual Service Improvements, Service Level Interoperability, Key Principles and Models of Continual Service Improvements.

### **References:**

- ITIL is a framework of best practices developed in the UK by the Office of Government Commerce (OGC). The official ITIL website is at [www.itil-officialsite.com](http://www.itil-officialsite.com), but much of the official information is at [www.best-management-practice.com](http://www.best-management-practice.com), run for OGC by The Stationery Office (TSO).
- The official overview, for free! Download the free 50-page book, An Introductory Overview of ITIL V3, at [www.best-management-practice.com/gempdf/itSMF\\_An\\_Introductory\\_Overview\\_of\\_ITIL\\_V3.pdf](http://www.best-management-practice.com/gempdf/itSMF_An_Introductory_Overview_of_ITIL_V3.pdf).
- Official ITIL Glossary of Terms and Definitions at [www.itil-officialsite.com/InternationalActivities/TranslatedGlossaries.aspx](http://www.itil-officialsite.com/InternationalActivities/TranslatedGlossaries.aspx).

## Organizational Behavior (MS4107)

**Objective:** To let the students be exposed to the nature and concepts of organizations behavior and culture

### Course Outcome

Students will be able to

- implement the process and will be trained for organizational challenges in future.

### Introduction

Concept, Nature, Characteristics, conceptual Foundations and Importance, Models of Organizational Behavior, Management Challenge, A Paradigm Shift. Relationship with other Fields. Organizational Behavior: Cognitive Framework, Behavioristic Framework and Social Cognitive, Framework. Perception and Attribution: Concept, Nature, Process, Importance. Management and Behavioral Applications of Perception. Attitude: Concept, Process and Importance. Attitude Measurement. Attitudes and Work force Diversity. Personality: Concept, Nature, Types and Theories of Personality Shaping. Personality Attitude and Job Satisfaction. Learning: Concept and Theories of Learning.

### Motivation

Concepts and Their Application, Principles, Theories, Employee Recognition, Involvement, Motivating a Diverse Workforce. Leadership: Concept, Function. Style and Theories of Leadership-Trait, Behavioural and Situational Theories. Analysis of Interpersonal Relationship, Group Dynamics: Definition, Stages of Group Development, Group Cohesiveness, Formal and Informal Groups, Group Processes and Decision Making, Dysfunctional Groups

**Organizational Power and Politics:** Concept, Sources of Power, Distinction between Power, Authority and Influence, Approaches to Power, Political Implications of Power: Dysfunctional Uses of Power. Knowledge Management & Emotional Intelligence in Contemporary Business Organization. Organizational Change: Concept, Nature, etc, Kurt Lewin Theory of Change Conflict, Classification of Conflict Intra, Individual. Interpersonal, Inter group and Organizational. Resolution of conflict. Meaning and Types of Grievance and Process of Grievance Handling. Stress: Understanding Stress and Its Consequences, Causes of Stress, Managing Stress

**Organizational Culture:** Concept, Characteristics. Elements of Culture. Implications of Organization culture, Process of Organizational Culture.

### References:

- Newstrom John W.-Organizational Behaviour: Human Behavioural Work (TataMcGrawHill,12<sup>th</sup>Edition)
- Luthans Fred-Organizational Behaviour (Tata McGraw Hill)
- McShaneL.Steven. Glinow Mary AnnVon & Sharma Radha R.-Organizational Behaviour (Tata Mc GrawHill,3rdEdition)

## **Corporate Finance (MS4108)**

**Objective:** This course aims to provide the students with the fundamental concepts, principles and approaches of corporate finance, and enable the students to apply relevant principles and approaches in solving problems of corporate finance.

### **Course Outcome**

Students will be able to

- value stocks and bonds, assess the risk and return of assets, estimate a company's cost of capital, evaluate investment projects and
- determine whether a company is creating or destroying value and compensate shareholders in the most convenient way.

### **Introduction**

Introduction to financial management Indian capital market, Time value of money. Conceptual Framework of Risk and Return

### **Capital Budgeting Risk Analysis**

Estimation of cash flow Sources of Financing, Cost of capital

### **Capital structure & Leverages**

Working capital management

### **Dividend**

Dividend policy Banking institutions, non-banking financial companies, mutual funds, insurance organizations, development finance institutions

### **Text Book/References:**

- Financial Management - Khan M. Y.& Jain P. K, 6le, TMH, 2011.
- Financial Management - Pandey I. M, 1 Ole, Vikas.
- Financial Management - Prasanna Chandra, 8le, TMH, 2011.
- Financial Management, Kapil, Pearson Education, 2011.
- Financial Management, Srivastav, Oxford University press, 2011.
- Fundamentals of Financial Management - Brigham & Houston, 1 Ole, Cengage Learning.
- Fundamentals of Financial Management – Vanhorns & Bhandari, Pearson Education.
- Contemporary Financial Management- Kothari & Dutta, Macmillan India Ltd.
- Fundamentals of Corporate Finance - Stephen A. Ross, Wester Field, Jordan, 8le, McGraw 2010.
- Fundamentals of Financial Management -Vanhorne & Wachowicz, I 3le, PHI, 2011.

## **Production & Operations Management (MS4109)**

**Objective:** To understand the role of operations management in the overall business strategy of the firm.

### **Course Outcomes**

Students will be able to:

- understand the roles and responsibilities of operations managers.
- recognize its interfaces with other functional areas within & outside the organization
- Understand the role of operations management in the overall business strategy of the firm.

