

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MASTER OF BUSINESS ADMINISTRATION
MBA R-23 FIRST-YEAR COURSE STRUCTURE AND SYLLABUS

Effective from Academic Year 2023-24 Admitted Batch

I Year I Semester

Course Code	Course Title	L	T	P	Credits
23MBA01	Management and Organizational Behavior	4	0	0	4
23MBA02	Business Economics	4	0	0	4
23MBA03	Financial Reporting & Analysis	4	0	0	4
23MBA04	Research Methodology and Statistical Analysis	4	0	0	4
23MBA05	Legal and Business Environment	4	0	0	4
Open Elective-I 23MBA06	6A Business Ethics and Corporate Governance 6B Project Management 6C Sustainability Management 6D Cross Cultural Management	3	0	0	3
23MBA07	Business Communication Lab	0	0	2	2
23MBA08	Statistical Data Analysis Lab	0	0	2	2
	TOTAL	23	0	4	27

I Year II Semester

Course Code	Course Title	L	T	P	Credits
23MBA09	Human Resource Management	4	0	0	4
23MBA10	Marketing Management	4	0	0	4
23MBA11	Financial Management	4	0	0	4
23MBA12	Quantitative Analysis for Business Decisions	4	0	0	4
23MBA13	Entrepreneurship and Design Thinking	4	0	0	4
23MBA14	Logistics & Supply Chain Management	4	0	0	4
Open Elective-II 23MBA15	15A Total Quality Management 15B Marketing Research 15C International Business 15D Rural Marketing	3	0	0	3
	TOTAL	27	0	0	27

Internship during Summer vacation (after Semester –II)

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER - I
23MBA01: MANAGEMENT AND ORGANIZATIONAL BEHAVIOR

Course Objectives:

- To enable students to understand the Evolution, Functions and Theories of Management.
- To orient on the aspects of planning and decision-making using relevant management processes.
- To impart knowledge on the processes of Organizing and Controlling with the help of various types of Organization Structures.
- To describe the various aspects of individual and group behaviours in an organizational setting.
- To elaborate on the impact of leadership and motivation for employee high performance.

Course Outcomes: Students will be able to:

- Gain understanding of the Concepts of Management, its Evolution, Functions and the Theories contributed by various Management Thinkers.
- Learn the process of planning, goal setting and the process of decision making with the help of various models.
- Learn the processes of Organizing and Controlling with the help of various Organizational Structures.
- Appreciate the relevance of Individual and group behaviour in an organization and the role of Culture and dynamics
- Identify different Leadership Styles, Skills and the Theories of Motivation

Unit – I: Introduction to Management: The Management Process, Management Functions, Kinds of Managers, Managerial Roles and Skills. Evolution of Management, Theories of Management: Classical, Scientific, Administrative and Behavioral. Management Sciences Theories: Systems and Contingency Theory.

Unit – II: Planning and Decision Making: Planning and Goal Setting, Organizational Planning, Vision, Mission and Goals, Types of Plans, Steps in Planning Process, Approaches to Planning, Planning in Dynamic Environment. Decision-making Process, Types of Decisions, Decision Making Styles, Vroom's Participative Decision-making Model.

Unit – III: Organizing and Controlling: Organizational Structure, Principles of Organizing, Authority, Power and Influence, Designing Organizational Structure. Mechanistic and Organic Structures, Contemporary Organizational Design and its Challenges.

Controlling: The Control Process, Controlling for Organizational Performance, Types of Control, Financial Controls, Balanced Scorecard, Bench Marking, Contemporary issues in Controlling.

Unit – IV: Organizational Behavior: Individual and Group Behavior: Importance of Organizational Behavior, Culture and Dynamics of Diversity, Personality Theories, Perception, Formation of Group Behavior, Classification of Groups, Group Properties, Group Cohesiveness, Building Teams.

Unit – V: Leadership and Motivation: Leadership Traits, Leadership Styles, Leadership Theories, Power and Politics.

Motivation: Approaches to Motivation, Maslow's Needs Hierarchy Theory, Two-factor Theory of Motivation, McGregor's Theory, ERG theory, McClelland's Needs Theory, Valance Theory.

Suggested Readings:

- K. Aswathappa, Organisational Behaviour, Himalaya Publications, 8e, 2021.
- Harold Koontz, Heinz Weihrich, Mark V Cannice, Essentials of Management, Tata McGraw Hill Education, 11e, 2020.
- Stephen P. Robbins, Timothy A. Judge, Neharika Vohra, Organizational Behaviour, Pearson Education, 18e, 2018.
- Ricky W Griffin, Management Principles and Practices, Cengage Learning, 11e, 2017.
- Richard L. Daft, New Era of Management, Cengage Learning, 11e, 2017.

- Chandrani Singh, Aditi Ktri, Principles and Practices of Management and Organizational Behaviour, Sage Publications, 1e,2016.
- Afsaneh Nahavandi, Robert B. Denhardt, Janet V. Denhardt, Maris P. Aristigueta, Organizational Behaviour, Sage Publications, 1e, 2015.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER - I
23MBA02: BUSINESS ECONOMICS

Course Objectives:

- To provide an understanding of the basic concepts associated with Business Economics.
- To impart the knowledge of various aspects of Demand and Supply
- To highlight the importance of Production and Cost concepts in a Firm.
- To elaborate on the nature of various Market Structures.
- To enable the understanding of various Pricing Strategies

Course Outcomes: Students will be able to

- Understand the Concepts and Principles of Business Economics.
- Learn various concepts and practical applications of Demand and Supply viz. Laws, Types, Elasticity, Forecasting and Equilibrium.
- Learn concepts and applications related to Production and Cost of a firm.
- Learn the features of various Market Structures along with the Decision-making with regards to Price and Output in Short and Long Terms.
- Understand the concepts of Pricing Practices, Theory of Firm and Managerial & Behavioral Theories of a Firm

Unit – I: Introduction to Business Economics: Definition, Nature and Scope, Relationship with Other Disciplines, Business Decision-making Process, Basic Economic Principles: The Concept of Opportunity Cost, Marginalism, Equi-marginalism, Incremental Concept, Time Perspective, Discounting Principle, Risk and Uncertainty.

Unit – II: Theory of Demand and Supply: (a) Demand Analysis: Demand, Demand Function, Law of Demand, Determinants of Demand, Types of Demand. Elasticity of Demand, Types, Measurement and Significance of Elasticity of Demand. Demand Forecasting, Need for Demand Forecasting, Methods of Demand Forecasting. (b) Supply, Supply Function, Determinants of Supply, Law of Supply, Elasticity of Supply. (c) Market Equilibrium.

Unit – III: Production and Cost Analysis: Production Function, Production Function with One and Two Variables, Cobb-Douglas Production Function, Marginal Rate of Technical Substitution, Isoquants and Isocosts, Returns to Scale, Economies of Scale, Innovations and Global Competitiveness. Cost Concepts, Determinants of Cost, Cost-Output Relationship in the Short-run and Long-run, Short-run vs. Long-run Costs, Average Cost Curves, Break Even Analysis.

Unit – IV: Market Structures- Pricing and Output decisions: Classification of Market Structures, Features and Competitive Situations. Price-Output Determination under Perfect Competition, Monopoly, Monopolistic Competition and Oligopoly – both the Long-run and the Short-run.

Unit – V: Pricing Strategies: Pricing Policy, Price Discrimination, Cost Plus Pricing, Pricing of Multiple Products, Transfer Pricing, Pricing over Product Life Cycle. Theory of Firm, Managerial Theories and Behavioral Theories of Firm. International Price Discrimination: Dumping, Effects of Dumping.

Suggested Readings:

- D.M. Mithani, Managerial Economics, Himalaya Publishing House, 9e, 2023.
- Satya P. Das & J.K. Goyal, Managerial Economics, Sage Publications, 2e, 2023.
- Dominick Salvatore, Siddhartha K. Rastogi, Managerial Economics, Oxford Publications, 9e, 2020.
- H L Ahuja, Business Economics, S. Chand & Co, 13e, 2019.
- Geetika, Piyali Ghosh, Purba Roy Choudhury, Managerial Economics, Tata McGraw-Hill, 3e, 2018.
- H L Ahuja, Business Economics, S. Chand & Co, 13e, 2019.
- Suma Damodaran, Managerial Economics, Oxford Publications, 2e, 2018.
- P. N. Chopra, Managerial Economics, Kalyani Publishers, 1e, 2018.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER – I
23MBA03: FINANCIAL REPORTING AND ANALYSIS

Course Objectives:

- To provide understanding of the concepts of Financial Accounting & Analysis.
- To highlight the importance of Accounting Process.
- To elaborate on the methods of inventory valuation.
- To elucidate the management of funds/ cash from operations of the company.
- To impart knowledge of various ratios, analysis and interpretation of financial statements.

Course Outcomes: Students will be able to

- Understand the Concepts and Principles of Accounting.
- Understand the Accounting Process in detail.
- Learn various aspects in depreciation, Inventory and Goodwill.
- Analyze the Working Capital and Flow of Funds and Cash into the Business ▪ Prepare, analyze and Interpret Financial Statements.

Unit – I: Introduction to Accounting: Importance, Objectives and Principles, Accounting Concepts and Conventions and The Generally Accepted Accounting Principles (GAAP), Their Implications on Accounting System, Double Entry System, Recording Business Transactions, Classification of accounts. Accounting cycle.

