SIKKIM MANIPAL UNIVERSITY SIKKIM MANIPAL INSTITUTE OF TECHNOLOGY DEPARTMENT OF MANAGEMENT STUDIES MASTER OF BUSINESS ADMINISTRATION (MBA) TWO YEAR FULL TIME DEGREE PROGRAMME

SIKKIM MANIPAL UNIVERSITY

VISION

• Global Leadership in Human Development, Excellence in Education and Healthcare.

MISSION

• Develop professionals of excellent technical calibre in the field of Health Sciences, Engineering, Management and Social Sciences with a humane approach capable of shouldering the responsibility of building the nation and be globally competent.

OBJECTIVES

- To support, promote and undertake the advancement of academics
- To promote use of ICT and modern education technologies.
- To encourage research, creation and dissemination of knowledge.
- To facilitate extension and community service.
- To empower people of Sikkim and contribute to human development in Northeast.
- To create environmental and social responsibilities among students and employees
- To ensure steady growth of the University.

SIKKIM MANIPAL INSTITUTE OF TECHNOLOGY

VISION

• To achieve eminence in the field of quality technological education and research.

MISSION

• To develop SMIT into an Institution of Excellence capable of producing competent techno-managers who can contribute effectively to the advancement of the society.

OBJECTIVES

- To provide wholesome education to meet the intellectual aspirations of the students.
- To equip students with techno-managerial skills to enable them to take their assigned role in the industry.
- To inculcate essential ethics and values to meet the spiritual needs to the students.
- To provide a sound institutional environment nurturing emotional strength, healthy mind, body and resilience amongst the students.

DEPARTMENT OF MANAGEMENT STUDIES

VISION

• To develop Department of Management Studies as a centre of excellence in management education through quality education, training, research, innovation which will eventually nurture employability and entrepreneurship.

MISSION

- To bridge the gap between theory and practice in the knowledge economy.
- To develop knowledgeable leaders with high degree of integrity and ethics.
- To undertake research and innovation for catering to the emerging societal needs.

OBJECTIVES

- To prepare students to detect, formulate and resolve real life and industrial problems with their knowledge of management.
- To develop managerial and research skills to perform assigned roles.
- To infuse high ethical and moral values among students to meet their career objectives.
- To provide a healthy, sound, and challenging environment to attain holistic management education as per the requirements of the industry.

MASTER OF BUSINESS ADMINISTRATION

Program Educational Objectives (PEOs)

- The management graduates of the department should be able to inculcate life-long learning, to solve the dynamic business problems and to enhance decision making capabilities.
- The management graduates of the department should be able to communicate, solve problems, work collaboratively with the stakeholders of the organization.
- The management graduates of the department should be able to perform the multidisciplinary and challenging tasks of the corporate world with highest standards of ethics and integrity.
- The management graduates of the department should be able to nurture the spirit of innovation, creativity, leadership and entrepreneurship.

Program Outcomes (POs)

- Apply knowledge of management theories and practices to solve business problems.
- Foster analytical and critical thinking abilities for data-based decision making.
- Ability to develop value based leadership capacity.
- Ability to understand, analyze and communicate global, economic, legal, and ethical aspects of business.
- Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.

Program Specific Outcomes (PSOs)

- Graduates are acquainted well with the concepts and principles of Management, required for understanding and solving practical industrial problems of current interests.
- Graduates are initiated to work on Innovative Ideas that will eventually motivate them to pursue Higher Studies and Research in Management.
- Graduates can function in a Multidisciplinary Environment by being able to associate and integrate their domain knowledge with other disciplines.

DURATION OF THE COURSE

- The MBA course is of two-year duration extended over four semesters.
- The student shall undergo a summer project study at the end of the first year.
- The student shall be allowed a maximum of four years (eight semesters) of duration to become eligible for an award of MBA degree, failing which he/she shall have to register once again as a fresh candidate.

COURSE STRUCTURE

- First two semesters are common to all.
- In third and fourth semester, students are offered dual specialization where Marketing Management is a common specialization offered to all. In each semester i.e. third and fourth, they are offered two subjects each from other four specialization areas namely Finance, Human Resource, System and Business Analytics.

INTERNAL ASSESSMENT

• Internal Marks shall be based on quizzes / sessional / assignments / oral examination / seminars / presentations conducted in respective subjects.

SUMMER INTERNSHIP PROJECT

- All students undergo a Summer Project Study at the end of II semester.
- A project report shall be submitted to the Department and the programme coordinator shall fix the responsibility of evaluating the reports.
- Based on project report, a viva-voce shall be conducted.
- Examiners will be appointed to conduct the viva-voce.
- A minimum 40 marks is required to pass in viva-voce examination.

| | | | MBA-S | EMESTER I | | | | |
|-----|-----------------|----------|--|------------|---------|------------|-----------|---------|
| Sl. | Old | New | C1-:4- | Teaching | No. | of Hours / | Week | Total |
| No | Codes | Codes | Subjects | Department | Lecture | Tutorial | Practical | Credits |
| 1 | BA-2101 | BA20101A | Principles of Management and Organizational Behavior | MGT | 3 | | | 3 |
| 2 | BA-2102 | BA20102A | Marketing Management | MGT | 3 | | | 3 |
| 3 | BA-2103 | BA20103A | Accounting for Managers | MGT | 3 | | | 3 |
| 4 | BA-2104 | BA20104A | Business Economics | MGT | 3 | | | 3 |
| 5 | BA-2105 | BA20105A | Business Communication | MGT | 2 | | | 2 |
| 6 | BA-2106 | CA20181A | Computer Application in Management | CA | 3 | | | 3 |
| 7 | ### | BA20702A | Research Seminar I | MGT | | | 1 | 1 |
| 8 | BA-2108 | BA20107A | Legal Aspects of Business | MGT | 3 | | | 3 |
| 9 | BA-2161 | BA20401A | Managerial Skills and Personality Development- LAB | MGT | | | 2 | 2 |
| 10 | BA-2162 | BA20402A | MS-Office-LAB | MGT/CA/IT | | | 2 | 2 |
| | Total Credit 25 | | | | | | | 25 |

| | | | MBA-SI | EMESTER II | | | | |
|----------------|---------|----------|---|------------|---------|----------|-----------|---------|
| Sl. | Old | New | Cubiasta | Teaching | No. | of Hours | Week | Total |
| No | Codes | Codes | Subjects | Department | Lecture | Tutorial | Practical | Credits |
| 1 | MA-2209 | MA20151A | Quantitative Methods in Management | Maths | 3 | 1 | | 4 |
| 2 | BA-2201 | BA20108A | Human Resource Management | MGT | 3 | | | 3 |
| 3 | BA-2202 | BA20109A | Financial Management | MGT | 3 | | | 3 |
| 4 | BA-2203 | BA20110A | Productions and Operations Management | MGT/ME | 3 | | | 3 |
| 5 | MA-2210 | MA20152A | Research Methodology and Statistical Techniques | Maths | 3 | 1 | | 4 |
| 6 | BA-2204 | BA20111A | Global Economic Environment and Policy | MGT | 3 | | | 3 |
| 7 | BA-2205 | CA20182A | Management Information Systems | CA | 3 | | | 3 |
| 8 | BA-2261 | BA20403A | SPSS-LAB | MGT/EC/IT | | | 2 | 2 |
| Total Credit 2 | | | | | | | 25 | |

[#] Summer Internship Project to be undertaken during vacation after second semester.

| | | | MBA-SEM | IESTER III | | | | |
|-----|---------------------|----------|---|-----------------------------|---------|-------------|------------|---------|
| Sl. | Old | New | | Tagahina | No. o | of Hours /\ | Veek | Total |
| No | Codes | Codes | Subjects | Teaching Department | Lecture | Tutorial | Practical | Credits |
| 1 | BA-2301 | BA20113A | Project Management | MGT/ME/EC | 2 | | | 2 |
| 2 | ### | BA20703A | Research Seminar II | MGT | | | 1 | 1 |
| 3 | BA-2302 | BA20114A | Business Strategy | MGT | 3 | | | 3 |
| 4 | BA-2375 | BA20601A | Summer Internship Project (8-10 weeks) | MGT | | | 6 | 6 |
| 5 | BA-2303 | BA20115A | Consumer Behavior and Advertisement and Brand Management | MGT | 4 | | | 4 |
| 6 | BA-2304 | BA20116A | Retail and Distribution Management and Supply Chain Management | MGT | 4 | | | 4 |
| 7 | BA-2361 | BA20404A | MS Project Management and Tally - LAB | MGT/EC | | | 2 | 2 |
| 8 | SPL:I/II/ III/IV | | Specialization (4+4) | MGT/CSE/ IT/CA/AI& DS | | | | 8 |
| | Total Credit 30 | | | | | | tal Credit | 30 |

[#] Out of the following four specializations- I/II/III/IV, anyone must be opted for in 3rd Semester.

| Sl. | Old | New | Subjects | Teaching | No. of Hours / W | | Week | Total Credits |
|-----|-----------------------------|-----------|---|----------------|------------------|----------|-----------|------------------|
| No. | Codes | Codes | is and goods | Department | Lecture | Tutorial | Practical | |
| | Specialization- I (Finance) | | | | | | | |
| 1 | BA-2331 | BA20301A | Security Analysis and Portfolio Management & Derivative Market | MGT | 3 | 1 | | 4 |
| 2 | BA-2332 | BA 20302A | Taxation | MGT | 3 | 1 | | 4 |
| | | | Specialization- | II (Human Resc | ource) | | | |
| 1 | BA-2333 | BA 20303A | Industrial Relation | MGT | 4 | | | 4 |
| 2 | BA-2334 | BA 20304A | Competency Mapping & Performance Management | MGT | 4 | | | 4 |

| | Specialization-III (System) | | | | | | | |
|---|-----------------------------|-----------|---|-----------------|--------|--|---|---|
| 1 | BA- 2335 | BA20305A | Object Oriented Programming System & Open Source System | CSE/IT/CA | 4 | | | 4 |
| 2 | BA- 2336 | BA20306A | Database Management Systems | CSE/IT/CA | 4 | | | 4 |
| | | | Specialization IV | (Business Analy | ytics) | | | |
| 1 | ### | BA 20317A | Introduction to Business Analytics | CA/IT/AI&DS | 3 | | | 3 |
| 2 | ### | BA 20318A | Introduction to R | CA/IT/AI&DS | 3 | | | 3 |
| 3 | ### | BA 20405A | Data Analysis using R | CA/IT/AI&DS | | | 2 | 2 |

MBA-SEMESTER IV

| Sl. | Old | New | | Taaahina | Seaching No. of | | Veek | Total |
|-----|-----------------------|----------|---|-----------------------------|-----------------|----------|-----------|-------|
| No. | Codes | Codes | Subjects | _ | Lecture | Tutorial | Practical | |
| 1 | BA-2401 | BA20117A | Banking and Insurance Management | MGT | 3 | | | 3 |
| 2 | BA-2481 | BA20701A | Research Trends in Management (Grand Viva-Voce) | MGT | | | 3 | 3 |
| 3 | BA-2403 | BA20118A | Market Research | MGT | 4 | | | 4 |
| 4 | BA-2404 | BA20119A | Service Marketing & Global Marketing | MGT | 4 | | | 4 |
| 5 | SPL:V/VI /VII/VIII | | Specialization (4+4) | MGT/CSE/ IT/ CA/AI&DS | | | | 8 |
| | | | | | | | 22 | |

[#] Out of the following four specializations-V/VI/VII/VIII, anyone must be opted for in 4th Semester.