### **Productivity & Forecasting**

productivity ratio, measurement, index, awareness improvement maintenance (A.I.M) process. Production System Models of production system, Product vs. Services, Process-focused & product focused systems, Operations strategy, moving average, exponential smoothing, Regression analysis, coefficient of co-relation, Delphi, Market survey. Modern Trends in Manufacturing: Basic concepts of CAD, CAM, FMS, CIM, ISO 9000, Quality circle, Kaizen, Kanbans, Poke Yoke' supply chain management

### **Facilities Planning**

Site location, facilities layout and various types, Objectives of Layout, Classification of Facilities, Basis for Types of Layouts, Nature of layout problems, Redesigning of a layout, Manufacturing facility layouts, Types of Layouts, Layout Planning, Evaluating Plant Layouts, Assembly Line Balancing, Material handling.

### **Production Planning & Control**

Aggregate planning. Sequencing, Line balancing, Flow control, Dispatching, expediting, Gantt chart, line of balance, learning curve.

### **Project Management**

Network scheduling, PERT. Critical path, Most likely time estimate, Resource leveling. Inventory Management: Basic Economic Order Quantity (EOQ) Model; Quantity Discount Models; Spare Parts Inventory; Manufacturing Resource Planning; Purchasing

### **Text Book:**

- Operations Management by Jay Heizer, Barry Render, Chuck Munson, Amit Sachan (Twelfth Edition), Pearson Publishing
- Production and Operations Management – Manufacturing and Services, Chase, Richard B., Nicholas J. Aquilano and Robert F. Jacobs; Tata McGraw-Hill, New Delhi, 1999.

### **References:**

- Succeeding in Project-Driven Organizations by Knutson Joan; Publisher: John Wiley.
- Production Systems: Planning, Analysis & Control : By —Riggs, J.L.(4th Edn.) John Wiley & Sons.

## **Operation Research (MS4110)**

**Objective:** To gain some ability to recognize situations in a production system environment that suggests the use of certain quantitative methods to assist in decision making on operations management and strategy.

### **Course Outcome**

Students will be able to

- Gain an understanding and appreciation of the principles and applications relevant to the planning, design, and operations of manufacturing/service firms and to cultivate analytical thinking among students.

### **Introduction**

Introduction to Operation Research Linear programming: sensitivity analysis; duality  
Transportation problem Assignment model

### **Decision making**

Decision-making environments Decision tree approach and its applications.

### **Replacement**

Replacement Problem Game Theory: Concept of game; Dominance Meth

### **Queuing Theory**

Queuing Theory Project Management

### **References:**

- Taha Hamdy – Operations Research – An Introduction (Prentice-Hall, 7th edition)
- Hiller and Lieberman. Introduction to Operations Research. McGraw Hill.
- Sharma J K – Operations Research (Pearson, 3rd Edition)
- Srinivasan, Operations Research, PHI.
- Paneerselvam, Operations Research, PHI

## Human Resource Management (MS4111)

**Objective:** To let student be exposed to the Human resource management process and techniques.

### Course Outcome

Students will be able to

- implement the process and will be trained for organizational challenges in future.

### Human Resources Management (HRM)

Meaning, Nature and Scope, HRM functions, objectives, Evolution. HRM in India: evolution and principles of HRD, HRD Vs. Personnel functions, Role of HR managers. Strategic HRM, Nature of Strategies and Strategic Management, Strategic Management Process-Environmental Scanning, Strategy Formulation, Implementation, and evaluation.

### Human Resources planning

Definition, purposes, processes and limiting factors. HRIS, HR accounting and audit, Job Analysis- Job Description, Job Specification. The systematic approach to recruitment: recruitment policy, recruitment procedures, recruitment methods and evaluation. The systematic approach to selection: the selection procedure, the design of application form, selection methods, the offer of employment, and evaluation of process.

### Training and Development

Purpose, Methods and issues of training and management development programmers Performance Appraisal: Definition, Purpose of appraisal, Procedures and Techniques including 360-degree Performance Appraisal, Job Evaluation. Compensation Administration: Nature and Objectives of compensation, components of pay structure in India, Wage Policy in India Minimum Wage, Fair Wage and Living Wage. Incentive Payments, Prerequisites for an effective incentive system, Types and Scope of incentive scheme, Incentive. Schemes in Indian Industries, Fringe Benefits.

### Discipline and Grievance Procedures

Definition, Disciplinary Procedure, Grievance Handling Procedure. Nature, importance, and approaches of Industrial Relations. Promotion, Transfer and Separation: Promotion-purpose, principles, and types; Transfer reason, principles, and types; Separation-layoff, resignation, dismissal, retrenchment, Voluntary Retirement Scheme.

### Text Book:

- “Human Resource Management, Text and Cases”, TMH.
- Dr. Anjali Ghanekar, “Essentials of Human Resource Management”, Everest.
- Wayne. F.Cascio, Ranjeet Nambudiri, “Managing Human Resource Management”, 8th Edition, TMH

### References:

- Aswathappa K, Human Resource and Personnel Management, (TataMcGrawHill,5thEd.)
- RaoVSP-Human Resource Management, Text, and Cases (ExcelBooks,2<sup>nd</sup>Ed.)

## **Marketing Management (MS4112)**

**Objective:** To teach the basics of Marketing Management to students from Different streams.

### **Course Outcome**

Students will be able to

- Learn Practical world of Business Environment.
- Analyse and develop effective marketing strategies for various products and services by understanding key concepts like segmentation, targeting, positioning, and the marketing mix.
- Use consumer behavior insights to drive marketing decisions and apply strategic decision-making skills across different stages of the product lifecycle.
- Implement practical pricing, distribution, promotion, and CRM solutions in domestic and international markets.