Unit – II: The Accounting Process: Overview, Books of Original Record, Journal, Ledger, Trial Balance, Classification of Capital and Revenue Expenses, Final Accounts Trading, P&L Account, Balance Sheet with Adjustments. Rectification of Errors.

Accounting from Incomplete Records, Advantages and Disadvantages of Single Entry and Double Entry System and the Differences between the two, Preparation of Accounts, and Ascertainment of Profit from Incomplete Records, Accounting Treatment as per the Statement of Affairs Method and Calculation of Missing Figures.

Unit – III: Valuation Models: Valuation of Assets, Tangible vs. Intangible Assets. Inventory Valuation: Methods of Inventory Valuation and Valuation of Goodwill, Methods of Valuation of Goodwill. Depreciation, Methods of Depreciation, their Impact on Measurement of Business Accounting.

Unit – IV: Financial Statement Analysis-I: Statement of Changes in Working Capital, Funds from Operations, Paid Cost and Unpaid Costs. Distinction between Cash Profits and Book Profits, Preparation and Analysis of Cash Flow Statement and Funds Flow Statement, Horizontal Analysis and Vertical Analysis of Company.

Unit – V: Financial Statement Analysis-II: Analysis and Interpretation of Financial Statements, Liquidity, Leverage, Solvency and Profitability Ratios, Valuation Ratios, Du Pont Chart, Accounting Standards Issued by ICAI, Focus on INDAS, International Financial Reporting Standards (IFRS).

Suggested Readings:

- S.N. Maheswari, S. K. Maheshwari, Sharad K. Maheshwari, Accounting for Management, Vikas Publishing House, 5e, 2023.
- Narayanaswamy. R, Financial Accounting: A Managerial Perspective, PHI Learning, 7e, 2023.
- Ambrish Gupta, Financial Accounting for Management, Pearson Education, 7e, 2023.
- Raj Kumar Sah, Financial Accounting, Cengage Learning, 2e, 2020.
- Dhanesh K. Khatri, Financial Accounting & Analysis, Tata McGraw-Hill Publishing Limited, 2015.
- V. Rajasekharan, R. Lalitha, Financial Accounting & Analysis, Pearson Education, 2015.

MBA SEMESTER – I
23MBA04: RESEARCH METHODOLOGY AND STATISTICAL ANALYSIS

Course Objectives:

To introduce the basic concepts of Research Methodology.

To impart knowledge on concepts and types of Research Design; Data and its Collection methods along with various tools used for Data Collection.

- To demonstrate Tabulation and Graphical Representation of One, Two, Three-Dimensional Data; to introduce the concepts of Statistics and Small Sample Tests.
- To highlight the significance of Statistical Tools for analysis and interpretation of Qualitative & Quantitative data
- To introduce the concepts of Time Series and Index Numbers and train on writing Research Reports effectively.

Course Outcomes: Students will be able to:

- Gain a conceptual overview of Research and the relevant concepts to Research.
- Learn the different types of Research Designs, Data Collection Tools and Procedures.
- Use different methods of representing data through Graphs and Tables; gain an overview of Statistics and relevant concepts and conduct Small Sample Tests.
- Learn to solve mathematical problems related to ANOVA (One-way and Two-way), Correlation and Regression.
- Learn the application of Time Series and Index Numbers; appreciate the need for preparing and presenting a structured Research Report.

Unit – I: Introduction to Research: Meaning, Scope, Role of Business Research, Types of Research, Research Process, Conceptualization of Variables and Measurement, Types and Measurement of Variables, Ethics in Business Research.

Unit – II: Research Design: Research Problem, Purpose of Research Design, Types of Research Design: Experimental Research Design, Research Design for Cross Sectional, Longitudinal Studies, Characteristics of Good Research Design, Sampling and its Applications. Data Collection Methods & Tools: Types of Data, Sources and Instruments for Data, Guidelines for Questionnaire, Sampling and its Application. Measurement and Scaling, Reliability and Validity in Measurement of Variables, Sources of Error in Measurement.

Unit – III: a) Tabulation of Univariate, Bivariate and Multivariate Data, Data Classification and Tabulation, Diagrammatic and Graphical Representation of Data. One-Dimensional, Two-Dimensional and Three-Dimensional Diagrams and Graphs. Introduction to Statistics, Measurement of Central Tendency and Dispersion. **b) Small Sample Tests:** t-Distribution, Properties and Applications, Testing for One and Two Means, Paired t-Test, Hypothesis Formulation and Testing.

Unit – IV: a) Analysis of Variance: One-Way and Two-Way ANOVA (with and without Interaction). Chi-Square Distribution: Test for a Specified Population Variance, Test for Goodness of fit, Test for Independence of Attributes. **b) Correlation Analysis:** Correlation, Limits for Coefficient of Correlation, Karl Pearson's Coefficient of Correlation, Spearman's Rank Correlation, Linear and Multiple Regression Analysis, Discriminant Analysis, Exploratory Factor Analysis.

Unit – V: Time Series Analysis and Report Writing:

Components, Models of Time Series, Additive, Multiplicative and Mixed Models, Trend Analysis: Free hand Curve, Semi Averages, Moving Averages, Least Square Methods. **Index Numbers:** Introduction, Characteristics and Uses of Index Numbers, Types of Index Numbers, Unweighted Price Indexes, Weighted Price Indexes, Tests of Adequacy and Consumer Price Indexes. Importance of Report writing, Types of Research Reports, Report Preparation and Presentation, Report Structure, Report Formulation, Guides for Effective Documentation, Research Briefings. Referencing Styles and Citation in Business Management Research.

Suggested Readings:

- Ranjit Kumar, Research Methodology: Step-by-step Guide for Beginners, sage, 4e,2023.
- S.P. Gupta, Statistical Methods, Sultan Chand & Sons, 46e,2021.
- Shashik.Gupta, P Rangji, Research Methodology: Methods, Tools & Techniques, Kalyani Publishers,6e, 2020.
- Donald R Cooper, Pamela S. Schindler, Business Research Methods, Tata Mc Graw Hill, 12e,2019.
- Deepak Chawla, Research Methodology: Concepts & Cases, Vikas Publishing, 2e, 2016.
- William G Zikmund, Barry J Babin, Jon C. Carr, Atanu Adhikari, Mitch Griffin, Barry J. Babin, Business Research Methods Cengage Learning, 8e, 2016.
- P.C. Tulsian, Bharat Jhunhunwala, Business Statistics, S. Chand Publishing, 2016.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER - I
23MBA05: LEGAL AND BUSINESS ENVIRONMENT

Course Objectives:

- To educate on the Legal and Regulatory Framework for doing business in India.
- To elucidate various aspects in Law of Contract.
- To explain about Negotiable Instruments and RBI guidelines on Digital Transactions.
- To enlighten students the significance of Monetary, Fiscal Policy, Union Budget.
- To impart knowledge of different Business Regulations and Environmental Laws.

Course Outcomes: Students will be able to:

- Understand the Business Laws related to Incorporation of a company.
- Learn the Law of Contract & Sale of Goods
- Learn the salient features of Negotiable Instruments Act 1881
- Learn the Reforms Undertaken by the Government with respect to the challenging business environments.
- Gain insights of the Regulatory Framework in India.

Unit – I: Introduction: Companies Act, 2013, Steps and Procedure for Incorporation of a Company, Appointment of Directors, Powers, Duties, & Liabilities of Directors, Role of Audit and Auditors, Change of Auditors, Related Party Transactions, Company Meetings, Resolutions, Winding-up of a Company.

Unit – II: Law of Contract: Nature and Types of Contract and Essential Elements of Valid Contract, Offer and Acceptance, Consideration, Capacity to Contract and Free Consent, Legality of Object. Unlawful and illegal Agreements, Contingent Contracts, Performance and Discharge of Contracts, Remedies for Breach of Contract.

Contracts-II: Indemnity and Guarantee, Contract of Agency, Sale of Goods Act-1930: General Principles, Conditions & Warranties, Performance of Contract of Sale, Auction Sale and E-Auctions.

Unit – III: Negotiable Instruments Act - 1881: Negotiable Instruments, Promissory Note, Bills of Exchange, & Cheque, Parties to Negotiable Instruments, Types of Endorsements, Holder, Holder in Due-course, Dishonor and Discharge of Negotiable Instruments, Offences by the Companies, Amendments, RBI Guidelines on Digital Transactions.

Unit – IV: Business Environment: Industrial Policy, Five Year Planning, Foreign Direct Investment (FDI), Fiscal Policy, Latest Union Budget, Reforms Undertaken by the Government, Monetary Policy, Banking Sector Reforms, NITI Aayog, Responsibilities and Functions.

Unit – V: Business Regulations and Environment Laws:

- a) Consumer Protection Act 2019, Information Technology Act 2000, Cyber Security Competition Act 2002, Intellectual Property Rights.
- b) Environmental Law: Water, Air Pollution, Green Tribunal in Protecting Environment, Sustainability Reporting Practices.