| Sl. | Old | New | Subjects | Teaching Department | No. of Hours / W | | Week | Total Credits |
|-----|---------|----------|--|------------------------|------------------|----------|-----------|------------------|
| No. | Codes | Codes | in any con | | Lecture | Tutorial | Practical | |
| | | | Specializa | ation V (Finance | e) | | | |
| 1 | BA-2431 | BA20319A | Multinational Finance & Risk Exposure Management | MGT | 3 | 1 | | 4 |

| 2 | BA-2432 | BA20320A | Marketing of Financial Services & Mergers and Acquisitions | MGT | 3 | 1 | | 4 | |
|---|------------------------------------|----------|---|------------------|-----------|---|---|---|--|
| | Specialization VI (Human Resource) | | | | | | | | |
| 1 | BA-2433 | BA20321A | Organization Development & Human Resource Development | MGT | 4 | | | 4 | |
| 2 | BA-2434 | BA20322A | Compensation Management & International Human Resource Management | MGT | 4 | | | 4 | |
| | | | Specializa | tion VII (Systen | n) | | , | | |
| 1 | BA- 2435 | BA20323A | E-Commerce | CSE/IT/CA | 4 | | | 4 | |
| 2 | BA- 2436 | BA20324A | Technology Management and Strategy | CSE/IT/CA | 4 | | | 4 | |
| | | | Specialization V | III (Business A | nalytics) | | | | |
| 1 | ### | BA20335A | Data Warehousing & Data Mining | CA/IT/AI&DS | 4 | | | 4 | |
| 2 | ### | BA20406A | Forecasting using Python | CA/IT/AI&DS | | | 2 | 2 | |
| 3 | ### | BA20407A | Data Visualization using R | CA/IT/AI&DS | | | 2 | 2 | |

[#] Minimum 10 students are required to be enrolled in order to run a Specialization.

| Minimum Number of Credits to be earned for Promotion | | | | | | |
|--|---------|---------|--|--|--|--|
| I Year | II Year | 30/50 | | | | |
| Final | Final | 102/102 | | | | |
| Promotion criteria are applicable for year-wise promotion. | | | | | | |

[MBA I Semester]

Principles of Management and Organization Behavior (Subject Code: BA 20101A)

Contact Hours: 3Hrs / Week Credit: 3

Course Objective: The objective of this course is to familiarize the students with the basic management concepts, behavioral process, organization structure and design, nature and description of managerial functions, individual decision making process, interpersonal group dynamics and group decision-making.

Prerequisites: No departmental prerequisites required

UNIT – I

Nature and Meaning of Management, Roles of Managers, Functions of Management, Skills possessed by managers, Levels of Management of Management, Evolution of Management theory & practice: Classical theories, Neo-classical theories, Behavioral Theories and Modern Organization Theories. Functions of Management. Planning: Objectives, Types, Process of Planning. Management by Objectives, Problem solving & Analysis, Managerial Decision-Making. Organizing: Principles of Organizing, Types and elements of Organization Structure, Organization Design. Staffing: Manpower Planning, Job Analysis, Description and Specification. Recruitment and Selection. Placement/ Orientation. Training and Development, Performance Appraisal. Directing: Leading, Motivation and Communication. Controlling: Process, Scope, and Techniques of Controlling.

UNIT - II

Organization Behaviour: Nature and scope, Concepts of organizations and organization process. Reasons for studying organizations and organizational behaviour. Microorganizational Behaviour: Personality, Attitude, Learning, Perception. Interpersonal and group dynamics. Micro-organizational Behaviour: Concept of organization effectiveness. Strategy and structure connection, Technology & organization structure. Size and organization structure. The environment and organization structure. Managing Organizational conflicts, Power and political behavior in Organization, Organization culture, Organization changes and organization development.

Text Books:

- 1. Organization Theory and Behaviour, B. P. Singh & T. N. Chhabra, Dhanpat Rai & Co. (P) Ltd.
- 2. Personnel Management, C. B. Mamoria & S. V. Gankar, Himalaya Publishing House
- 3. Principles of Management, P. C. Tripathi & P. N. Reddy, TATA McGraw Hill

- 1. Understanding Organizational Behaviour, Udai Pareek, Oxford
- 2. Organization Behaviour, V. S. P. Rao, Excel Books
- 3. Organization Behaviour, Steven L Mc Shane, M. A. V. Glinow, R. R. Sharma, TATA McGraw Hill

Marketing Management (Subject Code: BA 20102A)

Contact Hours: 3 Hrs / Week Credit: 3

Course Objective: The objective of this course is to develop an understanding of the strategies and issues involved in marketing of the products and services, provide input with basic marketing concepts such as selling and marketing, market segmentation, targeting and positioning, market mix sales promotion, pricing and distribution management. **Prerequisites:** No departmental prerequisites required

UNIT-I

Nature and scope of marketing along with the basic concepts, Marketing management as a function, consumer behavior and buying decision process, marketing environment; structure and behaviors, macro and micro environment of a company. Marketing information systems and marketing research, understanding industrial and consumer markets, market demand measurements and forecasting, market segmentation, targeting and positioning.

UNIT-II

Product decisions - product mix and product line decisions, product life-cycle concepts, new product development, branding and packaging decisions, pricing methods and strategies, promotion wise, advertising and sales promotion and personal selling. Channel management, selection cooperation and conflict resolution, vertical marketing systems organizing and implementing marketing in organizations, evaluation and control of marketing systems; marketing audit, new issues in marketing, globalization, on-line and internet marketing.

Text.Booksketing Management, Kotler P., Prentice Hall

2. Marketing Management: A South Asian Perspective, Kotler p., Keller K., Koshy A. and Jha M., Prentice Hall

Reference Books:

- 1. Marketing Management, Saxena, Rajan, Mc-Graw Hill Companies
- 2. Modern Marketing, Pillai, R S N, Bagavathi, V, S Chand & Company
- 3. Marketing, Gandhi, J C, Tata Mc-Graw Hill Companies

Accounting for Managers (Subject Code - BA 20103A)

Contact Hours: 3 Hrs / Week Credit: 3

Course Objective: The objective of this course is to enable the students of business management to understand the basic concepts in accounting and utilize the same in planning, control and decision making process of a business firm. **Prerequisites:** No departmental prerequisites required.

Introduction to Accounting, Nature of Accounting, Double Entry System of Book-Keeping, Branches of Accounting, Accounting Cycle.

Accounting Principles, Concepts, Conventions, IFRS, Recording of Transactions: Journal, Ledger Posting, Preparation of Trial Balance, Final Accounts and their preparation and uses.

UNIT-II

Introduction to Costing, Cost Classification, Preparation of Cost Sheet, Cost –Volume - Profit Analysis and its managerial implications, Analysis of Financial Statements, Trend Analysis, Ratio Analysis, Preparation of Cash-Flow (CFS) Statements, their managerial uses as per Ind AS 7, Concept of Responsibility Accounting and Segmental Analysis.

Text Books:

- 1. Text Book of Financial Accounting, Singhal A.K., Ghoshroy H. J., Vayu Education
- 2. Financial Accounting for Management, Ambrish Gupta, Pearson
- 3. Financial Management, Khan and Jain, Tata-McGraw Hills

Reference Books:

- 1. Financial Management, Prasanna Chandra, Tata-McGraw Hills
- 2. Financial Management, G. Sudarshan Reddy, Himalaya Publishing House

Business Economics (Subject Code: BA 20104A)

Contact Hours: 3 Hrs / Week Credit: 3

Course Objective. The objective of this course is to enable the students of business management to understand the relevant concepts and techniques in micro-economics for decision-making process by a business firm. Business Economics is a foundation course. It provides a link to other functional areas in business such as marketing, finance and production processes.

Prerequisites: No departmental prerequisites required

UNIT-I

Nature and scope of managerial economics - Business Decisions and Economic Analysis - Scope of Managerial Economics. Theory of demand; Law of Demand & its exceptions, Price elasticity of demand, income elasticity - cross elasticity - practical importance of elasticity of demand. Price distinctions-determinants of market demand, demand function, Analysis of Consumer Behavior - Cardinal utility approach, Ordinal utility approach - meaning of indifference curve - marginal rate of substitution - consumer equilibrium - income effect, substitution, effect.

UNIT-II

Demand Forecasting - Importance of Demand Forecasting, Methods of Forecasting - Direct and Indirect methods. Theory of Production; Production Function - Laws of production - Internal & External, Economies of Scale. Theory of cost - cost concepts - cost output relations, importance of break-even analysis in business decision making. Linear Programming and its business applications. Market Structure and Pricing Theory - Perfect Competition, Monopoly, Monopolistic Competition, Oligopoly, Pricing theory and Practice; Capital Budgeting and Investment Decision; Economics of Firm-mini project.

Texts Books:

- 1. Managerial Economics- Yogesh Maheshwari
- 2. Managerial Economics- H.L. Ahuja

Reference Books:

1. Managerial Economics- Peterson & Lewis

Business Communication (Subject Code: BA 20105A)

Contact Hours: 2 Hrs / Week Credit: 2

Course Objective: Communication, both oral and written, plays an vital role in decision making and various other aspects of business management. This course aims at providing some essential tools and techniques in oral and written communication.

Prerequisites: No departmental prerequisites required

UNIT-I

Human Communication: Communication Process, Types and Objectives of Communication, Importance of Communication in business activity, Communication Skills – Listening, speaking, reading and writing, 7 C's, 3 V's and 4 S's of Communication

Verbal and Non- Verbal communication: Body Talk at workplace (gesture, posture etc.), Communication Styles and attitudes

Business Communication: Channels, Types and Flow of Communication, Barriers in Communication, Communicating successfully in an organization.

UNIT-II

Written Communication in Business: Principles of writing, Effective Business Writing, Fundamental do's and don'ts.

Business Correspondence: Format and layout of business documents, Various letters, memos, circulars, applications, complaints, sales letters etc, Resume writing, Effective use of e-mail in business.

Writing Business Reports/ Project Report: Writing short and long reports, Documentation of report sources, Format and layout – do's and don't.

Oral Communication: Public speaking, Effective Presentations, Use of Visual and Audio Aids in Written and Oral Communication Power point slides, graphs, tables, charts etc.), Leading and participating in meetings, Conferences, seminars, symposia, Press conference and press release, Telephone etiquettes, Group Discussions – Do's and Don'ts.

Texts Books:

- 1. Technical Communication: Principles and Practice, Meenakshi Raman & Sangeeta Sharma, Oxford.
- 2. Business Communication for Managers, Payal Mehra, Pearson.

Reference Books:

1. Communication Skills, Leena Sen, Prentice-Hall of India.

Computer Applications in Management (Subject Code: CA 20181A)

Contact Hours: 3 Hrs / Week Credit: 3

Course Objective: The objective of this course includes developing an appreciation of different software and hardware systems available in the industry among the participants and building up the experience of computer usage in business organizations with specific reference to commercial data processing systems.

Prerequisites: No departmental prerequisites required

UNIT-I

Computers - an introduction, computers in business, elements of computer configuration, classification of computers, developments in computers and communication technology. Hardware and software; features of software, types of software, operating system, introduction to DOS and Windows, text processing software; features, introduction to spreadsheet software - creation of spreadsheet applications, range, formulas, functions, charts, presentation graphics - creating presentation on a PC.

UNIT-II

Computer languages, generation, features, compiler and interpreter; Data files - types and organizations, database fundamentals, relevance of database management systems and features of DBMS software; programme development cycle, flow charts and algorithms, programming concepts; software development process.

Networks - introduction, elements of network, LAN, WAN, Managing networks, introduction to internets; case study on application of computers in a particular area.

Text Books:

- 1. Computer Applications in Management, Ritendra Goel, D. N. Kakkar, New Age International.
- 2. Computer Applications in Business Management, Anmol Publications.