### **Introduction**

Introduction to Marketing, Marketing Environment.

### **Market Segmentation**

Market Segmentation, Market Targeting- Introduction, Procedure.

### **Product Positioning**

Product Positioning, Consumer Behavior Marketing Mix Decisions, New Product Development. Branding & Packaging Decisions, Product Life cycles.

### **Pricing Decisions**

Pricing Decisions, Management of Channels, Retail Distribution system in India. Promotion Mix, Marketing of Services, Rural Marketing, CRM, Electronic Marketing, International Marketing.

### **References Book**

- Kotler Philip, Keller Kevin Lane, Koshy Abraham & JHA Mithileshwar- - Marketing Management: A south Asian Perspective (Pear sons Education 12<sup>th</sup> Edition).

## **Database Management Systems (MS4113)**

**Objective:** To understand the role of a database management system and its users in an organization

### **Course Outcome**

Students will be able to

- Understand the architecture and components of DBMS.
- Design relational databases and develop Entity-Relationship (ER) diagrams.
- Normalize databases to improve efficiency and eliminate redundancy.
- Understand database security, transaction management, recovery techniques.

### **Introduction to DBMS and Database Models**

Definition and purpose of DBMS, Database concepts: Data, information, and knowledge, DBMS vs. file-based systems, Types of database models: Hierarchical, network, and relational database.

### **Relational Database Design and ER Modeling**

The Relational Model: Tables (relations), attributes, tuples, Keys, Entity-Relationship (ER) model: Entities, attributes, and relationships, Mapping ER models to relational schemas, Integrity constraints: Domain, referential, and entity integrity.

### **Structured Query Language (SQL) and Query optimization**

Basic SQL: Creating, modifying, and deleting tables, Querying data using SELECT, WHERE, and basic JOIN operations, Aggregate functions, Creating and managing indexes, Query optimization techniques: Cost-based optimization, query execution plans.

### **Normalization and Database Design**

Redundancy and anomalies in database design, Normal forms: 1NF, 2NF, 3NF, and BCNF, Functional dependencies and their role in normalization, Denormalization and its impact on database performance, Case studies in database design.

### **Transaction Management and Database Security**

Concept of transactions: ACID properties, Concurrency control: Lock-based and timestamp-based protocols, Deadlock handling and recovery techniques, Database security: Access control, authentication, and encryption, Backup and recovery in DBMS.

### **Text Books**

- "Database System Concepts", Abraham Silberschatz, Henry F. Korth, and S. Sudarshan, McGraw-Hill Education, 9781260084504
- "Fundamentals of Database Systems" Ramez Elmasri and Shamkant B. Navathe, Pearson, 9780133971248.

### **Reference Books**

- "Database Systems: The Complete Book", Hector Garcia-Molina, Jeffrey D. Ullman, and Jennifer Widom, Pearson Education, 9788131708422.

## **Entrepreneurship Development (MS4114)**

**Objective:** The objective is multifaceted, aiming to foster a robust environment for the growth and sustainability of new and existing businesses.

### **Course outcomes**

Students will be able to:

- define and explain key concepts related to entrepreneurship, such as innovation, risk-taking, and opportunity recognition.
- identify viable business opportunities and assess market needs, customer problems, and potential profitability.
- manage finances effectively, including budgeting, cash flow management, and fundraising strategies.
- develop leadership and teamwork skills, as well as learning to lead teams, manage employees, and collaborate.

### **Introduction to Entrepreneurship**

Introduction to Entrepreneurship, Concepts and Overview of Entrepreneurship, Evolution and Growth of Entrepreneurship in India, Role of Entrepreneurship in Economic Development, Entrepreneurial Culture, Entrepreneurial Society, Women & Rural Entrepreneurship.

### **Theories of Entrepreneurship**

Theories and Models of Entrepreneurship, Framework of Entrepreneurship Theories, Models of Entrepreneurship, Emerging Models of Corporate Entrepreneurship. Emerging Trends in Entrepreneurship Development, Entrepreneurial Potential, and Potential Entrepreneurship, Evaluation of Social Entrepreneurship in India. Skill development: development of entrepreneurial skills, including entrepreneurial motivation, entrepreneurship and the Indian social system, entrepreneurial characteristics and skills, entrepreneurial motivation, and the need for achievement.

### **Text Books**

- Entrepreneurship: Theory, Process, and Practice by Donald F. Kuratko
- Entrepreneurial Small Business by Jerome Katz and Richard Green
- The Lean Startup: How Today Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses by Eric Ries
- New Venture Creation: Entrepreneurship for the 21st Century by Jeffrey A. Timmons and Stephen Spinelli

### **Reference**

- Kuratko, D. F. (2016). Entrepreneurship: Theory, Process, and Practice (10th ed.). Cengage Learning.
- Ries, E. (2011). The Lean Startup: How Today Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses; Crown Business.

## **Strategic Management (MS5201)**

**Objective:** To develop a theoretical and practical understanding of marketing planning and control by exploring current developments in marketing theory and practice

### **Course outcome**

Students will be able to:

- Develop the ability to analyze complex business environments and formulate effective strategies.
- Gain insights into strategic decision-making and its impact on organizational success.
- Understand how to align resources and capabilities with competitive strategies.