Suggested Readings:

- Rajdeep Banerjee, Joyeeta Banerjee, Legal Aspects of Business, Sage Publications, 1e, 2023.
- Francis Cherunilam, Business Environment Text & Cases, Himalaya Publications, 13e, 2023. ▪ Ravinder Kumar, Legal Aspects of Business, Cengage Learning, 5e, 2021.
- Francis Cherunilam, Business Environment Text & Cases, Himalaya Publications, 13e, 2023.
- Akhileshwar Patha, Legal Aspects of Business, TMH, 7e, 2019.
- MC Kuchhal, Vivek Kuchhal, Business Legislation for Management, Vikas, Publishing House, 5e, 2018.

MBA SEMESTER - I

23MBA06A: BUSINESS ETHICS AND CORPORATE GOVERNANCE (OPEN ELECTIVE - I)

Course Objectives:

- To enable understanding of the basic concepts of Business Ethics and Corporate Governance in Indian and Global Context.
- To elaborate on various aspects in Professional Ethics.
- To explain Corporate Governance practices followed in Indian corporate. +
- To enlighten students the significance of Company Board and Governance Ratings.
- To explain different aspects of CSR and Business Council for Sustainable Development (BCSD) India.

Course Outcomes: Students will be able to

- Understand the Need for Business Ethics and Corporate Governance in India.
- Apply Knowledge of Established Methodologies of Solving Professional Ethical Issues.
- Learn Codes and Committees in Corporate Governance.
- Understand the Role of Board in Corporate Governance.
- Assess the Stakeholder perspective of Corporate Governance.

Unit – I: Business Ethics in the Changing Environment: Business Ethics, Levels of Business Ethics, Myths about Business Ethics, Stages of Moral Development Kohlberg's Study, Carol Gilligan's Theory, Principles of Ethics.

Unit – II: Professional Ethics: Introduction to Professional Ethics, Ethics in Production and Product Management, Ethics of Marketing Professionals, Ethics in HRM, Ethics of Finance and Accounting Professionals, Ethics of Advertisement, Ethics of Media Reporting, Ethics of Healthcare Services. Ethical Dilemma, Mounting Scandals, Ethical Issues, Preparatory Ethics: Proactive Steps, Cyber Ethics.

Unit – III: Corporate Governance: Introduction to Corporate Governance, Major Corporate Governance Failures, Need for Corporate Governance, Corporate Governance in India, Theories of Corporate Governance: Agency Theory, Stewardship Theory and Stakeholder Theory, Problems of Governance in Companies, Role of Capital Markets, Regulator, Government in Corporate Governance.

Unit – IV: Corporate Governance Codes and Committees: Global Reporting Initiative, OECD Principles, Cadbury Committee Report, Kumara Mangalam Birla Committee Report, Naresh Chandra Committee Report, Narayana Murthy Committee Report, SEBI Clause 49 Guidelines, Corporate Governance Committees.

Unit – IV: Role of Board: Types of Directors Functions of the Board, Structure of the Board, Role of the Board in Subcommittees, Audit, Compensation Committee, Role, Duties and Responsibilities of Directors, Conflicts of Interest, Remedial Actions. Governance Ratings, Merits and Demerits of Governance Ratings.

Unit – V: Corporate Social Responsibility (CSR): Models for Implementation of CSR, Scope of CSR, Steps to attain CSR, Business Council for Sustainable Development (BCSD) India, Ethics and Social Responsibility of Business, Social Responsibility and Indian Corporations, CSR as a Business Strategy for Sustainable Development, CSR Committee, Recent Amendments in Companies Act (Sec: 135)

Suggested Readings:

- Jyotsna G B, R C Joshi: Business Ethics and Corporate Governance, TMH, 1e, 2019.
- C.S.V. Murthy, Business Ethics, Himalaya Publishing House, 1e, 2019.
- C.S.V. Murthy, Business Ethics, Himalaya Publishing House, 1e, 2019.
- A. C. Fernando, Business Ethics and Corporate Governance, Pearson, 2e, 2018.
- Martin J. Ossewaarde, Introduction to Sustainable Development, sage,1e,2018.
- Christine A. Mallin, Corporate Governance, Oxford University Press, South Asia Edition, 4e, 2016.
- T.N. Sateesh Kumar, Corporate Governance, Oxford University Press, 2015.

- Bob Tricker, Corporate Governance Principles, Policies and Practices, Oxford University Press, 2015.

Course Objectives:

To provide understanding of management of projects with a special focus on every phase such as project planning, execution, monitoring and evaluation.

- To impart knowledge on various aspects in Project Appraisal.
- To educate on Project Finance Evaluation techniques.
- To explain to students the importance of organizational behaviour in Project Management.
- To elucidate different Control Mechanisms to manage a project.

Course Outcomes: Students will be able to

- Understand and appreciate the importance of Project Management.
- Learn Project Planning, Execution and implementation.
- Apply Project Appraisal Methods to Cash Flows and Corporate Practices of Dividend Payment
- Understand intricacies of Project Evaluation techniques for better decision making.
- Appreciate the significance of Organizational & Team Behaviors in projects.

Unit – I: Introduction: Introduction to Project Management, Project Characteristics, Project Life Cycle, Project Identification, Formulation and Implementation, Project Management in different Sectors: Construction, Services Sector, Public sector and Government Projects. Systems Approach to Project Management.

Unit – II: Project Appraisal: Project Planning, Steps in Project Planning, Scheduling, Project Appraisal, Feasibility Study, Technical, Commercial, Economic, Financial, Management, Social Cost Benefit Analysis, Project Risk Analysis.

Unit – III: Project Finance: Project Cost Estimation, Project Financing, Investment Criteria, Project Evaluation Techniques, Pay Back Period, Accounting Rate of Return, Net Present Value, Internal Rate of Return, Profitability Index, Cash Flows Estimation for New and Replacement Projects, Cost of Capital, Risk Analysis.

Unit – IV: Project Control: Network Diagrams, Network Analysis, Critical Path, Quality Management, Project Execution, Monitoring and Control, Agile Project Management, Scrum, Lean Production and Project Management.

Unit – V: Organizational Behavior in Project Management: Organizational Structure and Integration, Role of Project Manager, Roles in the Project Team, Project Stakeholder Engagement, Leadership in Project Management, Participative Management, Team Building Approach, Conflict Management in Projects, Stress Management.

Suggested Readings:

- Stewart R. Clegg, Torgeir Skyttermoen, Anne Live Vaagaasar, Project Management, Sage Publications, 1e, 2021.
- Jeffrey K. Pinto, Project Management, Pearson Education, 5e, 2020.
- Prasanna Chandra, Projects, Planning, Analysis, Selection, Financing, Implementation and Review, Tata McGraw Hill, 9e, 2019.
- Jack Gido, Jim Clements, Rose Baker, Mind Tap for Successful Project Management, Cengage Learning, 7e, 2018
- John M, Nicholas, Herman Steyn, Project Management for Engineering, Business and Technology, 5e, Routledge, 2017.
- K. Nagarajan, Project Management, New Age International Publishers, 8e, 2017.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER - I
23MBA06C: SUSTAINABILITY MANAGEMENT (OPEN ELECTIVE – I)

Course Objectives:

- To highlight the importance of Business Sustainability Management.
- To impart knowledge of various aspects in Environment and Economic Sustainability.
- To explain Sustainability Process and its strategies.
- To elucidate on the importance of Sustainability in Urban Metabolism.
- To appreciate the importance of Market and Sustainability.

Course Outcomes: Students will be able to

- Understand the importance of Climate change and global warming.
- Learn about environment pollution and sustainability, economic approaches to sustainable development.
- Assess the steps in sustainable planning for competitive advantage.
- Understand sustainable and circular value chain, sustainability marketing.
- Appreciate the relevance of Market Sustainability.

Unit – I: Sustainability and Business: Introduction to Sustainability, Triple Bottomline Approach, Global Reporting Initiative (GRI) Guidelines, Sustainability and Responsibility, Sustainability Framework, Business Engagement with Sustainability, Climate Change and Global Warming, Sustainability Development, Five Steps to Successful Engagement, Difference between Corporate Social Responsibility (CSR) and Sustainability, Current Major Sustainability Trends.

Unit – II: Environment and Economic Sustainability: The Environment and Economic Growth Linkage, Impact of Transport Infrastructure Development, Interconnection of the Environment and Economic Development, Environment Pollution and Sustainability, Economic Approaches to Sustainable Development.

Unit – III: Sustainability Process and Strategies: Process to Achieve Sustainability, Working with Processes, Process Approach and Control, Resource Management, Official Strategy, Effective Processes, Efficient Processes, Sustainability Strategies, Steps in Sustainability Strategy Formulation, Steps in Sustainable Planning, Unsustainable Take-Make-Waste Business Models, Sustainable Models, Sustainability Self-Assessment by Sectors and Functions.

Unit – IV: Sustainability in Urban Metabolism: Introduction, Sustainable and Circular Value Chain, Systemic Perspective on Value Creation, Emergence and Dynamics of Circular Value Systems, Materials and Methods, Territorial Analysis, Natural Capital, Human Capital, Economic and Manufacture Capital, Social Capital, Cultural Capital, Consequential Lifecycle Assessment.

Unit – V: Market and sustainability: Introduction, Defining Human Needs, Material Services and Characteristics, Integrating Material Services, Sustainability Marketing Mix, Benefits of Sustainability Marketing, Strategy for Sustainability Marketing, Sustainable Consumer Behaviour, Segmentation, Positioning, Competitive Advantage, Sustainability Reporting, Importance of Trust, Sustainability Reporting Guidelines.