Reference Books:

1. Computer Applications in Management, Tinku Singh.

Research Seminar 1 (Subject Code: BA 20702A)

Contact Hours: 1 Hr / Week Credit: 1

Course Objective: Management research encompasses a methodical process that focuses on being objective and collecting a variety of material and data for analysis. At the beginning of the research work, the student will learn to identify a research problem or develop research questions. The student will have to observe people/things, visit places, read print materials, or consult experts to find the research problem that is right for the chosen area of interest. To have a vivid picture of the whole research, the student will have to read various publications to become aware of the earlier works already done in the chosen area. At the end of the semester, he will be assessed based on the review of the related literature.

Legal Aspects of Business (Subject Code: BA 20107A)

Contact Hours: 3 Hrs / Week Credit: 3

Course Objective: The objective of this course is to enable the students to understand the Indian Contract Act, Sale of goods act, Negotiable Instruments Act, Consumer Protection Act, Arbitration and conciliation Act and various act related to Company Law; Intellectual Property Rights; Factories Act; Environment Protection Act. **Prerequisites:** No departmental prerequisites required

UNIT-I

Basic understanding of Constitution of India, Indian contracts Act 1872 - nature of contract - essential elements of a valid contract - performance of contract, discharge of contract - breach of contract - remedies for breach of contract, contract of indemnities and guarantee, contract of bailment and pledge, contract of agency - quassi contract. Sale of Goods Act 1930 - formation of contract - performance of contract - *Caveat emptor*, rights of an unpaid seller. Negotiable instrument Act 1881 - Negotiable instruments, Negotiation - holder and holder in due course - crossing of cheques, dishonour of cheques - discharge of negotiable instruments.

Company Law; Companies Act 1956 - Nature and types of companies - formation of companies memorandum and articles of association. Prospectus - share capital - borrowing powers - management and administration of a company. Appointment and power and duties of directors - managing director, winding of a company.

UNIT-II

Consumer Protection Act, 1986 - Definition Section - Consumer redressal forum - consumer protection council. Arbitration and Conciliation Act 1996 - Arbitrators' agreement - reference to arbitrators - appointment and powers of arbitrators - award - conciliation, appointment and role of conciliator - settlement and settlement agreement. Intellectual Property Rights; Factories Act; Environment Protection Act.

Introduction: Two learning models, Individual ethics (ethical dilemmas in management), ethics in corporate strategy (discussion on head & hard trades in decision making), value clarification for future managers group ethics ethical attitudes of Indian managers- discussion on ethical attitudes of local managers, a study of SMIT alumni, Managers facing unethical management discussion(group think & unethical behavior), Corporate ethics (ethics & company philosophies, discussion- corporations and game theory approach, corporate social responsibility, meaning & history.

Text Books:

- 1. Legal Aspects of Business, Akhileshwar Pathak, Tata McGraw Hill Education
- 2. Business Law for Managers, Prof. P. K. Goel, Dream Tech Press.

Reference Books:

1. Legal Aspects of Business, Harold. F. Lusk, R. D. Irwin

Managerial Skills and Personality Development (LAB Session) (Subject Code: BA 20401A)

Contact Hours: 2 Hrs / Week Credit: 2

Course Objective. This is an introductory course to introduce Managerial Skills. It is designed to provide students with fundamental knowledge of using tools to measure various managerial skills and then recommend corrective actions. Specifically, students will learn the basics of:

- Self-Awareness
- Interpersonal Relationship
- Communication
- Time Management
- Stress Management
- Goal Setting
- Conflict Handing

At the end of the semester students will be comfortable using various tools to measure managerial skills in an individual and provide corrective recommendations.

Prerequisites: No departmental prerequisites required.

Tool for stress management, conflict handling, positive attitude, FIRO-B, Social style Grid, Johari window, Management style, Leadership, Motivation, Locus of Control, Time Management, Personality type, ICE breakers, public speaking case analysis, group discussion.

MS Office (LAB Session) (Subject Code: BA 20402A)

Contact Hours: 2 Hrs / Week Credit: 2

Course Objective. This is an introductory course to MS Office applications. It is designed to provide students with fundamental knowledge of MS Office application via hands on lab sessions. Specifically, students will learn the basics of:

- MS Word
- MS Excel
- MS PowerPoint

At the end of the semester students will be comfortable using MS Office applications. They will be knowledgeable about the MS Office environment, features, and interfaces.

Prerequisites: No departmental prerequisites required.

UNIT-I

MS Word: Windows Interface; Customizing the Word Application; Document Views; Using Word Application; Basic Formatting in MS Word; Working With Pictures, Inserting Clip Art; Working With Tables; Advanced Formatting; Styles; Templates; Printing Documents;

MS EXCEL: Excel Interfaces; Workbook; Navigating a workbook; Cell reference; Worksheet; Creating, opening, and saving files.

UNIT-II

MS Excel: Working with charts; Sort & Auto filter; Basic formatting in Excel; Advanced formatting in Excel; Working with formulas; Printing worksheets.

MS PowerPoint: PowerPoint Interface; Creating a Presentation; Basic Formatting in PowerPoint; Advanced Formatting; Using Templates; Inserting charts; Inserting tables; Printing presentation.

Texts Books / Reference Books:

1. Sanjay Saxena; MS Office in a nutshell; Vikas Publishing House

[MBA II Semester]

Quantitative Methods in Management (Subject Code: MA 20151A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: The objective of this course is to make the students familiar with the basic statistical and optimization techniques relevant to business decision making.

Prerequisites: No departmental prerequisites required.

UNIT-I

Introduction to quantitative techniques for business management - Measures of central tendencies, graphical representation, measures of dispersion, moments. Concept of correlation - Karl Pearson's Spearman's Rank Correlation co-efficient - Regression - Simple linear regression - importance of Regression co-efficient.

Probability: definition, sample space, properties of probability, conditional probability and Bayes' theorem, random variables, classification of random variables functions of random variables, mean, variance and moment generating function - Binomial, Poisson, normal, distributions - properties.

UNIT-II

Optimization Techniques: Basic concepts and role of management science in decision making. Linear Programming Problem (LPP) - Graphical solution - Simple algorithm - two-phase method. Post-optical / sensitivity analysis and economic interpretation. Transportation and Assignment models. Meaning, assumptions and problem formulation / model construction solution methodology, sensitivity analysis and applications.

Mathematical programming models – integer / zero - one programming, goal programming and dynamic programming, applications and solution methodologies, Markov processes, applications and computations. Queuing model - single Poisson arrival with exponential service rate, multi-channel queuing models, game theory. Simulation - modeling and application.

Text Book:

- 1. Business Statistics by J. K. Sharma
- 2. Fundamentals of Mathematical Statistics by S. C. Gupta & V. K. Kapoor, Sultan Chand & Sons
- 3. Introduction to Probability and Statistical Applications by P. L. Meyer.

- 1. Quantitative Techniques, Terrence Lucey, Terry Lucey, Cengage Learning EMEA
- 2. New Age Fundamental of Statistics, Sultan Chand
- 3. Quantitative Methods for Business, Cengage/Thomson

Human Resource Management (Subject Code: BA 20108A)

Contact Hours: 3 Hrs / Week Credit: 3

Course Objective: In a complex world of industry and business, organizational efficiency is largely dependent on the contribution made by the members of the organization. The objective of this course is to sensitize students to various policies and practices of human resource management in India. Efforts will also be directed towards developing their communication and decision-making skills through case discussions, role playing and panel discussions.

Prerequisites: Basic understanding of Organizational Behavior and Principles of Management.

UNIT-I

Concepts and perspectives of HRM - overview, objectives, HRM in charging environment - environmental influence, competitive advantage, skills required. Corporate objectives - objectives & functions of personal management, integrated strategic and Human Resource Planning (HRP), Human resource planning - process of HRP, Control and review mechanism, job analysis and job description. Rexall Drug Company.

Recruitment and selection - methods of manpower search attracting and selecting human resources, sources and techniques of recruitment, assessment of recruitment program, induction and socialization - selection, placement and induction, meaning, significance, factors affecting decisions, interview, placement induction process. Induction procedures.

UNIT-II

Manpower training and development - determining training needs, on the job and off the job training methods, planning and organizing training. Strike at Bombay electrical Ltd. Performance appraisals - characteristics and effective appraisal systems, uses and problems of performance appraisals, potential evaluation. Gopal Bhagat. Job evaluation - matching right man to right job, age determination, industrial relations n India - overview and appraisal workers, trade union movement in India. Zal Ltd.

Compensation management - concept and theories of Wage machinery, performance linked compensation, incentive schemes. Case study - 6:a cost saving bonus plan.

Grievance management - dispute resolution, employee welfare, statutory, non-statutory requirement methods and approaches.

Employee empowerment- workers participation in management, importance of human relations approaches schemes of workers participation management in India.

Texts Books:

- 1. Human Resource Management by V.S.P. Rao. (Publisher: Excel)
- 2. Human Resource and Personnel Management, K. Aswathappa., TATA McGrawhill

- 1. Personnel and Human Resource Management, Robbins, EEE.
- 2. Personnel and Human Resource Management, Texts, Cases and Games, P. Subba Rao, VSP Rao, Konark Publishers.

Financial Management (Subject Code: BA 20109A)

Contact Hours: 3 Hrs / Week Credit: 3

Course Objective: The objective of this course is to acquaint the students with all financial functions, their evaluation and organization, management of working capital and framing of financial policies. It enables the student to take relevant decisions on dividend policies and decision making after considering the implication and fiscal incentives.

Prerequisites: Basic knowledge of Accounting for Managers.

UNIT-I

Financial Goals of the Firm – Introduction to finance, objectives of financial management – Firm Value and equity value—profit maximization and wealth maximization - Changing role of finance managers - Organization of finance function, Ratio Analysis and Financial statements Analysis, Working capital management decision - cash, receivables and inventory, Considering Time Value of Money in Financial Decisions, Concepts of Risk and Return

UNIT-II

Financing decision - Cost of different sources of raising capital, weighted average cost of capital, The Capital Budgeting decisions, estimating and cash-flows. Conventional approaches, time adjusted methods, Capital Budgeting Decision - Concept of risk in capital budgeting, Capital structure, Leverage and value of firm, Dividend Decision - Dividend decisions of the firm, relevance of the dividend policy, types of dividend policy, factors affecting dividend policy - bonus shares - MM and Gordon Model.

Text Books:

- 1. Financial Management, S. Kr. Paul and Chandrani Paul, New Central Book Agency.
- 2. Financial Management, Rajiv Srivastava and Anil Mishra, Oxford University Press.

Reference Books:

1. Text Book of Financial Accounting, Dr. A. K. Singhal and Prof. H. J. Ghosh Roy, Vayu Education of India.

Productions and Operations Management (Subject Code: BA 20110A)

Contact Hours: 3 Hrs / Week Credit: 3

Course Objective: The objective of this course is to acquaint the student with decision-making in planning, scheduling and control of production and operation functions in both manufacturing and service sectors, productivity improvement in operations through layout engineering and quality management, effective and efficient flow, replenishments and control of materials with reference to both manufacturing and service organizations.

Prerequisites: Basic understanding of mathematics and statistics

UNIT-I

Introduction to Operations Management: Nature and scope of production and operations management, role of operations management in total management system, Current trends and issues in Operations Management Plant Location and Plant Layout: Importance of Plant Location, Factors Affecting Plant Location, Muther's Principle of Plant Layout, Types of Plant Layout, Types of Manufacturing Systems, Lean Manufacturing, production cycle.

Aggregate Production Planning and Resource Planning: Productivity Definitions, Scope and measurement, basic functions of production planning and control, Framework of Aggregate Production Planning, Bill of Materials (BOM); Material Requirement Planning (MRP).

Scheduling of Operations: Loading of Machines – Assignment Rule (Hungarian Method); Priority Rules and Techniques for Job Shop and Flow Shop Scheduling, Shortest Processing Time (SPT), Longest Processing Time (LPT), Earliest Due Date (EDD), Johnson's Rule and Gantt Chart – Scheduling of 'n' Jobs on Two Machines, 'n' Jobs on Three Machines, Basic of Network analysis

UNIT-II

Forecasting: Demand Management; Types of Forecasting – Long and Short-term demand forecasting methods; Components of Demand; Time Series Analysis – Simple Moving Average, Weighted Moving Average, Exponential Smoothing, Forecast Errors, Linear Regression Analysis.