### **Introduction To Strategic Management**

Basic Concepts in Strategic Management, Corporate Governance and Social Responsibility, vision and mission, Levels of strategy, Competitive Advantage, Resource allocation

### **Scanning the Environment**

Definition and Importance, Types of Factors (Internal: Organizational structure; External: Economic, political, social, technological, legal), Techniques (SWOT Analysis, Competitive Analysis), Tools (Data analytics, Business intelligence, Social media monitoring), Challenges, Integration into Strategic Decision-Making.

### **Strategy Formulation**

Situation Analysis and Business Strategy, Strategy Formulation: Corporate Strategy, Strategy Formulation: Functional Strategy and Strategic Choice (Aligning functional areas, developing functional strategies, Evaluating strategic options).

### **Strategy Implementation and Control**

Strategy Implementation: Organizing for Action (Roles, Communication, Resource alignment), Staffing and Directing (Recruitment, Leadership, Performance), Evaluation and Control (Metrics, Monitoring, Feedback), Managing Technology and Innovation (Adoption, Efficiency, Change management), Case Analysis Suggestions (Stakeholders, Decisions, Implementation evaluation).

### **Reference Readings:**

- Ansoff, I. (1965). Corporate Strategy. McGraw-Hill.
- David, F. R. (2011). Strategic Management: Concepts and Cases (13th ed.). Pearson.
- Day, G. S., & Reibstein, D. J. (2004). Wharton on Dynamic Competitive Strategy. Wiley.
- Glueck, W. F., & Jauch, L. R. (1984). Business Policy and Strategic Management (5th ed.). McGraw-Hill.
- Kaplan, R. S., & Norton, D. P. (1996). The Balanced Scorecard: Translating Strategy into Action. Harvard Business School Press.

## **Business Continuity and Disaster Recovery Planning (MS5202)**

**Objective:** The course is designed with an intent to make the students aware about different protocols and technologies prevailing in the industry in the area of risk mitigation

### **Course Outcome**

Students will be able to:

- Understand key principles of risk analysis, threat assessment, and impact management in business continuity.
- Develop and implement effective Business Continuity and Disaster recovery Plans tailored to organizational needs.
- Design and test recovery solutions to minimize downtime and ensure business resilience.
- Utilize modern data protection technologies for backup and recovery.
- Maintain, test, and update BCP and DRP plans to ensure they remain effective and compliant with organizational standards.

### **Business continuity planning**

Introduction to Risk Analysis and Management, Analysis: Impact Analysis, Threat Analysis, Definition of Impact Scenario, Recovery Requirement Documentation, Solution Design, Implementation Testing, Organizational Acceptance

### **Testing & Verification**

Maintenance, Information Update & Testing, Testing & Verification of Technical Solutions, Testing for Failures, Verification of Organizational Recovery Procedure

### **Disaster Recovery Planning**

Business Data Protection, Prevention of Data Loss, Data Backup, Electronic Vaulting, Strategic DRP Solutions, Data Centre Management

### **Text Books:**

- Business Continuity and Disaster Recovery Planning by Michael Gregg, Published on March 10, 2009 by Pearson IT Certification.
- CISSP Study Guide, 2nd Edition by Eric Conrad, Joshua Feldman, Seth Misener.

### **Reference Books:**

- The Disaster Recovery Handbook: A Step-by-Step Plan to Ensure Business Continuity and Protect Vital Operations, Facilities, and Assets by Michael Wallace and Lawrence Webber, 2nd Edition.
- Business Continuity Management: Global Best Practices by Andrew Hiles, 3rd Edition, Published by Rothstein Publishing.

## **Digital Transformation (MS5203)**

**Objective:** The course provides the basis for the use of practical tools that the students could apply in their daily future work activities.

### **Course Outcome**

Students will be able to

- Understand digital technologies and the concept of the digital revolution.
- understand the development of new digital tools

### **Introduction**

Digitization and digital transformation, Digital strategies and strategic agility, Development of a compelling digital strategy (ingredients, elements), Foundations and theories to back up and inspire digital strategies.

### **Models**

Digital business models, Importance of the digital revolution, Digitalization trends and their impact on societies, Analysis of the main pillars of digitalization.

### **Digital tools**

The role of data in the digital transformation, Introduction to new digital tools, providing a basic toolkit of quantitative methods, Digital tools to solve real-life problems, Digital transformation and its impact on the organizations.

### **Services**

Digitally enabled services, digital service innovations, Enterprise capabilities, new perspectives and new capabilities, Case studies on digital transformation.

### **Text Books:**

- The Digital Transformation Roadmap: Rebuild Your Organization for Continuous Change, Columbia University Press, David L. Rogers, 2023.
- Driving Digital Strategy: A Guide to Reimagining Your Business, Harvard Business Review Press, Sunil, 2020.

## **Product Management (MS5204)**

**Objective:** The objective of the course is to equip students with the knowledge and skills necessary to effectively define, develop, and launch successful products

### **Course Outcome**

Students will be able to

- learn all basic concepts to introduce innovative new products in the market
- Customer Based Brand Equity model
- launch a product and do branding on applying the concepts learnt

### **Introduction**

Product Management, How Functional and Product Management Differ from Each Other, Functional Manager vs Product Manager, Definition of product management, Product Orientation and Market Orientation, The Process Levels in Product Management.