Suggested Readings

- Pardeep Singh, Pramit Verma, Daniela Perrotti, K.K.Srivastava, Environmental Sustainability and Economy, Elsevier Science, 1e,2021.
- Rudiger Hahn, Sustainability Management: Concepts, Instruments, and Stakeholders from a Global Perspective, Paper pack edition, 2023.
- Hardisty, Paul Environmental and Economic Sustainability Press, Routledge, 1e, 2019.
- Dr. Deb Prasanna Choudhury, Sustainability Management: Strategies and execution for achieving Responsible Organizational Goals, 1e, 2018.

Course Objectives:

- To enable understanding of importance of cross culture in conduct of business.
- To elucidate various aspects in reconciling cultural dilemmas, culture and styles of management.
- To explain culture and corporate structures.
- To elucidate on the importance of business communication across cultures.
- To highlight the importance of Working with International teams.

Course Outcomes: Students will be able to

- Understand the importance of the influence of national culture on business culture.
- Learn about value orientations and dimensions.
- Assess culture and leadership, culture and strategy, cultural change in organizations.
- Understand cross cultural team management.
- Learn the aspects of working with international teams and multiple cultures and management of conflicts

Unit – I: Introduction: Determinants of Culture, Facets of Culture, Levels of Culture, National Cultural Dimensions in the Business Context, The Influence of National Culture on Business Culture. Business Cultures: East and West.

Unit – II: Cultural Dimensions and Dilemmas: Value Orientations and Dimensions, Reconciling Cultural Dilemmas, Culture and Styles of Management: Management Tasks and Cultural Values.

Unit – III: Culture and Organizations: Culture and Corporate Structures, Culture and Leadership, Culture and Strategy, Cultural Change in Organizations, Culture and Marketing, Cultural Diversity.

Unit – IV: Culture and Communications: Business Communication across Cultures, Barriers to Intercultural Communication, Negotiating Internationally.

Unit – V: Cross Cultural Team Management: Working with International Teams, Group Processes During International Encounters, Conflicts and Cultural Difference, Understanding and Dealing with Conflicts, Developing Intercultural Relationships.

Suggested Readings:

- Marie-Joelle Browaeys, Roger Price: Understanding Cross-Cultural Management, Pearson, 4e, 2019.
- David C.Thomas: Cross Cultural Management, Sage Publications, 4e, 2017.
- Nigel Holdon, Cross Cultural Management: Knowledge Management Perspective, Pentice Hall, 2012.
- Parissa Haghirian: Multinational and Cross-Cultural Management, Routledge, 2012.
- Richard Mead: International Management-Cross cultural Dimension, 3/e, Blackwell, 2015.
- Jerome Dumetz, Cross-cultural Management Textbook: Lessons from the world leading experts in cross-cultural management, Create Space Independent Publishing Platform; Student edition (September 5, 2012), Oakland, USA.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER -I
23MBA07 BUSINESS COMMUNICATION LAB

Course Objectives:

- To demonstrate the importance various modes of communication and their applications in business.
- To develop Business Writing skills with practice of writing letters and improving the readability of written communication.
- To highlight the importance of writing business reports and proposals.
- To impart knowledge and skills necessary for development of verbal (speech & presentation) and non-verbal (body language) skills.
- To orient on the contemporary aspects in communication.

Course Outcomes: Students will be able to

- Appreciate the importance and influence of Business Communication and learn its applications for the purpose of self-development.
- Learn by practice of writing a variety of formal and informal letters & e-mails and reports and improve the readability of written documents
- Identify the intricacies of writing Business Reports and Proposals
- Develop verbal (oral) skills by giving presentations and participating in group discussions; appreciate the impact of body language in the process of communication
- Polish their etiquette, improve telephonic skills and appreciate the need for culture in maintenance of public relations.

Unit – I: Introduction: Introduction to Business Communication, Communication Barriers, Communication Media Choices, Inter-cultural and Team Communication, Interpersonal Communication: Respecting Social Protocol, Networking and Socializing Professionally, Non-Verbal Communication, Listening, Communication through social media, Business Meetings.

Unit – II: Developing Business Writing Skills: Process of Writing, Drafting, Revising Visuals, Editing, Proofreading and Formatting, Writing Positive and Neutral Messages, Persuasive Messages, Bad News Messages, Business Letter Writing, Kinds of Business Letters, Communicating with E-Mail and Memos. Improving Readability of Written Communication using Gunning Fog Index.

Unit – III: Business Reports and Proposals: Writing the Report, Planning the Report, Steps in Writing Business Reports, Parts of a Report, Corporate Report and Business Proposal, Citing Sources.

Unit – IV: Oral and Employment Communication: The Role of Business Presentations, Planning and Organizing Presentations, Team Presentations, Online Presentations. Understanding Yourself, Career, Goal Setting, Preparing Resume, Resume Formats, Writing Covering Letters, and Enquiry Mails, Preparing for the Job Interview.

Unit – V: Contemporary Aspects in Communication: Business Etiquette, Developing Professional Telephone Skills, Mass Media, Public Relations Management, Cross Cultural and Global Communication, Communication in Information Technology, e-Business related Operations.

Suggested Readings:

- Kelly M. Quintanilla and Shawn T. Wahl, Business and Professional Communication, Sage Publications, 4e, 2020.
- Mallika Nawal, Business Communication, Cengage Learning, 2e, 2020.
- Varinder Kumar, Bodh Raj, Business Communication, Kalyani Publishers,6e,2019.
- Ober Newman, Communicating in Business, Cengage Learning, 2015.
- Rebecca Moore Howaward, Writing Matters, 3e, Mc Graw Hill Education, 2018.
- Jeff Butterfield, Soft Skills for Everyone, Cengage Learning, 2017.
- Rajendra Pal, J S Korlahahi, Essentials of Business Communication, Sultan Chand & Sons, New Delhi, 2013.
- Elevate English, Mc Graw Hill, www.ellevateenglish.com.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER - I
23MBA08: STATISTICAL DATA ANALYSIS LAB

Course Objectives:

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- To highlight the importance of application of Statistical tools to Research Problem / Projects.
- To enable the practice of MS- EXCEL / SPSS.
- To demonstrate the management and analysis of data using graphs, tables, worksheets, pivot tables etc.
- To educate students on the significance of data from external Sources.
- To highlight the importance of statistical analysis for better decision making.

Course Outcomes: Students will be able to

- Understand the importance of the main functions of MS- Excel /SPSS.
- Practice advance Excel Tools for conduction of Data Analysis
- Evaluate Data Analysis using Pivot Tables and Pivot Charts.
- Analyze the Data using Descriptive Statistics
- Conduct various Parametric and Non-parametric Tests using MS Excel / SPSS

Unit – I: Introduction to Statistical Packages: MS – EXCEL or SPSS: Introduction, Uses, Functions and Features of Statistical Packages, Getting started with Excel/SPSS, Highlights and Main Functions: Home, Insert, Page Layout, Formulae, Data, Review, View, Add-ins, Using Help Function, Customizing the Quick Access Toolbar.

Unit – II: Creating and Using Templates: Working with Data: Entering, Editing, Copy, Cut, Paste, Paste Special, Formatting Data and Using the Right Mouse Click, Saving, Page Setup, and Printing, Using Headers and Footers, Manipulating Data, Using Data Names and Ranges, Filters and Sort and Validation Lists.

Unit – III: Data from External Sources: Using and Formatting Tables, Basic Formulae and Use of Functions, Data Analysis Using Charts and Graphs, Managing, Inserting, and Copying Worksheets, Securing the Document, Advanced Formulae and Functions, Worksheet Features, Data Analysis using Pivot Tables and Pivot Charts.

Unit – IV: Data Analysis – I: Tabulation, Bar Diagram, Multiple Bar Diagram, Pie Diagram, Measures of Central Tendency: Mean, Median, Mode. Measures of Dispersion: Variance, Standard Deviation, Coefficient of Variation. Correlation and Regression Lines.

Unit – V: Data Analysis – II: t-test, F-test, ANOVA One-way classification, Chi-square Test, Independence of attributes.
Time series: Forecasting Method of Least Squares, Moving Average Method. Inference and Discussion of Results.

Suggested Readings:

- R. Panneerselvam, Business Statistics Using MS Excel, Sage Publications, 2023.
- Glyn Davis, Branko Pecar, Business Statistics Using Excel, Oxford University Press, 2e, 2014.
 - D P Apte: Statistical Tools for Managers USING MS EXCEL, Excel, 2012.
- David M Levine, David. F. Stephan & Kathryn A. Szabat, Statistics for Managers – Using MS Excel, PHI, 2015.
- Bruce Bowerman, Business Statistics in Practice, TMH, 5e, 2012.
- Ajai.S. Gaur, Sanjaya S. Gaur, Statistical Methods For Practice and Research, Response, 2009.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER -II
23MBA09: HUMAN RESOURCE MANAGEMENT

Course Objectives:

- To educate on the concepts, significance and role of Human Resource Management in an Organization.
- To impart knowledge on the aspects of Talent Management, Manpower Planning, Recruitment and selection.
- To educate on the processes of Training & Development and Performance Management & Appraisals.
- To highlight the significance of effective Compensation, Rewards and Employee Welfare Practices in Organizations along with the relevant Acts.
- To elucidate on the aspects of employee relations and stress management along with the relevant Acts.