Inventory and materials management: materials planning and budgeting, inventory control, types of inventory costs EOQ, safety stock and ROL, system of inventory control - ABC, VED analysis, two bin and review systems of inventory control, Kanban system, overview of just in time (JIT).

Stores management: Objectives of stores management, Basic prerequisite for efficient management of stores, Work-Study, Method Study, Work Measurement, Work Sampling, Value analysis

Quality control: quality assurance and quality circle, acceptance sampling, Statistical process control, overview of TQM, Presentation of report on visit to an industrial unit.

Textbooks:

- 1. Operations Research, K. Shridhara Bhat, Himalaya Publishing House.
- 2. Production and Operations Management, Kanishka Bedi, Oxford University Press.
- 3. Production and Operations Management- Concepts, Methods and Strategy, Chary SN, PHI New Delhi 2005

Reference Books:

- 1. J Krajewski and Larry P Ritzman: Operations Management Strategy and Analysis, Prentice Hall
- 2. Sang M Lee and Marc J Schniederjans; Operations Management, Houghton Mifflin College Div.
- 3. Operations Management Concepts, Techniques and Applications, James R.Evans, David A.Collier, Cengage Learning.

Research Methodology and Statistical Techniques (Subject Code: MA 20152A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: The objective of this course is to induce a sense of scientific outlook towards information collection and related issues covering different aspects of research. **Prerequisites:** Basic concepts of probability, permutation and combination, basic concepts of differential calculus and integral calculus.

Business Research. Commonly researched areas of business, hallmarks of scientific research, research process, research design,

Data collection techniques - questionnaire and schedules of guidelines and format, observation method, projective techniques, merits and limitations of these techniques

Sampling method - probability and non-probability methods, simple random sampling methods, stratified random sampling, cluster random sampling. Measurement and Scales of measurement - data analysis - compilation and tabulation of data.

UNIT-II

Graphical representation of data Summary statistics - measures of variations - measures of covariations - estimation - internal estimate, testing of a hypothesis - concept of hypothesis - Null and Alternate, types of errors, type I and type II errors, concept of size and power of a test.

Hypothesis - single population mean (small and large samples), equality of two population means (small and large samples), Single population proportion, equality of two population proportions. Analysis of variance (ANOVA) - One way lay out only, Report writing.

Texts Books:

- 1. Research Methodology and Statistical Techniques, Santosh Gupta, Deep and Deep Publications
- 2. Research Methodology, R. Panneerselvam, PHI Learning
- 3. Business Statistics by K. Sharma
- 4. Fundamentals of Mathematics and Statistics by S.C. Gupta and V. K. Kapoor

Reference Books:

- 1. Research Methodology, C. R. Kothari, New Age International.
- 2. Groundwork of Mathematical Probability and Statistics by A. Gupta, Academic Press

Global Economic Environment and Policy (Subject Code: BA 20111A)

Contact Hours: 3 Hrs / Week Credit: 3

Course Objective: The objective of this course is to acquaint the students of business management with the macro-economic variables which influence business decision-making. The macroeconomic environment, coupled with social and political variables, affects the growth and development of business activities. The focus of the course is to highlight the market-oriented policy perspectives in the global environment. Prerequisites: Basic understanding of business economics.

UNIT-I

Introduction: Economic and non-economic environment, interaction between economic and non-economic environment

Economic Systems: capitalism - the concept of Laissez Faire and its merits and demerits, socialism - non-sustainability of communistic systems, mixed economic system

National Income Accounting: circular flow of income, concepts in national income, GNP, NNP, GDP, NDP, methods in assessment of national income - difficulties in assessment of national income, Monetary Policies and role of RBI in regulating credit systems,

Economic Development: factors of economic development,

Inflation: Meaning, types and control measures

Business Cycles: Meaning, Phases and practical implication

Industries resolution policies: new economic policy, industrial development during plans, planning and development process - Indian 5-year plans, public sector, private sector, joint sector, Small sector industries: industrial sickness, disinvestment policy,

Industrial finance: Types and functions of commercial banks,

International trade: Importance of international trade, balance of trade, balance of payment, absolute cost advantage, comparative cost advantage,

Business and society: social responsibility of business.

Infrastructural development in Indian economy: natural resource management and economic development, human resources, and economic development in the Indian context,

Parallel economy in India,

Balanced regional development,

Employment policy in India,

Financial relations between centre and state

Texts Books:

1. Economic Environment- Cherunilum

Reference Books:

1. Managerial Economics- A. Adhikary

Management Information System (Subject Code: CA20182A)

Contact Hours: 3 Hrs / Week Credit: 3

Course Objective: This course has been designed to provide the participants with an overall perspective of the information needs of contemporary organizations in the context of the ongoing information revolution. This also aims at familiarizing the participants with the business information systems and management.

Prerequisites: Basic understanding of computer applications in Management

UNIT-I

Introduction to information systems - management information systems; role and importance; manager's view of information systems; introduction to concepts of management, systems and organizations; Strategic uses of information systems and information technology.

Business process engineering, planning and development of information systems - planning of information systems; Systems analysis, and design; approaches to alternative applications development.

UNIT-II

Trends in information systems and technology; files and data base management; applications of information systems - applications of operational; tactical and strategic information system to business; decision support systems and experts systems.

The management of information system - organization of information systems; choice of management information system and information technology, information technology; security and ethical issues.

Text Books:

- 1. Management Information Systems, S. Sadagopan, PHI Learning
- 2. Management Information Systems, Terence Lucey, Cengage Learning, EMEA.

Reference Books:

1. Management Information Systems, James O'Brien, Irwin.

SPSS (LAB Session) (Subject Code BA 20403A)

Contact Hours: 2 Hrs / Week Credit: 2

Course Objective. The objective of this lab is to acquaint the students with SPSS. It is designed to provide students with fundamental knowledge of SPSS application via hands-on lab sessions. They will be knowledgeable about how to perform data entry and analysis and create tables and graphs. At the end of the session, students will be able to use the knowledge in the Social Sciences and the business world well in the future. in **Prerequisites:** No departmental prerequisites required.

| S. No | Торіс | Duration |
|-------|--|----------|
| 1 | Introduction to SPSS | 2 |
| 2 | To Create and Edit Graphs and Charts | 2 |
| 3 | To determine Frequencies, Bar Charts, Histograms Percentiles | 2 |
| 4 | To perform cross tabulation and Chi-Square Analyses for given set of Data | 2 |
| 5 | To perform Bivariate Correlation: Bivariate correlations, partial correlations, & the correlation matrix for given set of Data | 2 |
| 6 | Perform the T-Test procedure: independent samples, paired-samples, and one sample tests for given set of Data | 2 |
| 7 | To perform One-Way ANOVA Procedure: One way Analysis of Variance for given set of Data | 2 |
| 8 | To perform General Linear Models: Two-way analysis of Variance for given set of Data | 2 |
| 9 | To perform General Linear Models: Two-way analysis of variance for given set of Data | 2 |
| 10 | To perform Simple Linear Regression for given set of Data | 2 |
| 11 | To Perform Multiple Regression Analysis for given set of Data | 2 |
| 12 | To Perform Non-Parametric procedures for given set of Data | 2 |

[MBA III SEM]

Project Management (Subject Code: BA 20113A)

Contact Hours: 2 Hrs / Week Credit: 2

Course Objective – The purpose of this course is to make students familiar with various project management tools and techniques applicable in real-life world.

Prerequisites: Basic understanding of operation management

UNIT-I

Project Management overview – definition of project management, characteristics of project, importance of projects, key drivers behind popularity of project management; Project management bodies, standards, – the project Management Institute (PMI), PMBOK, Prince II; payback period calculation, NPV, IRR.; The project Manager and the Project Team – Project mgt and the project mgr, special demands of the project mgr, selecting the project mgr, multicultural communications and Managerial behavior, the project team.

Project Life-cycle summary of the project life-cycle –initiation, planning, execution, & termination; Project Planning – project plan elements, developing action plans, constructing WBS guidelines, types and forms, constructing the linear responsibility chart. Scheduling – Network diagrams-AON & AOA network diagrams, identifying the key variables, calculating the critical path, slack, calculating the probability of project completion times (Z-Score)

UNIT-II

Resource allocation-critical path method – crashing a project; Resource allocation problem, Resource leveling Vs loading, multi-project scheduling and resource allocation, Project Monitoring and Information Systems- guidelines for design, EVA analysis, Choosing a PMIS; Project Control – Guidelines on design of control systems, Design of well-balanced control system, Various control methods-cybernetic control systems, phased control, Go-No GO control.

Project Auditing—types of project audit, ensuring a successful audit-key criteria, Final project deliverables—project report, elements and purpose of project report. Project Organization—Project as part of the functional organization, Pure project organization, The Matrix Organization, Mixed organizational systems, Choosing an organizational form.

Text Books:

- 1. Project Management and Control, PCK Rao, Pearson
- 2. Project Management, S. Choudhary, Pearson

Reference Books:

- 1. Project Management Handbook, J R Turner, S J Simister, Pearson
- 2. Project Management, Harvey Maylor, C M Kale, Pearson

Research Seminar II (Subject Code: BA 20703A)

Contact Hours: 1 Hr / Week Credit: 1

Course Objective: A research design is the blueprint of the research that has been undertaken. It is the framework of research methods and techniques chosen by a student. The design allows student to hone on research methods that are suitable for the subject matter. Further, data will be collected through a questionnaire, through observations, or from the literature. The findings of the research are done with statistical tools to interpret the results of the research. The results of this analysis are then reviewed and summarized in a manner directly related to the research questions. At the end of the semester, he will be assessed based on the framework of research methods and techniques chosen for the select topic, data collected and data analysis through a seminar.

Business Strategy (Subject Code: BA 20114A)

Contact Hours: 3 Hrs / Week Credit: 3

Course Objective – The purpose of this course is to facilitate the students to understand the business environment from a broad perspective. The course covers modules such as issues in strategic management, business and competitive strategy, the competitive advantage of organizations, SWOT Analysis and formulations and implementations of corporate and business level strategies.

Pre-requisite – Students must possess basic knowledge of business and marketing.

UNIT-I

Introduction: Strategic management, meaning of strategy, Process of strategic management, benefits of strategic management, competitive advantage.

Strategic Analysis (SWOT Analysis)

External Environment Analysis: General environment analysis and competitive environment analysis (5-forces model of competition)

Internal Environment Analysis: Resource Based View of firm, Critical Success Factors, Value Chain Analysis, Core Business Processes, Balanced Score Card.

Business Level Strategy: Generic Business strategies, Levels of Competition, Types of Tactics.

UNIT- II

Corporate Level Strategy: Strategic Alternatives, Types of Grand Strategies – Stability Strategy, Expansion Strategy, Retrenchment Strategy and combination strategy.

Strategic Analysis and Choice: Process of strategic choice, corporate level strategic analysis, BCG Matrix, Ansoff Matrix, business level strategic analysis, strategic plan.

Activating Strategies: Process, McKinsey 7S Model.

Text Books:

- 1. Strategic Management and Competitive Advantage, Bamey and Hesterly, Pearson Education.
- 2. Business Policy and Strategic Management, Azhar Kazmi, TATA McGraw Hill.

Reference Books:

- 1. Management Policy and Strategic Management, R. M. Srivastava, Himalaya Publishing House.
- 2. Global Strategic Management, Neeta Baporikar, Himalaya Publishing House.