### **Product Management**

Product Management, Recruitment of Product Managers, Organizational Integration of Product Management, Organization in Strategic Product Management, Organization in Operational Product Management, Assignment to Technical Functions, Special Forms of Organization in Product Management, Often Neglected: Strategic Responsibility

### **Organization & Strategies**

The Function-Oriented Organization, The Product-Oriented Organization, The Market-Oriented Organization, The Regionally Oriented Organization. Product Marketing: Structures, Success Factors, Market Segmentation, Criteria, Strategies, Product Segmentation, Hierarchies, Revenue and Contribution Margin Analysis), Market Matrix, Product Market Coverage Strategies, Product Market Growth Strategies.

### **Performance**

Product and Brand Awareness, Market Segmentation and Product/Brand Image, Performance, Price or Performance Orientation, Product Benefit Analysis, Quality Function Deployment, Practical Applications Price as a Decision Criterion, PPR & CBR. The Use of Strategic Analysis Tools by the Product Manager.

### **Strategies**

Gaining Market Share, Setting the Product Market Goals, Basic strategies in Product Marketing, Overview of the Strategy Elements, Strategy Development Using the Strategic Toolbox, Marketing Mix Strategies, Pricing Strategies, Distribution Strategies, Assortment Strategies, Other Marketing Mix Strategies.

### **Text Books:**

- Product Management, 4th Edition By Donald Lehmann, Russell Winer, Tata McGraw-Hill.
- Product Manager's Handbook The Complete Product Management Resource second edition, Tata McGrail

**Baskets (Marketing)**

## **Digital Marketing (MS 5528)**

**Objective:** This course focuses on understanding of digital revolution, technology and new opportunities for digital marketing.

### **Course Outcomes:**

Students will be able to:

- Design and execute effective digital marketing strategies
- Analyse digital marketing performance and leverage SEO, SEM, and social media.
- Plan and manage digital advertising campaigns on different platforms and
- Will understand business and revenue models in the digital space

### **Introduction to Digital Marketing**

Fundamental Marketing Concepts, 7D of digital marketing, RACE concept, Digital audience, Digital device, digital marketing goal and strategy.

### **Business models**

Business model, revenue model, online marketplace, digital branding and marketing mix, types of digital media.

### **Designs**

Website design, CMS platform, and types, social media marketing, content marketing-mail marketing, Google keyword planner, Google trend.

### **Webs Usage**

Google analytics, web analytics, Facebook and LinkedIn analytics, blog site designing, and tracking, Google ad words, campaign planning, cases.

### **References Book:**

- "Digital Marketing: Strategy, Implementation and Practice" by Dave Chaffey and Fiona Ellis-Chadwick
- "E-Marketing" by Judy Strauss, Raymond Frost, and Alexa Fox
- "Digital Marketing Excellence: Planning, Optimizing and Integrating Online Marketing" by Dave Chaffey and PR Smith
- "Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation" by Damian Ryan

## **Consumer Behavior (MS 5534)**

**Objective:** The course deals with the behavioral aspects of marketing management & explain how the markets, consumers behave. It'll enable students to develop marketing strategies that are consumer based, create & enhance customer value.

### **Course Outcome**

Students will be able to:

- Analyze the behavioral aspects of marketing management.
- Evaluate consumer behavior in various market conditions and examine the influence of various factors on consumer decision-making.
- Develop consumer-based marketing strategies that enhance customer value and align with organizational objectives.

### **Consumer behavior**

Definition, scope, customer value, Customer satisfaction, Injurious consumption, Traditional marketing concept, Models of Consumer Behavior, Nicosia, Howard sheth, Consumer benefits, and evaluative criteria, Decision Heuristic

### **Consumer motivation**

Needs, Goals, Discovering purchase motives, motivation research, Defense mechanism, Personality, Consumer innovativeness, Dogmatism, Cognitive personality factors, Self-image, Forms, How general personality influence consumer behavior

### **Consumer learning**

Consumer learning and Reference group appeal, Conditioning, , Information Processing, Perceptual mapping, attitude model, Consumer related reference groups, Brand communities, decision-making process, Family life cycle, Perception, Figure and ground, grouping, closure, Perceptual distortion, Perceived risk, Perceived quality, Opinion leadership, Surrogate buyer, Adopter categories, Adoption process

### **Purchasing Process and Post purchase behavior**

Store location, Store design, and Physical facilities, Store specific shopper profiles In-store purchasing behavior, Usage segmentation, Brand user, Product user, Loyalty, situation segmentation, Positive/ negative Post purchase Behaviour, Complaint Behaviour

### **Reference Book:**

- Jay D. Lindquist, M. Joseph Sirgy, Shopper, buyer and Consumer Behavior, Bertantra, New Delhi, 2007.
- Del 1. Hawkins, Roger J, Best, Kenneth A. Coney, Amit Mookerjee, Consumer Behavior Building Marketing Strategy, 9/e, Tata McGraw-Hill, New Delhi, 2007,
- Leon G. Schiffinan, Kanuk Leslie Lazar, Consumer behavior, PII Learning, New Delhi, 2008.
- David L. Loudon, Albert J. Della Bitta, Tata McGraw-Hill, New Delhi, 2007

## **Marketing Research (MS 5535)**

**Objective:** The course objectives of Marketing Research typically include understanding the marketing research process, identifying consumer needs and preferences

### **Course Outcomes:**

Students will be able to:

- Understand theoretical and practical knowledge of marketing research methods, enabling them to design, execute, and analyze research projects.
- get data collection and analysis techniques and can apply various tools and statistical methods to solve real-world marketing problems.
- Ethical considerations and effective communication of research results will be central skills developed throughout the course, preparing students for careers in market research, consultancy, or strategic organizational roles.