Course Outcomes: Students will be able to

- Understand the concepts, role and functions of HRM and appreciate the need of HR to act as a Strategic Business Partner of the Organization.
- Learn the methods of conducting Job Analysis, process of writing Job Descriptions & Specifications and the processes of recruitment and selection.
- Gain an understanding of various concepts and practices of Employee Training & Development and Performance Management & Appraisals.
- Learn the principles and practices of Employee Compensation and Rewards, with the help of Job Evaluation & Broad-banding etc. and the salient features of Workmen Compensation Act and Minimum Wages Act.
- Appreciate the need for effective Employee Relations and learn the salient features of Industrial Disputes Act and Factories Act.

Unit – I: Introduction of HRM: Introduction to HRM, Line Managers, HR Role and Responsibilities, New Approaches to Organizing HR, Globalization & Competition Trends, Technological Trends, Trends in Nature of Work, Workforce and Demographic Trends, Economic Challenges, High Performance Work System's, Equal Employment Opportunity, HR Score Card. Human Resource Information System (HRIS), e-HRM, HR Analytics: An Introduction.

Unit – II: Recruitment and Selection: Basics of Talent Management Process, Job Analysis, Methods for Collecting Job Analysis Information, Job Descriptions and Specifications, Job Satisfaction, Job Enlargement, Job Enrichment and Job Rotation, HR Planning, Recruitment, e-Recruitment & Selection Process, Planning & Forecasting of human Resources, Sources of Recruitment, Recruitment on Diverse Work Force, Employee Testing and Selection, Basic Types of Interviews, Errors in Interviews.

Unit – III: Training and Development and Performance Management: Importance of Training and Development, Training Process, Analyzing Training Needs & Designing the Program, Implementation of training programs, Training Methods, Management Development Process, Evaluation of Training and Development programs.

Performance Management: Concept of Performance Management and Appraisal, The Performance Appraisal Process, Techniques for Performance Appraisal, Career Management.

Unit – IV: Compensation and Employee Welfare: Basic Factors in Determining Pay Rates, Job Evaluation Methods, Compensation and Reward Structure, Pricing Managerial and Professional Jobs, Performance based Pay Benefits: Insurance, Retirement Benefits, Employee Welfare Facilities. Salient Features of Workmen Compensation Act & Minimum Wages Act.

Unit – V: Employee Relations: Labor Movement, Collective Bargaining Process, Grievances: Grievances Handling Procedure, Employee Separation, Employee Safety and Health, Occupational Safety Law, Work Place Health Hazards Problems, Remedies and Work-Life Integration, Stress Management: Salient Features of Industrial Disputes Acts 1947, Factories Act. **Prevention of Sexual Harassment (PoSH)** and Migrant Labor Act.

Suggested Readings:

- P. Subba Rao, Essentials of Human Resource Management, Himalaya Publishing, 6e, 2021.
- Biswajeet Pattanayak, Human Resource Management, 5e, 2018.

- Gary Dessler, Biju Varkkey, Human Resource Management, Pearson, 4e, 2017.
- Robert L. Mathis, John H. Jackson, Manas Ranjan Tripathy, Human Resource Management, Cengage Learning 2016.
 - Biswajeet Pattanayak, Human Resource Management, 5e, 2018.
 - K. Aswathappa, Human Resource Management: Text and Cases, TMH,8e, 2017.
 - Sharon Pande and Swapnalekha Basak, Human Resource Management, Text and Cases, Vikas Publishing, 2e, 2016.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER -II
23MBA10: MARKETING MANAGEMENT

Course Objectives:

- To enable understanding of the basic concepts and applications of Marketing and Marketing Research.
- To educate on the aspects of analyzing Market Opportunities and Customer Value and Marketing Mix.
- To elucidate on designing a customer driven strategy through Marketing Segmentation, Targeting and Positioning.
- To clarify the significance of Distribution decisions, Promotion & Communication strategies.
- To highlight the importance of pricing decisions & personal communication.

Course Outcomes: Students will be able to

- Understand the important concepts and principles of Marketing Management and Marketing Research.
- Learn about the analysis of Market Opportunities and Customer Value with the help of Marketing Mix Elements.
- Learn the significance of designing a customer driven strategy through Marketing Segmentation, Targeting and Positioning.
- Assess Global marketing, green marketing strategies for sustainable development.
- Gain insights of the key aspects of pricing decisions and the role of communication

Unit – I: Introduction to Marketing: Importance and Scope of Marketing, Core Marketing Concepts, Market Place, Marketing in Practice, Marketing Environment, Marketing Strategies and Plans, The New Marketing Realities, Marketing Analytics: An Introduction.

Market Research, Marketing Research Process, Marketing Information Systems. Marketing Research and Ethics, International Marketing Research.

Unit – II Analyzing Marketing Opportunities, Customer Value and Marketing Mix: Consumer Decision-making, Building Customer Value, Analyzing Consumer Markets, Consumer Behavior, Cultural, Social & Personal Factors, Developing Products & Brands, Product Levels; Classifying Products, Product Range, Product Line & Product Mix, Product Life Cycles, New Product Development, New Service Development, Stages of Product/ Service innovation development, The Process of Adoption, Branding.

Unit – III: Designing a Customer Driven Strategy: Market Segmentation, Targeting, Positioning Process, Segmentation of Consumer Market, Business Market, Requirement for Effective Segmentation, Market Targeting, Evaluating Market Segmentation, Selecting Target Market Segmentation, Positioning and Repositioning, Positioning Maps, Product Positioning Strategies.

Unit – IV: Distribution Decisions, Promotion & Communication Strategies: Marketing Channels, Channel Intermediates and Functions, Channel Structure, Channel for Consumer Products, Business and Industrial Products, Alternative Channel, Channel Strategy Decisions. The Promotional Mix, Advertising, Public Relations, Sales Promotion, Personal Selling, Direct and Online Marketing. Marketing Communication: Communication Process, Communication Promotion Mix, Factors Affecting the Promotion Mix.

Unit – V: Pricing Decisions & Personal Communication: Importance of Price, Cost Determinant of Price, Markup Pricing, Profit Maximization Pricing, Break-even Pricing, Pricing Strategies, Ethics of Pricing Strategy, Product Line Pricing, Word of Mouth, Rural Marketing, Bottom of the Pyramid, Relationship Marketing, Retail Marketing, Digital marketing, social media and Mobile Marketing, Market Sustainability and Ethics, Global marketing, Green Marketing.

Suggested Readings:

- Rosalind Masterson, Nichola Phillips, David Pickton, Marketing: An Introduction, Sage Publications, 5e, 2021.
- G.Shainesh Philip Kotler, Kevin lane Keller, Alexander Chernev, Jagdish N. Sheth, Marketing Management, Pearson, 16e, 2023.
- Philip Kotler, Gray Armstrong, Prafulla Agnihotri, Principles of Marketing, 18e, Pearson Education, 2020.
Ramaswamy, Nama Kumari, Marketing Management, Sage Publications, 6e, 2018.
- Lamb, Hair, Sharma, Mc Daniel, Principles of Marketing, A South Asian Perspective Cengage Learning, 2016.
- Arun Kumar & N. Meenakshi, Marketing Management, Vikas Publications, 3e, 2016.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER -II

23MBA11: FINANCIAL MANAGEMENT

*The students need Discounting Table and Annuity tables for the examination.

Course Objectives:

- To provide an understanding of basic decisions taken by a Finance Manager in a corporate and help the manager to understand the use of resources efficiently, effectively and economically.
- To explain the various aspects in Investment Decision.
- To learn about Capital structure and its theories.
- To educate students on the significance of dividends and valuation of the firm.
- To elucidate the importance of working capital management, management of current assets.

Course Outcomes: Students will be able to:

- Understand the concept of time value of money.
- Learn about the capital budgeting techniques and cost of capital.
- Learn the significance of Capital structure vs. financial structure.
- Assess dividend policies of Indian companies, determinants of working capital, analysis of investment in inventory.
- Understand the Concepts and Applications of Working Capital Management and Management of Current Assets.

Unit – I: The Finance Function: Nature and Scope, Evolution of Finance Function, Its New Role in the Contemporary Scenario, Goals of Finance Function, Profit Maximization and Wealth Maximization, the Agency Relationship and Costs; Risk-Return Trade off; Concept of Time Value of Money, Future Value and Present Value and the Basic Valuation Model.

Unit – II: The Investment Decision: Investment Decision Process, Project Generation, Project Evaluation, Project Selection and Project Implementation. Developing Cash Flow, Data for New Projects, Capital Budgeting Techniques: Traditional and DCF Methods. The NPV vs. IRR Debate, Approaches for Reconciliation. Capital Budgeting Decision under Conditions of Risk and Uncertainty. Cost Of Capital: Concept and Measurement of Cost of Capital, Weighted Average Cost of Capital and Marginal Cost of Capital. Importance of Cost of Capital in Capital Budgeting Decisions.

Unit – III: Capital Structure and Dividend Decisions: Capital Structure vs. Financial Structure, Capitalization, Financial Leverage, Operating Leverage and Composite Leverage. EBIT-EPS Analysis, Indifference Point/Break-even Analysis of Financial Leverage, Capital Structure Theories: The Modigliani Miller Theory, NI, NOI Theory and Traditional Theory.