Summer Internship Project (8-10 Weeks) (Subject Code: BA 20601A)

Credit: 6

- All students undergo a Summer Project Study at the end of II semester.
- A project report shall be submitted to the Department and the programme coordinator shall fix the responsibility of evaluating the reports.
- Based on project report, a viva-voce shall be conducted.
- Examiners will be appointed to conduct the viva-voce.
- A minimum 40 marks is required to pass in viva-voce in the ratio of 60:40

Consumer Behavior and Advertisement and Brand Management (Subject Code: BA 20115A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: The course aims at providing insight into the significance of consumer behavior, and consumer decision-making process under various situations and to, analyze the various internal and external and external factors affecting the behavior of the consumer and evaluate their implications. This course also provides insight into Advertising and Brand Management. This is intended to help students to understand different dimensions of advertising and Brand Management policies, methods and strategies. **Prerequisites:** Basic understanding of Marketing Management

UNIT-I

Introduction to consumer behavior, application of consumer behavior knowledge to marketing, understanding consumers and market segments, environmental influences on consumer behavior, viz. cultures, sub-cultures, social classes, life-styles, etc. Influence of group on consumer behavior - social groups, reference group, family, etc. Personal influence and diffusion of innovations and their marketing implications.

Individual determinants of consumer behavior, viz., personality, self-concept, motivation involvement and their marketing implications Information processing - perception and perceived risk, learning and memory, attitudes, consumer decision process, consumer behavior models, consumer behavior research etc., consumerism, consumer safety, choice, redress, environmental concerns, consumer privacy, business response to social and ethical issues. Organizational buyer behavior and decisions. Case discussions.

UNIT-II

Introduction to advertising (definition, types, dimensions, role, functions etc.); Evaluation of advertising; place of an ad in marketing process; marketing mix; promotional mix. Advertising business - agencies; clients; modern suppliers. Developing advertising strategy - marketing and consumer behavior; link product to market; ad research; ad planning; how ad works. Creativity in advertising - creative strategy, process; creative execution; developing and producing ad campaigns for different media.

Media planning and strategy - different media types and characteristics; media buying, media planning and selection. Ad effectiveness study - memory test; persuasion test, pre test; post test; communication test. IMC (Integrated Marketing Communication) - Concept; sales promotion; direct marketing; public relations. Concept of a brand, Brand evolution, Brand Positioning, Brands and Consumers.

Brand equity; Defining brand equity, Brand image constellation. Brand Extension; Line extension, line extension trap, type of extensions. Brand over time. Brand and firm.

Texts Books ated Advertising, Promotion and Marketing Communication: Kenneth Clow

- 2. Advertising: Principles and Practice: Wells Burnett Morairty
- 3. Brand Management Text and Cases: Harsh V Verma

- 1. Consumer behavior : Insights from Indian market: Majumdar Ramanuj
- 2. Consumer behavior: buying, having, and being: Michael R. Solomon

Retail and Distribution Management and Supply Chain Management (Subject Code: BA 20116A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: The course aims at introducing the students the basic fundamentals of retailing, distribution and supply chain management and exploring their application in practical field.

Prerequisites: A student should have prior exposure to strategies and issues involved in sales and marketing.

UNIT-I

Concept of Sales, AIDAS Principles, Sales Management-An overview, Objectives of Sales Management, Introduction to Retail Sales Management, Concept and Meaning, Types of Retail Format, Retail Mix, Retail Planning Process, Merchandise Planning and Management, Location and Layout of Retail Outlet.

Stages in Buying Process in Retailing, Retail Pricing, Building Customer Loyalty in Retailing, Store Loyalty Model, Significance of Visual Merchandising, Retailing in India and Emergence of Organized Retailing, Rural Retailing, Concept of Consumerism.

Physical Distribution-Concept and Structure, Channel System-Types of Intermediaries and Channels, Choice of a Channel of Distribution, Assessing Channel Performance, Design of a Channel System, Channel Policies, Wholesaling-Characteristics, Types, Functions and Services, Distribution Channel in India.

UNIT-II

Key Logistics Activities and Logistics Strategy, Customer Services, Material Handling, Order Processing, Inventory Management-Tools and Techniques, Packaging-Categories, Functions, Packaging Policy, Warehousing and Storage, Transportation-Modes of Transportation and Selection, Indian Transport Infrastructure Bottleneck, Logistic Information System, Computer Packages used in Logistics-EDI, BCS, ERP, Intranet and Extranet.

Introduction and Evolution of Supply Chain, Definition and Scope, Various Elements, Structure of Supply Chain System, Logistics VS Supply Chain, Customer Focus in Supply Chain, Value Chain and its Outputs, Supply Chain Excellence and Competitive Advantage – Steps for Integration, Different Types of Supply Chains, Sourcing of Suppliers and Supplier Evaluation, Principles of Supplier Relation, Bullwhip Effects, Selected Case Discussion.

Text Books:

- 1. Retailing Management By Swapna Pradhan, Publisher: McGraw Hill
- 2. Retailing Management By Chetan Bajaj and Tuli, Publisher: Oxford Publishing

Reference Books:

- 1. Supply Chain Management By Sunil Sharma, Publisher: Oxford Publishing
- 2. Text Book of Logistics & Supply Chain Management By D.K Agrawal, Publisher: Macmillan

MS Project Management and Tally (LAB Session) (Subject Code BA 20404A)

Contact Hours: 2 Hrs / Week Credit: 2

Course Objective. The objective of this lab is to acquaint the students with MS Project Management and Tally. It is designed to provide students with fundamental knowledge of MS Project Management and Tally application via hands-on lab sessions. They will be knowledgeable about MS Project Management and Tally, their features and interfaces. **Prerequisites:** No departmental prerequisites required.

| | MS-Project Management | | | | | |
|----|--|----------|--|--|--|--|
| SN | Topics / Sub Topics | Duration | | | | |
| 1 | Microsoft Project 2007 Overview, Creating a simple project | 2 | | | | |
| 2 | Exploring Calendar and Schedule, Developing a Work Breakdown Structure | 2 | | | | |
| 3 | Critical Path Analysis | 2 | | | | |
| 4 | Resources, Updating Project Progress | 2 | | | | |
| 5 | Working With Reports, export of data | 2 | | | | |
| 6 | Hands On Practice Sessions - Application of all of the above concepts and techniques | 2 | | | | |
| | Workshop on Tally | | | | | |
| 7 | Understanding the features of Tally | | | | | |
| | Learn the uses of Mouse/ Keyboard Conventions | | | | | |
| | Creation/ Setting up of Company, Setting up Account Heads | | | | | |
| | Creating Stock Group, Stock Category, Units of Measure, Stock Item | 2 | | | | |
| 8 | Voucher Entry in Tally | 2 | | | | |
| 9 | Voucher Entry in Tally | 2 | | | | |
| 10 | Evaluation of ledger | 2 | | | | |
| | Rectification of entries | | | | | |
| | Generalization of ledger, trial balance, final accounts, inventory reports, | | | | | |
| 11 | taxation report | 2 | | | | |
| 12 | Hands On Practice Sessions - Application of all of the above concepts and techniques | 2 | | | | |

Security Analysis and Portfolio Management and Derivative Market (Subject Code: BA 20301A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: The course aims at introducing the students to the basic fundamentals of the share market and its management. It outlines a sound conceptual understanding of the derivative market, which includes various instruments like forward, futures, options, swaps and convertibles.

Prerequisites: Basic understanding of Capital Market.

UNIT-I

Investment, investment objectives, Financial Markets in India - Primary and Secondary Markets, Placement of Issue, Indian Stock Exchanges and International Stock Exchanges, Stock Market Indices, Dematerialization, Risk, Determination of Risk and Return, Fundamental and Technical Analysis, Efficient Market Theory.

Portfolio-Markowitz Model, Efficient Portfolio, Feasible Portfolio, Efficient Frontier, Leveraged Portfolio, Sharpe Index Model, Capital Asset Pricing Model, Capital Market Line and Security Market Line, Portfolio Evaluation using Sharpe, Treynor and Jensen Indices and Portfolio Revision.

Conceptual Framework of Derivative Market-Meaning, Definition, Types and History, Participants in Derivative Market, Various Derivative Instruments - Forward, Futures, Options, Swaps and Convertibles, Forward Contract and Valuation of Forward and Future Prices, Swap Contract and its mechanism, Types of Swaps, Types of Orders in Derivative Trading, Overview of Derivative Market abroad and in India.

Option Contracts - Characteristics, Terminologies, Option Pricing, Option Trading Strategies, Valuation of Options - Call and Put Values, Valuation Models, Dividends, Shares Splits and Bonus Shares, Convertible Securities and Other Embedded Derivative and its Valuation, Recent Trends in Commodity Market in India.

Text Books:

- 1. Investment Analysis and Portfolio Management-By Prasanna Chandra, Publisher : Tata
- 2. Mc Graw Hill.
- 3. Security Analysis and Portfolio Management By Punithavathy Pandian, Publisher: Vikas Publishing.
- 4. Derivative Market By S. S. S. Kumar, Publisher: PHI

Reference Books:

- 1. Investment Management By V. K. Bhalla, Publisher: S. Chand
- 2. Financial Derivatives By S.L. Gupta, Publisher: Prentice Hall
- 3. Futures & Option Market By J. C. Hull, Publisher: Pearson Education

Taxation (Subject Code: BA 20302A)

Contact Hours: 4 Hrs / Week

Credit: 4

Course Objective: The focus of the course is on the basic concepts pertaining to direct taxes, and also provide principles and provisions of GST.

Prerequisites: The students should have knowledge of taxes levied by Government of India.

UNIT-I

Basic concepts under the income tax act 1961, Residential status, Indian Income and Foreign Income. Concepts of different heads of Income. Concept of goods and service tax GST, Main features of GST implemented in India, Background, Causes for adoption and implementation of GST, Favorable impacts and difficulties of GST, Evaluation and suggestion of GST, Classification of GST Dual and Integrated GST, Important terms. Registration under GST provision and process. Amendment and cancellation of registration, Practical problems relating to registration.

UNIT-II

Supply of goods and services-Meaning, Scope and types. Determination of time and place of supply of goods and services. Levy and collection of tax. List of exempted goods and services. Provision of integrated GST regarding interstate supply. Calculation of Taxable supply and tax payable under IGST and adjustment. GST council and administration, Recent updates of GST.

Text Book:

- 1. Indirect Tax Laws by Ravi Puliani & Mahesh Puliani Publisher: Bharat Publication.
- 2. Gupta, S.S., GST- How to meet your obligations, Taxmann

Reference Book:

1. Student's Guide to Indirect tax: Dr. Yogendra Bangar, Dr. Vandana Bangar CA. Vineet Sodhani, Aadhya's Publication.

Industrial Relations (Subject Code: BA 20303A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: The course is designed to promote an understanding of labour legal environment and Industrial relations Legislature in India.

Prerequisites: Basic understanding of Business Law.

UNIT-I

Economy and the labour force in India - Introduction, the Indian economy, labour force in India - Structure, composition and trends, Key issues and critical challenges.

Industrial Relation- Introduction, industrialization strategy and industrial relations, globalization and industrial relations.

Trade Unions - Introduction, theories of trade union movements, trade unions in India, trade unions and economic development, legal frame work, trade unions recognition, union recognition agreement, the problem of the free rider.

Trade union structure – Introduction, models of national trade union movements, international trade union federations, trade union structure at the national level, managerial trade union.

Management of Trade Union in India – Introduction, trade unions constitution, trade unions functions, Internal and external challenges.

Collective Bargaining – Introduction, concept, nature, legal framework, levels of bargaining and agreements, collective bargaining and stake holders, negotiating techniques and skills.

UNIT-II

Tripartism and Social Dialogue - Introduction, types and levels of tripartite agreements, assessment of the working of tripartism, social dialogue and the reform process, strengthening tripertite social dialogue.