### **Introduction**

Introduction and Early Phases of Marketing Research; Marketing problem, Marketing research, Research approach; Research Design Formulation (Exploratory, causal, longitudinal, Questionnaires, survey); Primary and Secondary data

### **Scales**

Scales, Questionnaire design; Sampling

### **Analysis**

Statistical analysis- Manova, Anova, Cluster Analysis, Sentiment analysis, Conjoint analysis, R programming and xlstat.

### **Research**

Mobile research, Internet Research, Ethics, Ethical regulations; Research report writing, presentation and discussion

### **References Book**

- "Marketing Research: An Applied Orientation" by Naresh K. Malhotra
- "Essentials of Marketing Research" by William G. Zikmund, Barry J. Babin, Jon C. Carr, and Mitch Griffin
- "Marketing Research" by Aaker, Kumar, Day, and Leone
- "Marketing Research: Methodological Foundations" by Gilbert A. Churchill and Dawn Iacobucci
- "The Market Research Toolbox: A Concise Guide for Beginners" by Edward F. McQuarrie

## **Data-Driven Marketing (MS 5536)**

**Objective:** To understand the concept of delivery channels, as well as creative content that is appropriate to each, in order to establish and grow relationships that benefit marketer and consumer alike.

### **Course outcome**

Students will be able to:

- Analyze and interpret customer data to inform strategic marketing decisions.
- Utilize data analytics tools to optimize and measure performance.
- Develop personalized marketing strategies based on consumer insights and behavioral patterns and understand the ethical considerations and best practices.

### **Data-Driven Models: An Overview**

Identifying what to measure, the descriptive, diagnostic, predictive, and prescriptive approach DDM, The classical marketing metrics, the essential financial metrics.

### **Optimizing Marketing Strategies**

Identifying the marketing process, Establishing key customer/consumer touchpoints, Modeling, Model optimization and reinforcement, Developing logic and decision scenarios.

### **Harnessing Data for Marketing strategy**

The modern metrics, Web auditing, SEO&SERP, Social sentiment & click economy, AI & new age marketing communication.

### **Navigating the Dataset**

Leaders & laggards: Barriers to Data-Driven Marketing, UX, CX & Data, Extracting, Exploring, and Understanding the Dataset

### **Reference readings:**

- McDougall, J. S. (2012). #Tweetsmart.
- Semmelroth, D. (2013). Data-driven marketing for dummies.
- Bryan, R. (2017). Data-driven marketing.
- Jeffery, M. (2010). Data-driven marketing: The 15 metrics everyone in marketing should know.
- Sponder, M. (2018). Digital analytics for marketing.
- Holdren, A. (2020). Google AdWords.
- Croll, A. (2018). Lean analytics.
- Busche, L. (2017). Lean branding.
- Chaters, B. (2018). Mastering search analytics.
- Ward, A. A. (2017). SEO battlefield.
- Jerkovic, J. I. (2015). SEO warrior.
- Zarrella, D. (2019). The social media marketing book.

**Baskets (HR)**

## **Creativity and Innovation (MS 5540)**

**Objective:** To let the students understand the importance of creativity and innovation in organizations.

### **Course Outcomes**

Students will be able to:

- Develop a deep understanding of the foundational concepts, theories, and models of creativity and innovation in a business context and will demonstrate the ability to generate innovative and creative solutions to complex business problems.
- Gain skills to cultivate and lead an organizational culture that promotes creativity, risk-taking, and continuous innovation.
- Integrate innovation into business strategies and understand how creative thinking can enhance leadership effectiveness and decision-making, driving competitive advantage in dynamic business environments.

### **Managing Creativity**

An Overview, Understanding Creativity, Difference Between Creativity, Invention, and Innovation, Types of Innovation, Theories of Creativity, Challenges and Barriers to Creativity in Organizations.

### **Unblocking Creative Potential**

Ideation Techniques, Creative Problem-Solving Frameworks, Enhancing Personal Creative Abilities, Creativity in Leadership and Decision-Making

### **Organizational Creativity and Innovation Culture**

Building an Innovation-Friendly Culture, Encouraging Risk-Taking and Learning from Failure, Role of Leaders in Fostering Creativity and Innovation, Creativity Techniques (Brainstorming, Lateral Thinking, Forced Relationship, Morphological Analysis, Attribute Listing.)

### **Managing Creativity in Organization**

Integrating Innovation into Business Strategy, Product, Process, and Business Model Innovation, Innovation Ecosystems and Open Innovation

### **Text Books**

- “Creativity and Innovation: The ASTD Trainer's Sourcebook”, Elaine Biech, First Edition, 1996, McGraw Hill Education, ISBN 978-0070534452.
- “Corporate Creativity: How Innovation and Improvement Actually Happen”, Alan G. Robinson, Sam Stern, First Edition, 1997, Berrett-Koehler Publishers, ISBN 978-1576750094.

### **Reference Books**

- “Harvard Business Essentials: Guide to Managing Creativity and Innovation”, Harvard Business Essentials, First Edition, 2011, Harvard Business School Press, ISBN 978-1591391128

**Baskets (Financial Management)**

## **Financial Technology (MS 5506)**

**Objective:** The objective is to equip students with the knowledge and skills necessary to identify potential threats and evaluate the potential impact of disruptions on critical business functions, identifying priorities and dependencies.