Unit – IV: Dividend Decisions: Dividends and Value of the Firm, Relevance of Dividends, the MM Hypothesis, Factors Determining Dividend Policy, Dividends and Valuation of the Firm, the Basic Models, Forms of Dividend. Declaration and Payment of Dividends. Bonus Shares, Rights Issue, Sharesplits, Major Forms of Dividends, Cash and Bonus Shares. Dividends and Valuation. Major Theories centered on the works of Gordon, Walter and Lintner, Dividend Policies of Indian companies.

Unit – V: (a) Working Capital Management and Finance: Working Capital Management: Components of Working Capital, Gross vs. Net Working capital, Determinants of Working Capital Needs, the Operating Cycle Approach. Financing of Working Capital through Bank Finance and Trade Credit. **(b) Management of Current Assets:** Basic Strategies for Cash Management, Cash Planning, Cash Budget, Cash Management Techniques/Processes. Marketable Securities: Characteristics, Selection Criterion, Management of Receivables, Credit Policy, Credit Evaluation of Individual Accounts, Monitoring Receivables. **(c) Management of Inventory,** Inventory Management Process, Inventory Control Systems, Analysis of Investment in Inventory.

Suggested Readings:

- Prasanna Chandra, Financial Management, 10e, Mc Graw Hill, 2019.
- M.Y Khan, P K Jain, Financial Management-Text and Problems, Mc Graw Hill, 8e, 2019.

- I M Pandey, Financial Management, Vikas Publications, 11e, 2015.
- James Cvan Horne, Sanjay Dhamija, Financial Management and Policy, Pearson Education, New Delhi, 12e, 2011.
- Eugene F. Brigham Michael C. Ehrhardt, Financial Management, Cengage Learning, 12e, 2012.
- Arindam Banerjee, Financial Management, Oxford Publications, 2016.

23MBA12: QUANTITATIVE ANALYSIS FOR BUSINESS DECISIONS

Course Objectives:

To impart knowledge of basic tools of Operations research in solving the management problems using mathematical approaches for decision making.

To teach the methods of solving Linear Programming Problems.

- To impart knowledge on assignment model and transportation problem.
- To impart knowledge on the significance of decision tree and Network analysis.
- To highlight the importance of Queuing Theory.

Course Outcomes: Students will be able to:

- Understand the origin and application of operations research.
- Learn about the Formulation of Linear Programming Problem for different areas.
- appreciate the significance of variations of assignment problem, methods for finding Initial feasible solution.
- Learn the aspects of Decision Theory and Network Analysis
- Gain insights of the theoretical principles and practical applications of different queuing models.

Unit – I: Introduction to Operations Research: Nature and Scope of Operations Research: Origins of OR, Applications of OR in different Managerial Areas, Problem Solving and Decision-making, Quantitative and Qualitative Analysis. Defining a Model, Types of Models, Process for Developing an Operations Research Model, Practices, Opportunities and Shortcomings of using an OR Model.

Unit – II: Linear Programming Method: Structure of LPP, Assumptions of LPP, Application Areas of LPP, Guidelines for Formulation of LPP, Formulation of LPP for Different Areas, Solving of LPP by Graphical Method: Extreme Point Method, Simplex Method, Converting Primal LPP to Dual LPP, Limitations of LPP.

Unit – III: Assignment Model: Algorithm for Solving Assignment Model, Hungarians Method for Solving Assignment Problem, Variations of Assignment Problem: Multiple Optimal Solutions, Maximization Case in Assignment Problem, Unbalanced Assignment Problem, Travelling Salesman Problem, Simplex Method for Solving Assignment Problem.

Transportation Problem: Mathematical Model of Transportation Problem, Methods for Finding Initial Feasible Solution: Northwest Corner Method, Least Cost Method, Vogels Approximation Method, Test of Optimality by Modi Method, Unbalanced Supply and Demand, Degeneracy and its Resolution.

Unit – IV: Decision Theory: Introduction, Ingredients of Decision Problems. Decision-making under Uncertainty, Cost of Uncertainty Under Risk, Under Perfect Information, Decision Tree, Construction of Decision Tree.

Network Analysis: Network Diagram, PERT, CPM, Critical Path Determination, Project Completion Time, Project Crashing.

Unit – V: Queuing Theory: Queuing Structure and Basic Component of a Queuing Model, Distributions in Queuing Model, Different Queuing Models with FCFS, Queue Discipline, Single and Multiple Service Station with Finite and Infinite Population. Game Theory, Saddle Point, Value of the Game.

Suggested Readings:

- Mik Wisniewski, Dr Farhad Shafti, Quantitative Analysis for Decision Makers, Pearson,7e,2019.
- Miguel Ángel Canela, Inés Alegre, Alberto Ibarra, Quantitative Methods for Management: A Practical Approach, Springer International Publishing,1e,2019.
- James E. Sallis, Geir Gripsrud, Ulf Henning Olsson, Ragnhild Silkoset, Research Methods and Data Analysis for Business Decisions: A Primer Using SPSS, Springer International Publishing,1e,2021.
- R. Pannerselvam, Operations Research, Prentice Hall International, 3e, 2015.
- N.V.S.Raju, Operations Research: Theory and Practice, CRC Press, 2020.
- R. Pannerselvam, Operations Research, Prentice Hall International, 3e, 2015 ▪ J.K. Sharma, Operations Research: Theory and applications, Macmillian, 5e, 2013.

**SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER -II
23MBA13: ENTREPRENEURSHIP AND DESIGN THINKING**

Course Objectives:

- To understand the Entrepreneurial process and also inspire them to be Entrepreneurs.
- To highlight importance of entrepreneurial motivational behavior, entrepreneurial competencies, entrepreneurial Stress.
- To elucidate on the opportunities and challenges of entrepreneurship
- To clarify students the significance of Principles, process of Design Thinking.
- To educate on Development of Prototypes, Testing Ideas and Implementing Design Thinking.

Course Outcomes: Students will be able to:

- Understand the approaches to entrepreneurship.
- Learn about the individual entrepreneurial mind-set and Personality.
- Learn the significance of Feasibility Analysis, Industry, competitor analysis, new venture development.
- Understand the principles of implementation of Design Thinking.
- Appreciate the relevance of Creativity in the process of implementation of Design Thinking

Unit – I: Understanding Entrepreneurial Mindset: The Evolution of Entrepreneurship, Qualities, Skills, Functions of Entrepreneurs, Types of Entrepreneurs, Approaches to Entrepreneurship, Process Approach, Role of Entrepreneurship in Economic Development.

The individual Entrepreneurial Mindset and Personality: The Entrepreneurial Journey, Stress and the Entrepreneur, The Entrepreneurial Ego, Entrepreneurial Motivations, Motivational Cycle, Entrepreneurial Motivational Behavior, Entrepreneurial Competencies, Entrepreneurial Stress.

Unit – II: Strategic Perspectives in Entrepreneurship: Strategic Planning, Strategic Actions, Strategic Positioning, Business Stabilization, Building the Adaptive Firms, Understanding the Growth Stage, Internal Growth Strategies and External Growth Strategies, Unique Managerial Concern of Growing Ventures.

Unit – III: Opportunities and Challenges of Entrepreneurship: Initiatives by the Government of India to Promote Entrepreneurship, Social and Women Entrepreneurship. Feasibility Analysis, Industry and Competitor Analysis, Formulation of the Entrepreneurial Plan, The Challenges of New Venture Startups, Developing an Effective Business Model, Blue and Red Ocean Strategies, Sources of Finance, Critical Factors for New venture Development, Evaluation Process. Intellectual Property Protection: Patents, Copyrights, Trademarks and Trade Secrets, Avoiding Trademark Pitfalls.

Unit – IV: Design Thinking – An Introduction: Principles of Design Thinking, Process of Design Thinking, planning a Design Thinking Project, Understanding of the Problem, Problem Analysis, Reformation of the Problem, Empathetic Design Methods.

Unit – V: Prototype, Testing Ideas, Implementing Design Thinking: Creativity, Creativity Process, Creativity Techniques, Business Idea, Evaluation of Ideas, Kano Method, Finding Gaps in the Market Place, Prototype, Lean Startup Method, Visualization, Presentation Techniques, Desirability Testing, Methods to Initiate Ventures, Creating New Ventures, Acquiring an Established Venture, Franchising, Advantages and Disadvantages, Implementing Design Thinking, Agility for Design Thinking.

Suggested Readings:

- Devayani M. Lal, Design Thinking, Sage Publications, 1e, 2021.
- Ali J Ahmed, Punita Bhatt, Lain Acton, Entrepreneurship in Developing and Emerging Economies, Sage Publications, 1e, 2019.
- Christian Mueller- Roterberg, Handbook of Design Thinking –Tips and Tools for how to design Thinking, Independently Published, US, 2018.
- Robert D. Hisrich, Michael P. Peters, Dean A. Shepherd, Entrepreneurship, Mc Graw Hill, 10e,2018.
- Bruce R. Barringer/ R. Duane Ireland, Entrepreneurship Successfully launching new ventures, 4e, Pearson, 2015.
- D F Kuratko and T V Rao, Entrepreneurship- A South-Asian Perspective, Cengage Learning, 1e, 2012.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER -II
23MBA14: LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Course Objectives:

To provide understanding of the components and processes of supply chain and logistics management as well as the performance drivers of supply chain.