Role of Government in industrial relation – divergent perspectives, types of Government intervention, means of state interventions, role of state in industrial relations at the state level. Contract of Employment – Industrial Employment Act, Shops and Establishment Act, Interstate migrant, Workmen Act, Contract Labour Act.

Dispute resolution and Industrial Harmony – Industrial Conflict, Industrial Dispute Act, Notice of change, reference of disputes to boards/ court or tribunals, voluntary reference of disputes to arbitration, general prohibition on strikes and lockouts. Unfair labour practices, Guiding framework for sound labour management relations.

Grievances and Discipline handling- Managing employee grievances, nature and causes of grievance, grievance procedure, managing discipline.

Working conditions, safety, health and environment – Introduction, Working conditions, safety, health and environment, organization commitment.

Labour administration – labour administrative machinery, improving labor inspection, strengthening conciliation and labour court administration, promoting alternative disputes resolution mechanism

Social security – Social security system in the organized sector, Indian constitution and legal framework, medical care, safety, occupation, health and welfare funds

Employee participation and labour management co-operation- Introduction, decision taking, to decision making - participation or association with management?

Text Book:

- 1. Industrial Relations, C. S. Venkata Ratnam, Publisher Oxford.
- 2. The Future of Industrial Relations. New Delhi Sage. Niland JR.

Reference Book:

- 1. Collective Bargaining and Industrial. -Kochan, T.A. & Katz Henry. 2nd ed. Homewood, Illinois, Richard D Irish.
- 2. Personnel Management and Industrial Relations –P. C. Shejwalkar and S. B. Malegaonkar.

Competency Mapping and Performance Management (Subject Code: BA 20304A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: The course aims to introduce students to the fundamental understanding of Competency and the importance of Competency Mapping. The course focuses on the study of the Performance Management system and development in an organization, role analysis, role of performance appraisal in an organization, and ethics of appraisal. This course also highlights the importance of a competency-based appraisal system in an organizational setup and the concepts and processes of balance score card. It provides a sound understanding of the topics to enable them to apply in real-life situations. **Pre-requisites:** Basic understanding of Human Resource Management.

UNIT-I

Concepts of competence, competency Mapping. Difference between competence and competencies, The Behavioral Ice ber.

Competency clusters, Competency approach to development, competency models, Developing models, and important issues related to developing competency models.

Assessment Centre approach to competence building. Competency dictionaries, competency based applications, Competency model for leadership role, competency model for HR, Increase need of competencies mapping in globalize world.

UNIT-II

Performance Appraisal (PA): objectives, issues & problems, Job Analysis and PA systems, Methods of PA, Measurements in PA, Appraisal communication & Interview. Potential Appraisal: its relevance and advantages over PA.

Performance Management System (PMS): definition and difference in three systems and relevant advantages over each other. Smart goals, PMS and Reward system, Process & documentation of PMS, Performance Management & strategic planning, implementing a performance management system, Performance management & employee development, performance management skills, managing team performance.

Mentoring and counseling, Knowledge management, Balanced score card and HR score card.

Texts Books:

- 1. Performance Management System & Stratigies, Dipak Kr. Bhattacharya, Pearson
- 2. Performance Management: Topomoy Deb, Excel Books
- 3. Hand book of Competency Mapping: Understanding, Designing & Implementing Competency Models in Organizations, Seema Sanghi, Response Books.

Reference Books:

- 1. Human Resource Management by V.S.P. Rao. (Publisher: Excel)
- 2. Human Resource and Personnel Management, K. Aswathappa, TATA McGraw Hill.

Object Oriented Programming System and Open Source Systems (Subject Code: BA 20305A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: C++ is a programming language essential for management students seeking to specialize in information system. C++ is a super set of c which is one of the very elementary interfacing language for data base management software (DBMS) applications.

Prerequisites: Basic understanding of computer applications

UNIT-I

Introduction to object oriented programming –characteristics and advantages; general structure of a C++ program

Data types, variables, constants, operators, input and output statements; program control statements – loops and decision making;

UNIT-II

Functions-library functions, user defined function, scope and visibility; arrays, strings and structures; concept of objects and classes, constructors and destructors, inline functions; pointers;

Function overloading and operator overloading; polymorphism & inheritance; virtual functions and friend functions;

Text Book:

1. Mastering C++; K. R. Venugopal, Rajkumar & T. Ravishankar; McGraw Hill

Reference Books:

- 2. C++ Primer; Stanley B Lippman and J.Lajoie; Addison Wesley
- 3. The C++ Programming Language; Bjarne Stroustrup; Addison Wesley
- 4. C++ The Complete Reference; Herbert Schildt, McGraw Hill
- 5. Programming with C++, Schaum's outline series; John R. Hubbard; McGraw Hill

Database Management Systems (Subject Code: BA 20306A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: In today's scenario, almost all business establishments are managed by databases. This course aims to introduce the complete concept of a database management system, so that business management students are in a position to incorporate a suitable database for an organization.

Prerequisites: Basic understanding of computer applications.

An introduction, entity—relationship model: basic concepts, design issues, mapping constraints, keys, entity-relationship diagram, design of an E-R database schema, reduction of an E-R schema to tables.

Relational model: the relational algebra, the tuple relational calculus, the domain relational calculus. SQL: SQL *plus, data manipulation in database management systems, the oracle data types, tables, data constraints, oracle functions, joins, sub queries, union, intersect and minus clause, indexes, views, sequences, security, SQL *plus reports.

UNIT-II

Functional dependencies: trivial and non-trivial dependencies, closure of a set of dependencies, closure of a set of attributes, irreducible sets of dependencies. Normalization: non-loss decomposition and functional dependencies, first, second and third normal forms, Boyce/Codd normal form, fourth normal form, fifth normal form, other normal forms. Object-oriented databases: the object oriented data model.

Storage and file structure: file organization, organization of record ion files, data-dictionary storage. Database system architectures: centralized systems, client-server systems, distributed systems, network types. Distributed databases: data replication, data fragmentation. Security and integrity.

Text Book:

1. Fundamentals of Database Systems; R. Elmasri, S. B. Navathe, Somayajulu, Pearson

Reference Books:

- 1. Database System Concepts; A. Silberschatz, H. F. Korth & S. Sudarshan; Mc Graw
- 2. Database Management Systems; Raghu Ramakrishnan; McGraw Hill
- 3. Introduction to Database Systems; C.J. Date; Addison Wesley
- 4. Database- Principles, Programming and Performance; Patrick O' Neil; Morgan Kaufman

Introduction to Business Analytics (Subject Code: BA 20317A)

Contact Hours: 3 Hrs./Week Credit: 3

Course Objectives:

- 1. Understanding the Role of Business Analyst and Data Science in business.
- 2. Understanding the basic concept of data management and data mining techniques
- 3. Understanding the basic concept of machine learning
- 4. Understanding the application of business analysis.
- 5. Understanding the basic concept of Data Science Project Life-Cycle.

Prerequisites: Basic understanding of computer applications

UNIT-I

Introduction: Decision making, business analytics, business analytics in practice. Descriptive Statistics: overview of using data: definitions and goals, types of data, modifying data in excel, creating distributions from data, measures of location and variability, analyzing distribution, measures of association between two variables. Data Visualization: overview, tables, charts, advanced data visualization, data dashboards.

Spreadsheet Models: Building good spreadsheet models, what if analysis, excel functions for modeling, auditing spreadsheet models. Linear optimization models: minimization problem, solving the par. Inc. problem, maximization problem, special cases of linear program outcomes, sensitivity analysis, general linear programming notation. Introduction to Data Mining, The origins of Data Mining, data mining tasks, OLAP and multidimensional data analysis, basic concept of association analysis and cluster analysis.

Types of Integer linear optimization models, east borne realty example, solving using excel solver, application involving binary variables, modeling flexibility provided by binary variables, generating alternatives. Nonlinear optimization models: a production application, local and global optima, a location problem, markowitz portfolio model, forecasting adoption of a new product.

UNIT-II

Monte Carlo Simulation and Decision Analysis: Monte Carlo Simulation: Risk Analysis for Santonics LLC, Simulation modeling for land Shark Inc., Simulation considerations. Decision analysis: Problem Formulation.

Business Analytics Applications: Why resource constraints are important to support business analytics: introduction, business analytics personnel, business analytics data, Descriptive: visualizing and exploring data, sampling and estimation, Predictive: logic driven models, data driven models, data mining. Prescriptive analysis: prescriptive modeling: non-linear optimization.

Measures & Metrics and Performance Management: need for measurement, characteristics of measures, measurement system terminology, salient attributes of a good metric, SMART test for ensuring metric relevance to business, Supply chain associated with the metric, fact-based decision making and KPIs, few sample KPIs used by Human Resource (HR) division, mapping metrics to business phases KPIs, and performance Management. Application of business analysis: retail analytics, marketing analytics, financial analytics, healthcare analytics, supply chain analytics.

Text Books:

- 1. Essentials of Business Analytics: An Introduction to the methodology and its application, Bhimasankaram Pochiraju, Sridhar Seshadri, Springer
- 2. Introduction to Machine Learning with Python: A Guide for Data Scientists 1st Edition, by Andreas C. Müller, Sarah Guido, O'Reilly
- 3. Introduction to Data Science, Laura Igual Santi Seguí, Springer.
- 4. Camm, J.D., Cochran, J.J., Fry, M.J., Ohlmann, J.W., Anderson, D.R., Essentials of Business Analytics, Cengage Learning, Second Edition.
- 5. Prasad, R. N., Acharya, S., Fundamentals of Business Analytics, Wiley.
- 6. Schniederjans, M.J., Schniederjans, D.G., Starkey, C.M., Business Analytics: Principles, Concepts and Applications, Pearson.

- 1. Introduction to Data Mining, Pang-Ning Tan, Michael Steinbach, Vipin Kumar, Pearson Education India
- 2. An Introduction to Business Analytics, Ger Koole, Lulu.com.
- 3. Liebowitz, J. Business Analytics: An Introduction, Auerbach Publications.
- 4. Hardoon, D.R., and Shmueli, G., Getting Started with Business Analytics, CRC Press, Taylor & Francis.
- 5. Rao, P.H. Business Analytics: An Application Focus, Prentice Hall India.
- 6. Sharma, J.K., Khatua, P.K., Business Statistics, Pearson.

Introduction to 'R' (Subject Code: BA 20318A)

Contact Hours: 3Hrs./Week Credit: 3

Course Objectives:

- 1. To give an introduction to the software R and how to write elementary programs
- 2. To demonstrate how statistical models are implemented and applied.
- 3. To write simple program scripts for data analysis.
- 4. To produce illustrative data plots and carry out statistical tests.
- 5. To get hands-on experience to work with statistical graphs.

Prerequisites: No Departmental prerequisites required

UNIT-I

Introduction to the R language - SAS versus R - R, S, and S-plus - Obtaining and managing R - Objects - types of objects, classes, creating and accessing objects - Arithmetic and matrix operations - Introduction to functions.

Getting and Installing R, The R user Interface, A short R tutorial, R packages. Overview: Expressions, Objects, Symbols, Functions. Syntax: Constants, Operators, Expressions, Control Structures, Accessing Data Structures. R Objects: Primitive object types, vectors, lists, other object types. Symbols and Environment: Symbols, Global environment, environment and functions, exceptions.

Working with R - Reading and writing data - R libraries - Functions and R programming – the If statement - looping: for, repeat, while - writing functions - function arguments and options – Basic R commands. Graphics - Basic plotting-Manipulating the plotting window-Advanced plotting using lattice library-Saving plots.

UNIT-II

Standard statistical models in R - Model formulae and model options - Output and extraction from fitted models - Models considered: Linear regression: lm () , Logistic regression: glm() , Linear mixed models: lme(). Entering Data Within R, Entering Data Using R Commands, Using the Edit GUI, Saving and Loading R Objects, Importing Data from External Files, Exporting and Importing Data from Databases. Preparing Data: Combining Data Sets, Transformations, Binning Data, Subsets, Summarizing Functions, Data Cleaning, An overview of R graphics.