### **Course Outcomes**

Students will be able to :

- Appreciate how technology is reshaping financial services and will understand key Fintech sectors and their impact on traditional financial institutions.
- Evaluate the business models and strategies employed by Fintech firms and will understand global FinTech landscape
- Get familiar with competitive landscape of FinTech startups in payments, lending, banking, capital markets & insurance.

### **Introduction to the Fintech landscape**

Overview of Fintech and its importance in the financial services industry, Traditional vs. Fintech models of finance, the Fintech ecosystem: startups, regulators, and financial institutions, BFSI Value chain, How FinTech changed BFSI, FinTech Architecture, FinTech Technologies, Latest Trends and future of FinTech, Fintech startups

### **Blockchain Technology and DeFi**

Blockchain Foundations, Blockchain in Use, Smart contracts, Cryptocurrencies Primer, Bitcoin and Applications, Cryptocurrencies and Digital Crypto Wallets, Types of Cryptocurrencies, Cryptocurrencies and Business use cases in supply chain, contracts, and record-keeping, Stable coins, Decentralized Finance (DeFi) and its impact, DeFi Platforms, Decentralized Exchanges

### **Digital Payments, Peer-to-Peer Lending & Crowdfunding**

Global Payment Ecosystem, Payments Architecture and Setup, Innovation in Consumer and Retail payments, Popular Payments Technology, Concept of P2P Lending, P2P and Marketplace Lending, Crowd funding: Models and platforms.

### **Emerging Technologies and Innovations in Fintech**

Banktech, Insurtech, Regtech, Algorithmic Trading, Robo-Advisory, Cybersecurity and Fraud Prevention in Fintech, Fintech Regulation and Compliance, Future Trends in Fintech

### **Reference Books:**

- “Financial Technology: Case studies in fintech innovation”, Niels Pedersen, Kogan Page Ltd., 978178966 5451.
- “Disrupting Finance: FinTech and Strategy in the 21st Century”. Theo Lynn, John G. Mooney, Pierangelo Rosati, Mark Cummins, Palmgrave Macmillan, 978-3-030-02329-4
- “Harvard Business Review: Crypto”, Harvard Business Review Publishing, 9781647824495.

## **Financial derivatives and Risk Management (MS 5507)**

**Objective:** The main aim of this course is to familiarize students with the concepts of financial derivatives

### **Course Outcomes**

Students will be able to:

- Understand derivatives in details and will demonstrate critical thinking, analytical and problem-solving skills in the context of derivatives pricing and hedging practice
- help in analyzing various risk in business environment particularly in derivatives products and to generate an optimal risk management strategy.
- get expose in evaluating risks in terms of frequency and severity

### **Introduction**

Introduction to derivatives instruments: futures, forwards Commodity Futures, Swaps, Options

### **Derivatives**

Derivative mechanics and strategies, Greeks Option Pricing: Binomial Model, Black-Scholes-Merton Model

### **Risk**

Identify and describe risk in the business environment; Credit risk, market risk, operational risk, liquidity risk, legal risk, interest rate risk and currency risk; Risk Measurement; Risk preferences. Risk premium, Risk attitudes, Value at Risk, Stress testing and scenario Analysis; Risk transfer; Risk Management Method in Business

### **Text Book:**

- Options Futures & Other Derivatives by Hull, John, C.; Global Edition, Pearson Education.
- Fundamentals of Futures and Options Markets Paperback by C. Hull John.

### **References:**

- Hull, John, C., "Risk Management & Financial Institutions", Wiley Finance.
- Neftci, Salih, N. "Principles of Financial Engineering" , Academic Press.
- Cuthbertson, Keith & Nitzsche, Dirk, "Financial Engineering: Derivatives & Risk Management" John Wiley.
- Saunders, Anthony & Cornett, Marcia Millon, "Financial Institutions Management: A Risk Management Approach" McGraw Hill/Irwin.
- Marshall, John, F & Bansal, Vipul, "Financial Engineering" PHI Learning.

**Baskets (IT)**

## **Search Engine Optimization (MS 5522)**

**Objective:** The course objectives focus on teaching students how to improve a website's visibility on search engines like Google by understanding search engine algorithms, utilizing relevant keywords, optimizing website structure,

### **Course Outcomes**

Students will be able to

- Understand the fundamentals of search engine algorithms and ranking factors.
- Analyze website performance using SEO tools and data analytics.
- Develop and execute SEO strategies that align with business goals and marketing campaigns.

### **Search Fundamentals**

How search engines work, language of search, Crawling, indexing and their types, ranking and ranking factors. What is SEO? The importance of organic search. SEO planning and the business of SEO.

### **Keyword Research**

Starting SEO, The role of keywords in SEO, Types of keywords: Short-tail vs. long-tail keywords, Keyword research tools, Creating a keyword strategy: Relevance, competition, and search volume. Internal and External resources for keyword research, keyword valuation.

### **On-Page and Off-Page SEO Optimization**

Optimizing meta tags, Content, image optimization, URL structure and internal linking best practices, subdomains and subfolders, duplicate content, redirects, schema, sitemaps, Introduction to off-page SEO, Quality backlinks, guest blogging, influencer outreach, Social signals and their impact on SEO. Content Management Systems.

### **SEO Analytics and SEO Auditing**

CMS Selection, Introduction to SEO tools, Tracking and analyzing website performance, Setting up KPIs and monitoring SEO success, Conducting an SEO audit and improving site performance, Approaches to SEO auditing, audit checklist, content auditing.