To impart knowledge on the various functions of logistics management.

- To educate on designing of the supply chain network.
- To clarify the significance of establishing global supply chain.
- To highlight the role of information technology in supply chain.

Course Outcomes: Students will be able to:

- Understand the cyclical perspective of logistics and supply chain process.
- Learn about the distribution, transportation, warehousing related issues and challenges in supply chain.
- Appreciate the significance of network design in the supply chain.
- Gain knowledge of various models / tools of measuring the Supply Chain Performance.
- Appreciate the role of coordination and technology in supply chain management.

Unit – I: Understanding Supply Chain: Objectives of a Supply Chain, Importance, Stages of Supply Chain, Value Chain Process, Cycle View of Supply Chain Process, Key Issues in SCM, Logistics & SCM, Supply Chain Drivers and Obstacles, Supply Chain Strategies, Strategic Fit, Best Practices in SCM, Obstacles of Streamlined SCM, Green Supply Chain Management, Supply Chain Sustainability.

Unit – II: Logistics: Evolution, Objectives, Components and Functions of Logistics Management, Difference between Logistics and Supply Chain, Distribution related Issues and Challenges. Gaining Competitive Advantage through Logistics Management, Transportation: Functions, Costs, and Mode of Transportation Network and Decision, Models, Containerization, Cross Docking, Reverse Logistics. Outsourcing: Nature and Concept, Strategic Decision to Outsourcing, Third-party Logistics (3PL), Fourth-party Logistics (4PL).

Unit – III: Designing the Supply Chain Network: Designing the Distribution Network, Role of Distribution, Factors Influencing Distribution, Design Options, e-Business and its Impact, Distribution Networks in Practice, Network Design in the Supply Chain, Role of Network, Factors Affecting the Network Design Decisions, Modeling for Supply Chain.

Unit – IV: Supply Chain Performance: Bullwhip Effect and Reduction, Performance Measurement: Dimension, Tools of Performance Measurement, SCOR Model. Demand Chain Management, Global Supply Chain, Challenges in Establishing Global Supply Chain, Factors that influence Designing Global Supply Chain Network.

Unit – V: Coordination in a Supply Chain: Importance of Coordination, Lack of Supply Chain Coordination and the Bullwhip Effect, Obstacles to Coordination, Managerial Levels, Building Partnerships and Trust, Continuous Replenishment and Vendor Managed Inventories, Collaborative Planning, Forecasting and Replenishment. Role of Information Technology in Supply Chain, Supply Chain 4.0.

Suggested Readings:

- IMT Ghaziabad, Advanced Supply Chain Management, Sage Publications, 2021.
- Rajat K. Basiya, Integrated Supply Chain Management, Sage Publications, 2020.
- K Sridhara Bhat, Logistics & Supply Chain Management, HPH, 1e, 2017.
- Chopra, Sunil, Meindl, Peter and Kalra, D. V., Supply Chain Management: Strategy, Planning and Operation; Pearson Education, 6e, 2016.
- Altekar, Rahul V, Supply Chain Management: Concepts and Cases; PHI Learning, 1e, 2005.
- Ballou, R.H. Business Logistics Management. Pearson Education, 5e, 2014.
- Coyle, Bardi, Langley, The Management of Business Logistics – A Supply Chain Perspective, Thomson Press, 7e, 2003.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER –II
23MBA15A: TOTAL QUALITY MANAGEMENT (OPEN ELECTIVE-II)

Course Objectives:

To provide understanding of the basic concepts Quality concept, principles, various tools, statistical process control for the implementation of quality management with ISO certification process and its need for the industries.

- To explain to students to why TQM principles are important.
- To impart knowledge of different tools and techniques of TQM.
- To elaborate on various aspects in Quality Management Systems.
- To educate on the models of TQM implementation in manufacturing and service sectors.

Course Outcomes: Students will be able to:

- Understand the need for Quality.
- Learn the relevant TQM models like PDCA Cycle, 5S, Kaizen, Quality Circles.
- Learn statistical aspects relevant for process control.
- Assess the relevance of Total Productive Maintenance, FMEA, Six Sigma.
- Learn different Quality Management Systems.

Unit – I: Introduction: Evolution of Quality, Quality Definition, Need for Quality, Dimensions of Product and Service Quality, Basic Concepts of TQM, TQM Framework, Quality Philosophies, Contributions of Deming, Juran and Crosby, Feiganbaum, Ishikawa and Taguchi, Barriers to TQM, Quality Statements, Customer Focus, Customer Orientation, Customer satisfaction, Customer Complaints, Customer Retention, Costs of Quality.

Unit – II: TQM Principles: Leadership, Strategic Quality Planning, Quality Councils, Employee Involvement, Motivation, Empowerment, Team and Teamwork, Quality Circles Recognition and Reward, Performance Appraisal, Continuous Process Improvement, PDCA Cycle, 5S, Kaizen, Supplier Partnership, Partnering, Supplier Selection, Supplier Rating.

Unit – III: Statistical Process Control: Statistical Fundamentals such as Mean and Standard Deviation, Chance and Assignable Causes, Control Charts for Variables, Process Capability Analysis such as Cp and Cpk, Seven basic (Traditional) Quality Control Tools: 1) Check Sheets (Tally Sheet) 2) Stratification (Alternatively, Flowchart or Run-chart) (Trend Analysis) 3) Histograms 4) Pareto Chart (80-20 Rule) 5) Cause-and-Effect Diagrams (Fishbone or Ishikawa Diagram) 6) Scatter Diagrams 7) Control charts.

Unit – IV: Tools and Techniques: Quality Functions Development (QFD), Benefits, Voice of Customer, Information Organization, House of Quality (HOQ), Building a HOQ, QFD Process, Taguchi Method and Quality Loss function, Failure Mode Effect Analysis (FMEA): Requirements of Reliability, Failure rate, Total Productive Maintenance (TPM), Seven New Management Tools for Process Improvement: Affinity diagram, Interrelationship Diagram, Tree Diagram, Matrix Diagram, Matrix Data Analysis, Arrow Diagram, Process Decision program Chart, Benchmarking and POKA YOKE, Six Sigma, Methodologies: DMAIC, DFSS, Six Sigma Belts, Quality Circles.

Unit – V: Quality Management Systems: Introduction, Benefits of ISO Registration, ISO 9000 Series of Standards, ISO 9001, Requirements, Implementation, Documentation, Writing the Documents, Quality Auditing, TQM Culture, Quality Auditing, QS 9000, ISO 14000, Concepts, Requirements and Benefits, TQM Implementation in Manufacturing and Service Sectors.

Suggested Readings:

- Sunil Sharma, Total Quality Management, Sage Publications, 1e, 2018.
- Bester filed, et al., Total Quality Management, Pearson Education Asia, 3e , 2006.
- Suganthi, L. and Samuel, A., Total Quality Management, Prentice Hall (India) Pvt. Ltd., 2006.
- Janakiraman. B and Gopal.R.K., “Total Quality Management – Text and Cases”, Prentice Hall (India) Pvt. Ltd., 2006.
- James R. Evans and William M. Lindsay, “The Management and Control of Quality”, 6th Edition, South-Western (Thomson Learning), 2005.
- Oakland, J.S., TQM – Text with Cases, Butterworth – Heinemann Ltd., Oxford, 3rd Edition,2006.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER -II
23MBA15B: MARKETING RESEARCH (OPEN ELECTIVE-II)

Course Objectives:

To provide conceptual understanding of marketing research, its design, and application of research methodology to Marketing issues.

To explain to students the need for creating proper marketing research proposal.

- To impart knowledge on sampling and acquire knowledge on probability and non- probability sampling techniques.
- To impart knowledge on the concepts of measurement and scaling.
- To highlight the role of marketing research methodology in different business contexts.

Course Outcomes: Students will be able to:

- Understand the importance of marketing research.
- Learn various aspects in research design.
- Learn sampling design process.
- Understand the characteristics of a good measurement, scaling and sampling methodology.
- Learn hypothesis testing and data presentation.

Unit – I: Introduction to Marketing Research: Meaning and Scope of Marketing Research, Factors that Influence Marketing Research, Scope of Marketing Research, Limitations of Marketing Research, Marketing Research Process, Role of Marketing Research in Marketing Decision-making, International Marketing Research, Marketing Research in social media, Mobile Marketing Research, Ethics in Marketing Research, Use of Information Technology in Marketing Research.

Unit – II: Marketing Research Design: The Process of Defining the Problem and Developing an Approach, Defining a Marketing Research Problem, Exploratory, Descriptive, Casual Research Design, Marketing Research Proposal.

Unit – III: Sampling and Data Collection: Sampling Design Process, Classification of Sampling Techniques, Probability and Non-Probability Sampling Techniques, Internet Sampling, Sampling Distribution, Sample Size Determination, Non-Response Issues in Sampling. Sources of Data Collection, Methods of Data Collection.

Unit – IV: Measurement and Scaling: Concept of Measurement, Types of Measurement Scales: Likert, Semantic Differential, Guttman, Interval, Q-Sort, Nature of Measurement, Characteristics of a Good Measurement, Nature of Attitude Scale, Rating Scale, Ranking Scale, Questionnaire Design, Editing, Coding and Tabulation of data.