Advanced R - Data management - importing, sub-setting, merging, new variables, missing data; Plotting - Loops and functions - Migration SAS to R - Plotting and Graphics in R - Writing R functions, optimizing R code- Bio-conductor, analysis of gene expression and genomics data. More on linear models - Multivariate analysis, Cluster analysis, dimension reduction methods (PCA).

Text Books:

- 1. Raghav Bali, Dipanjan Sarkar and Tushar Sharma, Learning Social Media Analytics with R, Packt Publishing Ltd.
- 2. Nina Zumel and John Mount, Practical Data Science with R, Manning Publications Company.

- 1. Peter Dalgaard, Introductory Statistics with R (Paperback) 1st Edition Springer-Verlag New York, Inc. (ISBN 0-387-95475-9).
- 2. W. N. Venables and B. D. Ripley. Modern Applied Statistics with S. 4th Edition. Springer. (ISBN 0-387-95457-0).

LAB - I

Data Analysis using R (Subject Code: BA 20405A)

Contact Hours: 2 Hrs/Week Credit: 2

Course Objectives:

The objective of the course is to learn applications of various machine learning concepts using R language. The course would enable the ability to understand and critically assess available data using machine learning methods.

Prerequisites: No departmental prerequisites required.

UNIT-I

Getting and Installing R, The R user Interface, A short R tutorial, R packages. Overview: Expressions, Objects, Symbols, Functions. Syntax: Constants, Operators, Expressions, Control Structures, Accessing Data Structures. R Objects: Primitive object types, vectors, lists, other object types. Symbols and Environment: Symbols, Global environment, environment and functions, exceptions.

Functions: Arguments, Return values, Function as arguments, side effects. Object Oriented Programming: Overview, Defining Classes, new objects, accessing slots, working with objects, creating coercion methods, methods, basic classes. High performance R with built in math functions, lookup tables etc.

Entering Data Within R, Entering Data Using R Commands, Using the Edit GUI, Saving and Loading R Objects, Importing Data from External Files, Exporting and Importing Data from Databases. Preparing Data: Combining Data Sets, Transformations, Binning Data, Subsets, Summarizing Functions, Data Cleaning, An overview of R graphics.

UNIT-II

Analyzing Data: Summary Statistics, Correlation and Covariance, Principal Components Analysis, Factor Analysis, Bootstrap Resampling. Probability Distributions: Normal Distribution, Common Distribution-Type Arguments, Distribution Function Families. Statistical Tests for Continuous and Discrete Data, Power Tests: Experimental Design, Example, t-Test Design, Proportion Test Design, ANOVA Test Design.(Using R Software) Regression Models: A Simple Linear Model, Fitting a Model, Refining the Model, Details About the Im Function, Assumptions of Least Squares Regression, Subset Selection and Shrinkage Methods, Stepwise Variable Selection, Ridge Regression, Lasso and Least Angle Regression. Principal Components Regression and Partial Least Squares Regression.

Machine Learning Algorithms for Regression: Regression Tree Models, MARS, Neural Networks, Project Pursuit Regression, Generalized Additive Models, Support Vector Machines. Classification Models: Linear Classification Models, Logistic Regression, Linear Discriminant Analysis, Log-Linear Models. Machine Learning Algorithms for Classification: k Nearest Neighbors, classification Tree Models, Neural Networks, SVMs, Random Forests.

Text Books:

- 1. Adler, J. R in a Nutshell: A Desktop Quick Reference, O'reilly publications, Second Edition.
- 2. Lantz, B. Machine Learning with R, Packt publishing Ltd.

Reference Books:

- 1. Lesmeister, C. Mastering Machine Learning with R, Packt Publishing, First Edition.
- 2. Wickham, H. & Grolemund, G. R for Data Science: Import, Tidy, Transform, Visualize, and Model Data, O. Reilly Media.
- 3. Gillespie, C., Lovelace, R., R for Data Science: Import, Tidy, Transform, Visualize, and Model Data, O'Reilly Media.
- 4. StrickLand, J.S., Predictive analytics using R, Lulu Inc.

[MBA IV SEMESTER]

Banking and Insurance Management (Subject Code: BA 20117A)

Contact Hours: 3 Hrs / Week Credit: 3

Course Objective: This course aims to introduce the basic concepts of Modern Commercial Banking and Insurance. By the end of the course, each student should attain proficiency in the following areas: Understanding basic Banking and Insurance concepts, theory of Law and practice of the banking and insurance business, Understanding the Structure banking and sector insurance in

Prerequisites: No departmental prerequisites required

UNIT I

Evolution of Banking: Commercial Banking in India, Structure of the Commercial bank, Need for regulation of Banking System: Central Bank as the regulator of banking system,

Banking Sectors: Corporate, retail, international and rural banking

Export credit: Pre shipment and post shipment and RBI measures

Definition of Banker, definition of Customer, Banker Customer relationship, Rights & Obligations of Banker & Customers,

loan and advances: methods and modes of creating charging

Types of Bank Deposits, Nomination Facility-Utility to customers and bankers,

Licensing of Banking Companies; Branch Licensing.

Paid up Capital and Reserves,

Capital Finance: Short- and Long-term Loans,

CAMELS rating, Concept of NPA-Capital Adequacy, and its importance,

International regulation of Banks-Basel Norms,

Global Financial Crisis and Banks,

Priority sector lending

UNIT II

Insurance: Introduction of and principles of Insurance, Meaning, Types

Managing Agencies (importance of agents in reaching out to customers),

Indian Insurance companies, Non-Life Insurance Companies,

Life and General Insurance Market,

Underwriting and Rating practices,

Claims Practice and Procedure,

Nature of The Insurance Act 1938,

Insurance Regulatory & Development Authority (IRDAI) Act 1999, Recent Changes in

IRDA norms, Life Insurance Corporation Act 1956, Insurance Ombudsman, FDI in

Insurance.

Structure and competitive nature of Indian Insurance market, Growth potential and future prospects of the insurance industry

Text Book

- 1. Modern Commercial Banking by HR Machiraju, New Age International Publishers
- 2. Banking Law & Practice Part I & II, by Varshney P.N.
- 3. General Insurance: Principles & Practice (Paperback) By K C Mishra, G E Thomas, Publication
- 4. Life Insurance Underwriting by R Venugopal & Dr K.C Mishra, G E Thomas, Publication.

Reference Book:

- 1. Modern Banking Theory & Practice, by Muraleedharan, PHI
- 2. Commercial Banking Institute of Bank Management and Research

Web References:

- 1. www.rbi.org.in
- 2. www.irdai.gov.in

Research Trends in Management (Grand Viva-Voce) (Subject Code: BA 20701A)

Contact Hours: 3 Hrs / Week Credit: 3

Course Objective: Research report is prepared by each student after analyzing the information gathered and submit the same to the department. At the end of fourth semester, each student will have to face a Grand Viva-Voce wherein his or her knowledge and skill acquired related to research shall be measured and examined in terms of the selected area. The Viva shall be conducted jointly by a group of faculty experts and total assigned mark is 100 without any break-up ratio and a minimum pass mark 40 is required to clear the said Viva-Voce.

Market Research (Subject Code: BA 20118A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: The objective of this paper is to induce a sense of research orientation considering different market dynamics.

Prerequisites: Understanding of research methodology and statistical techniques

UNIT-I

Introduction to Marketing Research. Defining the Marketing Research Problem and Developing an Approach,

Research Design: Exploratory, Descriptive (Cross-Sectional Design; Longitudinal Design), Causal Research,

Exploratory Research Design: Secondary Data: Primary versus Secondary Data; Criteria for Evaluating Secondary Data; Classification of Secondary Data.

Exploratory Research Design: Qualitative Research: Primary Data: Qualitative versus Quantitative Research; Focus Group Interviews Depth Interviews; Projective Techniques.

Descriptive Research Design: Survey and Observation: Comparative Evaluation of Survey Methods; Selection of Survey Method(s); Observation Methods

Causal Research Design: Experimentation: Concept of Causality; Conditions for Causality Definition of Concepts; Definition of Symbols; Validity in Experimentation; Extraneous Variables; Controlling Extraneous Variables; Classification of Experimental Designs; Pre-experimental Designs; True Experimental Designs; Quasi Experimental Designs; Statistical Designs.

UNIT-II

Measurement and Scaling: Fundamentals and Comparative Scaling: Primary Scales of Measurement; A Comparison of Scaling Techniques.

Non comparative Scaling Techniques.

Questionnaire and Form Design: Questionnaire Design Process; Type of Interviewing Method; Choosing Question Wording.

Sampling: Design and Procedures: Sample or Census; The Sampling Design Process; Classification of Sampling Techniques; Choosing Nonprobability versus Probability Sampling.

Sampling: Final and Initial Sample Size Determination. The Sampling Distribution; Statistical Approaches to Determining Sample Size; Confidence Intervals. Non-response Issues in Sampling.

Frequency Distribution, Cross-Tabulation, and Hypothesis Testing: Cross-Tabulations;

Report Preparation and Presentation: Report Format; Report Writing; Guidelines for Tables; Guidelines for Graphs.

Common Parametric and Non-parametric Tests: Parametric Tests (One Sample; Two Independent Samples; Paired Samples); Non-parametric Tests (One Sample; Two Independent Samples; Paired Samples)

Text Book

1. Market Research: An Applied Orientation, Malhotra N.K., Pearson

Reference Books

- 1. Marketing Research, Burns, A.C., Bush, R.F., Pearson
- 2. Marketing Research, Easwaran, S., Singh, S.J.
- 3. International Marketing Research, V.Kumar, Pearson

Service Marketing and Global Marketing (Subject Code: BA 20119A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: The course deals with the conceptual framework in the marketing of services and challenges faced by marketing managers in the service marketing areas in a global market environment.

Prerequisites: Understanding of Marketing Management

Introduction to services. What are services? Why service marketing is done? Myths about services. GAPS model. Differences in marketing of tangible goods Vs. service marketing. The service marketing mix, key competitive trends and conceptual framework. Competitive trends for the 21st century. Customer satisfaction and focus value. TQM and service quality; Consumer behaviour in services, customer expectation of service, customer perception of services, strategies for influencing customer perception, building customer relationship through segmentation and relation strategies.

Aligning strategy, service design and standards; customer defined service standards, leadership and measurement system for market driven service performance, service design and positioning; Delivering and performing service; employees' role in service delivery, delivering service through intermediaries, customer's role in service delivery, managing demand and capacity, international services marketing. The role of advertising, personal selling and other communication, pricing of services, the physical evidence of services, selected cases in services marketing, viz., and marketing services such as airlines, Hotels, Courier, and financial services. Hospital, Hospitality and education.

UNIT-II

Nature of international Marketing- Challenges and opportunities, Trade theories and economic Development, Trade distortions and marketing barriers, Political environment, Legal environment, Culture. Consumer behavior in the International context- Psychological and social dimensions.

Foreign market entry Strategies, Product strategies; Basic decisions and product planning, Promotion strategies; Personal selling, publicity, and sales promotion, Pricing strategies; Basic decisions, Countertrade and terms of sale/payment.

Texts Books

- 1. Services Marketing by-the Indian perspective: Ravi Shanker
- 2. Services Marketing-Text and Cases: Verma
- 3. International Marketing: Analysis and Strategies by Sak Onk visit and John Snow (Publisher: Routledge)

Reference Books:

- 1. Services Marketing-Integrating Customer focus across the firm: Zeithaml, Bitner, Pandit, Gremler
- 2. Consumer behavior: buying, having, and being: Michael R. Solomon
- 3. Consumer behavior: Insights from Indian market: Majumdar Ramanuj
- 4. Marketing Management by Philip Kotler (Publisher: PHI)

Multinational Finance and Risk Exposure Management (Subject Code: BA 20319A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: The objective of the course is to enable the students to understand the broad scope of international financial system. It also comprises an analysis of Indian forex market and its risk exposure management.