### **Strategic SEO Approaches and Future Trends**

Mobile, local and Vertical SEO, Developing a long-term SEO strategy. Ethical SEO vs. Black Hat SEO: The future of SEO: AI, voice search, and the evolving search landscape.

### **Reference Books:**

- "The Art of SEO", Eric Enge, Stephan Spencer, and Jessie Stricchiola, O'Reilly Media, Inc, 978-1-098-10261-6.
- "Search Engine Optimization Bible", Jerri L. Ledford, Wiley Publishing, 978-0-470-17500-
- "SEO 2022 Learn Search Engine Optimization with Smart Internet Marketing Strategies" Adam Clarke, Simple Effectiveness LLC, 9780578333380.

## **Data Mining and Warehousing (MS 5548)**

**Objective:** The course deals with understanding of various Data pre-processing techniques and data quality and Understanding of Big Data and Business Intelligence

### **Course Outcomes**

Students will be able to:

- Build and manage a data warehouse effectively and use reporting tools, OLAP systems, and applications for business decision-making and analysis.
- Understand data types, mining functionalities, and the process of integrating data mining with a data warehouse
- Understand various clustering techniques, analyze data trends, and apply data mining in real-world scenarios

### **Data warehousing Components**

Building a Data warehouse, Mapping the Data Warehouse to a Multiprocessor Architecture, DBMS Schemas for Decision Support, Data Extraction, Cleanup, and Transformation Tools, Metadata

### **Business analysis**

Reporting and Query tools and Applications, Tool Categories, Cognos Impromptu, Online Analytical Processing, Multidimensional Data Model, OLAP Guidelines, Multidimensional versus Multi Relational OLAP, Categories of Tools, OLAP Tools and the Internet.

### **Data mining and Association rule mining & classification**

Data, Mining Functionalities, Patterns, Classification, Primitives, with a Data Warehouse, Issues, Data Preprocessing. Mining Frequent Patterns, Mining Methods, association Rules, Correlation Analysis, Constraint Based Association Mining, Classification and Prediction, Decision Tree, Induction, Bayesian Classification, Rule Based Classification, Classification by Back propagation, SVM Associative Classification, Lazy Learners, Other Classification Methods, Prediction.

### **Clustering and applications and trends in data mining**

Cluster Analysis, Types of Data, Categorization of Major Clustering Methods, Kmeans, Partitioning Methods, Hierarchical Methods, Density-Based Methods, Grid, Based Methods, Model-Based Clustering Methods, Clustering High Dimensional Data. Constraint Based Cluster Analysis. Outlier Analysis, Data Mining Applications.

### **Reference Book:**

- Alex Berson and Stephen J. Smith, "Data Warehousing, Data Mining & OLAP", Tata McGraw-Hill Edition, Tenth Reprint 2007.
- Jiawei Han and Micheline Kamber. "Data Mining Concepts and Techniques", Second Edition, Elsevier, 2007.
- Pang-Ning Tan, Michael Steinbach and Vipin Kumar, "Introduction To Data Mining", Pearson Education, 2007.

**Baskets (Operation management)**

## **Total Quality Management and Six Sigma (MS 5513)**

**Objective:** The overall purpose of the course is to provide an understanding of the process of managing quality and managing services

### **Course Outcomes**

Students shall be able to:

- Understand the Total Quality Management concept and principles, statistical approach to quality control.
- Create awareness about the ISO and QS certification process and develop models for complex problems in business situations
- Learn various algorithms for solving operations problems

### **Introduction**

Definition of Quality, Dimensions, Planning, costs, TQM, Leadership – Concepts, Role of Senior Management, Quality Council, Quality Statements, Strategic Planning, Deming Philosophy, Barriers to TQM Implementation.

### **TQM Principles & Quality Improvement Techniques**

Customer satisfaction, perception, Complaints, Service, Quality, Customer Retention, Employee Involvement, Continuous Process improvement, Supplier Partnership, Performance Measures, Pareto Diagrams, Cause-Effect Diagrams, Scatter Diagrams, Run Charts, Cause and Effect Diagrams

### **Statistical Process Control**

Statistical Quality Control, Sources of Variation, Descriptive Statistics, Statistical Process Control Method, Control Chart for Variables, Control Chart for Attributes, C Charts, Process Capability, Developing OC Curve, Average Outgoing Quality

### **TQM Tools, Quality Systems and Six Sigma**

Benchmarking, Quality Function, Deployment, House of Quality, QFD Process, Benefits, Taguchi Quality Loss Function, Total Productive Maintenance, FMEA – Stages of FMEA, ISO 9000, Other Quality Systems, ISO 9000:2000 Quality System, Quality Auditing, TS16949, ISO 14000, Six Sigma definition, goals, comparison, methodology – DMAIC & IDOV, Important Concepts of Six Sigma

### **Text Books:**

- Dale H. Besterfield, et al., "Total Quality Management", Pearson Education, Inc. 2003. (Indian reprint 2004). ISBN 81-297-0260-6.
- James R. Evans & William M. Lindsay, "The Management and Control of Quality", (5th Edition), South-Western (Thomson Learning), 2002 (ISBN 0-324-06680-5).

### **Reference Books:**

- Feigenbaum, A.V. "Total Quality Management", McGraw-Hill, 1991.
- Total Quality Management by N.V.R. Naidu, G. Rajendra New Age international, First Edition, Jan 2006
- Total Quality Management by R.S. Naagarazan, New Age international, 3e, 2015