Unit – V: Analysis and Presentation of Data: Data Preparation, Data Preparation Process, Statistically Adjusting Data, Frequency Distribution, Cross Tabulation, Hypothesis Testing, Bi-Variate Analysis, Correlation, Regression, Multi-Variate Analysis, Discriminant, Logit Analysis, Factor Analysis, Cluster Analysis.

Report Writing, Report Preparation and Presentation.

Suggested Readings:

- Naresh Malhotra, Satyabhushan Dash, Marketing Research, Pearson, 7e, 2019.
- GC Beri, Marketing Research, 4e, 2018, Mc Graw Hill 2018.
- Donald R Cooper, Pamela S Schindler, Marketing Research Concepts and Cases, Mc Graw Hill, 2005.
- David J Luck, Ronald S Rubin, Marketing Research, 9e, PHI, 2006.
- David A Aaker, V. Kumar, Georges, Marketing Research, 9e, Wiley India Pvt Ltd, 2009.
- Donald S. Tull, Del I. Hawkins, Marketing Research –Measurement & Method, PHI Private Limited, 2009.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER -II
23MBA15C: INTERNATIONAL BUSINESS (OPEN ELECTIVE - II)

Course Objectives:

To highlight the need and importance of studying International Business and provide understanding of the concepts associated with International Business To impart knowledge of Classical and Modern International Trade Theories.

- To educate on the aspects of Business, Economic and Regional Integration and Multilateral Trade Agreements
- To elucidate on the elements of Strategy & Structure in International Business
- To highlight the role played by various Functional Areas of Business in International Business Operations

Course Outcomes: Students will be able to:

- Understand the Concepts, Principles and Approaches of International Business.
- Learn the evolution of International Trade thought process with the help of classical and modern theories of International Trade.
- Gain insights of the aspects of Business and Economic Integration with the help of various Regional Economic Integrations and Multilateral Trade Agreements.
- Understand the Strategy and Structure of International Business with the help of Value Chain Analysis, Environmental Scanning, Strategic Alliances.
- Gain knowledge of the contribution of major functional areas of business viz. Production, Finance, Marketing and HRM in International Business Operations.

Unit – I: Introduction to International Business: Need for International Business, Drivers of Globalization, Distinction between Domestic and International Business, International Business Approaches, Modes of International Business, Impediments in International Business, Opportunities and Challenges of International Business, Ease of Doing Business (World Bank), Multi National Corporation (MNCs), International Business Environment: Cultural, Political, Social and Technological Environment.

Unit – II: International Trade Theories: Classical Theories: Mercantilism, Absolute Advantage Theory, Comparative Advantage Theory and Factor Endowment Theory. Modern Theories: Country Similarity Theory, Product Life Cycle Theory, New Trade Cycle Theory and National Competitive Advantage Theory. India's Foreign Trade, Foreign Direct Investment in India, Balance of Payments.

Unit – III: International Business and Economic Integration: Levels of Economic Integration, Benefits and Challenges of Economic Integration, Free Trade Agreement (FTA), The Customs Union, The Common Market, The Economic Union. Arguments Surrounding Economic Integration, Regional Economic Groups: European Union, NAFTA, ASEAN, SAARC, QUAD and G8. Multilateral Trade Agreements: GAAT, WTO, TRIPS and TRIMS, UNCTAD. International Trade Policy of India.

Unit – IV: Strategy and Structure of International Business: Environmental Analysis, Value Chain Analysis, Types of Strategies, Strategy Implementation Process, Control and Evaluation, Strategic Alliances, Nature, Benefits, Pitfalls of Strategic Alliances, Scope of Strategic Alliance, Alliance Development Process, Economic Considerations for Strategic Alliances. Choosing an Organizational Design Structure, Issues in Global Organizational Design.

Unit – V: International Business Operations: Issues involving International Production: Sourcing and Vertical Integration. Major Activities in International Marketing: Brand Decisions. Issues of International Financial management: Forex Market, International Monetary System, International Financial Markets, Export Financing. Managing International HR Activities: HR Planning, Recruitment and selection, Expatriate Selection and Training. Cross Cultural Issues in International Business.

Suggested Readings:

- Charles W. L Hill, G. Thomas M Hult, Rohit Mehtani, International Business, Mc Graw Hill, 11e, 2019.
- EHUD Menipaz, Amit Menipaz and Shiv S Tripathi, International Business – Theory and Practice, Sage Publishers, 1e, 2017.
- Michael R. Czinkota, Ilkka A. Ronkainen, Michael H. Moffett, International Business, Wiley, 8e, 2011.

- K Ashwatappa, International Business, Mc Graw Hill, 6e,2015.
- Sanjay Misra, P.K. Yadav, International Business: Text & Cases, PHI,2009.
- Rakesh Mohanh Joshi, International Business, Oxford University Press, 2009.
- Subba Rao,International Business, Himalaya Publications,2007.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER - II
23MBA015D: RURAL MARKETING (OPEN ELECTIVE – II)

Course Objectives:

To enable understanding of the importance of Rural Marketing, Rural Environment, Problems in Rural Marketing in India

To describe the different rural marketing Strategies to be adopted by the corporate.

- To elaborate on the rural market brand and channel management aspects.
- To help understand the factors that influence rural consumers during purchase of products ▪
- To impart knowledge on various applications and innovation strategies in rural marketing.

Course Outcomes: Students will be able to:

- Understand the importance of Indian Rural Economy.
- Learn various rural marketing strategies ▪ Learn challenges of Retail Channel Management.
- Understand the aspects of rural business research.
- Learn e- rural marketing, CSR, IT for rural development, e- Governance for Rural India.

Unit – I: Introduction: Nature and Characteristics of Rural Market, Understanding the Indian Rural Economy, Rural Marketing Models, Rural Marketing Vs Urban Marketing, Parameters Differentiating Urban & Rural Market, Differences in Consumer Behavior in Rural and Urban Markets.

Unit – II: Rural Marketing Mix: Rural Marketing Mix, Additional Ps in Rural Marketing, 4As of Rural Marketing Mix, New Product Development for Rural Market, Rural Market Product Life Cycle, Objectives behind New Product Launch, New Product Development process.

Unit – III: Rural Market Brand & Channel Management: Brand Loyalty in Rural Market, Regional Brands Vs National Brands, Channel Management, Indian Rural Retail Market, Rural Retail Channel Management, Strategies of Rural Retail Channel Management.

Unit – IV: Rural Market Research: Sources of Information, Factors Influencing Rural Consumers during Purchase of Products, Rural Consumer Life style, Approaches and Tools of Marketing Research, Rural Business Research, Evolution of Rural Marketing Research, Sources and Methods of Data Collection, Data Collection Approaches in Rural Areas, Data Collection Tools for Rural Market. Limitation and Challenges in Rural Marketing Research, Role of Rural Marketing Consulting Agencies.

Unit – V: Applications and Innovations: Marketing of Consumer Products, Services, Social Marketing, Agricultural Marketing, Rural Industry Products, Innovation for Rural Market, Marketing Strategies, eRural Marketing, Agricultural Co-operative Marketing, Rural Market Mapping, Corporate Social Responsibility, Organized Rural Marketing, IT for Rural Development, e-Governance for Rural India.

Suggested Readings:

- Dinesh Kumar, Punam Gupta, Rural Marketing, Sage Publications, 2017.
- Pradeep Kashyap, Rural Marketing, 3e Pearson Education, 2016.
- T P Gopaldaswamy, Rural Marketing, Environment, problems and strategies, Vikas Publications, 3e, 2016.
- Sanal Kumar Velayudhan, Rural Marketing, Sage Publications, 2e, 2012.
- C. S. G. Krishnamacharyulu, Lalitha Ramakrishnan, Rural Marketing: Text and Cases, Pearson Education, 2009.
- Balram Dogra & Karminder Ghuman, Rural Marketing, TMH, 2009.

SHADAN COLLEGE OF ENGINEERING AND TECHNOLOGY
MBA SEMESTER - II
SUMMER INTERNSHIP

Course Objectives: To acquire practical knowledge by working in any organization. Students should learn application of conceptual learning to practical business problems and also develop interpersonal relations, working in teams and understanding dynamics in an organization.

Course Outcomes: Students will be able to understand a) Management Functions and Organizational Structure b) Organizational Dynamics in terms of Organizational Behaviour, Culture and Climate c) Functional Domain Knowledge d) Processes and Systems d) External and Internal Environment Impact on the Organization.

Approach to Summer Internship:

- Students should take covering letter/s from the college, addressed to the organization/professional institutions during the beginning of the second semester coursework.
- The students in consultation with Supervisor / Mentor and head of the department should choose any area / topic of Business Management as per the Syllabus prescribed by the University.
- The students can approach any Business Organizations / Corporate of Public and Private Sectors, Government Departments, Research Organizations, J-Hub, T-Hub, Wehub etc. for the Summer Internship. The students should do the Internship during the summer break.
- Summer Internship report has to be submitted to the Department after approval by the concerned Supervisor/Mentor and the Head of the Department for the Power Point (PPT) Presentation for Evaluation.
- Summer Internship Report is evaluated for 25 marks for Internal Exam and for 75 marks for External Exam.
- The Report has to be evaluated by the Head, Supervisor/ Mentor and the senior faculty of the Department.