Prerequisites: Basic understanding of foreign exchange market

Introduction to International Financial Management (IFM), Modes of International Business, Scope of IFM, IFM and Domestic Financial Management.

Balance of Payments, Current Account and Capital account, Causes / Factors Responsible for Disequilibrium in BOPs, Methods of Correction of Disequilibrium, and Barriers to Trade.

Foreign Exchange Market, Characteristics, Major Participants, Spot Market and Forward Market, Swap Transaction, Currency Arbitrage, Speculation in the Spot Market and Forward Market.

Exchange Rate Mechanism, Exchange Rate Quotations, Nominal, Real and Effective Exchange Rates, Spot Rate / Forward Rate, Determination of Exchange Rate in the Spot Market, Factors Influencing Exchange Rate, Exchange Rate Determination in the Forward Market, Covered and Uncovered Interest Arbitrage.

UNIT-II

Exchange Rate Forecasts, Need and Technique.

Foreign Exchange Exposure, Need, Types - Translation Exposure, Transaction Exposure, Real Operating Exposure.

Management of Foreign Exchange Exposure, Hedging of Translation Exposure, Hedging of Transaction Exposure, Hedging of Real Operating Exposure.

International Capital Market, Various Instruments and their types - International Bond Market, International Equity Market.

Foreign Direct Investment (FDI), Costs and Benefits of FDI, Strategy for FDI, Conflicts between Home Country Government and MNCs and Measures of Control, Conflicts between Host Government and MNCs and Measures of Control.

Text Book:

1. International Financial Management by Vyuptakesh Sharan. (Publisher: PHI)

Reference Books:

- 2. Multinational Financial Management by Alan C. Shapiro (Publisher : PHI)
- 3. International Financial Management, Jeff Mudra (Publisher: Cengage Learning).

Marketing of Financial Services and Mergers & Acquisitions (Subject Code: BA 20320A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: The course acquaints the students with a conceptual framework of a range of financial products and services offered by different financial institutions and agencies in India. It also outlines the core concepts of mergers and acquisitions (M&A) strategies and the challenges encountered in implementing the same.

Prerequisites: Familiarity with the structure of financial system and awareness of the trends and challenges faced by the corporate firms in modern world.

Introduction to Financial Services, Definition, Functions of Financial Services, Characteristics, Scope, Classification of Financial Services - Traditional and Modern activities, Recent trends. Factoring and Forfaiting, Definition, Services provided, Types, Factoring Mechanism, Factoring Cost, Benefits, Differences between Bills Discounting & Factoring, Characteristics of International Factoring, Mechanism of International Factoring, Needs and benefits, Definition of Forfaiting, Pricing of a Forfaiting transaction, Mechanism, Difference between Forfaiting & Factoring, Benefits, Leasing and Hire Purchase, Types of Lease, Procedural Aspects, Advantages and Disadvantages, Myths About Leasing, Difference between Leasing and Instalment Sales, Differences between Leasing and Hire Purchases.

Depositary Receipts, definition, ADR and GDR, working mechanism, benefits. Eligibility conditions for overseas companies to issue IDRs. Hedge Fund, introduction, benefits and risk, Hedge Fund Vs Mutual Fund, Hedge Fund Strategies. Mutual Fund, definition, features, Products / Schemes, NFO, NAV, organization of a Mutual Fund, AMFI, Securitization, introduction, structure, advantages and disadvantages. Credit Rating: Origin, advantages, Rating Agencies, Rating symbols, Rating Methodology, Growth of Credit Rating Industry in India. Recent Trend in Financial Services.

UNIT-II

Conceptual Framework of Mergers and Acquisitions (M&A), Types and Forms of Mergers, Mergers and Acquisitions Activities and its Trend, Distinction amongst Mergers, Acquisitions, and Amalgamation, Motives, Benefits of M&A, Synergy Effect - Creation of Synergy, Various M&A Lingo- Reverse Merger, Holding Company, Joint Venture, Strategic Alliances, Divestiture, De-Merger, Spin-Off, Carve Out, Spit Off, Spit Up, LBO, MBO, Assets Stripping, Black Knight, Grey Knight, Macaroni Defense, ESOP, Green Mail, White Knight, Shark Repellent, Pac Man, Liquidation, Poison Pill. Reasons for Mergers, Growth of M& A Activity in Asia, Seeking Acquisition Opportunities, A Disciplined Acquisition Programme, Failure of M&A Proposal, Schemes and Legal Procedure for a Merger, Regulation of Takeover and Takeover Code of SEBI, Financing a Merger-Cash Offer or Share Exchange. Common Takeover Tactic - Friendly and Hostile Takeover, Tender Offer, Defenses including Pre-bid and Post-bid Strategies, Valuation of Firms in M&A-Valuation Models, Valuation of Brand - Quantifying Brand through Goodwill, Approaches to Brand Valuation, Value Creation through M&A – Determination of Net Economic Advantage, Human Aspects of Post-Acquisition Integration, Concept and Scope of Due Diligence, Accounting for Business Combination -Methods used in Accounting Treatment for M&A and Takeover Activities, Computation of Purchase Consideration, Looking at Pre-merger Status and Post-merger Impact on different financial parameters of the Merged Firm and Merging Firms, Determination of Exchange Ratio in M&A Proposal, Case Discussions.

Text Books:

- 1. Merchant Banking and Financial Services By Dr. S. Gurusamy, Publisher: Thomson
- 2. Mergers and Acquisitions By R.S. Aurora, Kavita Shetty, Publisher: Oxford

- 1. Financial Services By Thummuluri Siddaiah, Publisher: Pearson Education
- 2. Mergers and Acquisitions By A.P. Dash, Publisher : I.K. International Publishing House

Organization Development and Human Resource Development (Subject Code: BA 20321A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: Upon completion of the course, students should thoroughly understand the organization's ability to assess its current functioning and ability to achieve goals. The course focus on enhancing the understanding of the development of human resource in the modern organization. This course also highlights the importance of training & development and planning of career of the employees, in today's age of LPG. It provides a sound understanding of the process and methods of training and development to enable them to apply it in real work situations.

Prerequisites: Basic understanding of Organization Behaviour and Human Resource Management.

UNIT -I

Organization Development: Meaning, definitions and concepts, needs and importance in organizations, action research process, principles, steps and goals, managing the OD process.

Foundations Of OD: Action Research, Survey Feedback, Systems Theory, Teams And Teamwork, Participation And Empowerment, Applied Behavioural Science, Parallel Learning Structures. Process of OD –Model of Change, Six Box Model.

OD Intervention: Meaning, Importance, Team Intervention: Role Analysis, Interdependency, Appreciation and Concern Inter group: Walton, Principled Negotiation Structural: Sts, Work Redesign, Self-Managed Teams. Individual: T-Group, Behaviour Modeling.

UNIT-II

Overview of Human Resource Management, objective, HRD Process ,HRD Mechanisms, Processes and Outcomes,Principles of HRD System, Sub-Systemsof HRD, Difference between HRD and Training; Training and development, learning principles, training, meaning, need, objectives. Methods of training; on-the-job, off-the-job methods of training.

Development concepts, objectives and process, development concepts, objectives and process, methods of development; coaching, job rotation, Job enlargement and job enlargement - managerial grid.

Training for trainer: Ice breaking, skills of trainers, room setting in training, Types of participants and methods of handling them, Career Planning.

Text Books:

- 1. Organization Development, & Transformation, Managing Effective Change, Wendell L.French, Cecil H.Bell, Jr, Publisher: PHI
- 2. Organisation Change and Development by Dipak Kumar Bhattacharyya, Publisher: Oxford.
- 3. Training and Development Dr. B. Janakiram, Biztantra.
- 4. Training and Development, G. Pandu Naik, Excel Books.

- 1. Organizational, Design, and Change-Gareth R. Jones, Publisher: Pearson Education.
- 2. Effective Training System, Strategies and Practices, NICK Blanchard, James Thacker, PEARSON
- 3. Human Resource Management by V.S.P. Rao. (Publisher: Excel)
- 4. Human Resource and Personnel Management, K. Aswathappa
- 5. Training for Development, R K Sahu, Excel Books.
- 6. Globalization and Human Resource Development, I S Singh, Excel Books.

Compensation Management and International Human Resource Management (Subject Code: BA 20322A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective – The course is designed to promote understanding of issues related to the compensation or rewarding of human resources in the corporate sector, public services and other forms of organizations and to impart skills in designing, analyzing and restructuring reward management systems, policies and strategies. The course is also helpful in helping the students to critically explore the management of people from an international perspective, analyzing the International HRM policies, strategies and practices that organizations pursue in responding to demands of increased globalization.

Pre-requisite – Students need to possess basic knowledge about Human Resource Management before studying this subject.

UNIT – I

Conceptual and Theoretical understanding of Economic theory related to reward management; Competitive Imperatives; Productivity, Quality, Service, Speed, Learning, Planning for Internal and external Equity in compensation system.

Designing compensation - steps in designing compensation; Compensation designs for Specific Type of Human Resources like Compensation of Chief Executives, senior managers, R & D Staff.

Understanding different components of compensation packages like fringe benefits, incentives and Retirement Plans; Compensation Practices of Multinational Corporations and Strategic Compensation Systems.

UNIT – II

Introduction: Definition of IHRM, need of IHRM, Variables that moderate between domestic and international HRM

International Recruitment & Selection: Staffing policies, issues in staff selection.

Performance management: performance management in MNC, factors associated with individual performance appraisal.

Training and Development: expatriate training, developing international staff and multinational teams. Adaptation & Repatriation.

Compensation: objectives of international compensation, approaches to international compensation.

Managing diverse workforce globally, importance of cultural awareness.

Text Books:

- 1. Managing People in Multinational Context Peter J.Dowling, Denice E.Welch
- 2. Reward Management: A Handbook of salary administration by Armstrong, Michael and

Marlis.

- 1. Wage and Salary Administration by Leonard R, Berger's.
- 2. Wage and Salary administration by Rock Micton.
- 3. International Human Resource Management. 3rd edition. CIPD, Brewster, C., Sparrow, P., Veron, G., & Houldsworth, E.
- 4. International Human Resource Management, 3rd Edition By Dennis Briscoe, Dennis R. Briscoe, Randall S. Schuler, Randall Schuler, Lisbeth Claus

E-Commerce (Subject Code: BA 20323A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: This course aims to provide students with an in-depth understanding of E-Commerce. The course will examine the various E-Commerce models, E-Commerce technological infrastructure, process architecture, and technical components that comprise an E-Commerce solution, such as Electronic Payment Systems, Security, and Electronic Data Interchange. The course will also examine the role of the internet, ISP providers, network architecture, network media.

Prerequisites: No departmental prerequisites required.

UNIT-I

Information systems overview, E-Commerce overview, Nature and Dynamics of the internet, E-Commerce applications

E-Commerce process architecture, Planning and launching of E-commerce (online) business, Technology for online business and internet architecture

UNIT-II

Internet Service Providers; IT Network infrastructure for E-Commerce; Electronic Payment Systems; Digital Signature

Encryption and Cryptography; E-Commerce model for a Middle Level Organization; Promoting Web Traffic

Text Books:

1. Chhabra T.N., Suri R.K., VermaSanjiv. E-Commerce.

Technology Management and Strategy (Subject Code: BA 20324A)

Contact Hours: 4 Hrs / Week Credit: 4

Course Objective: This course deals with the fundamental concepts of technology management with special reference to the innovation process, human factors in technology development, and competitive technology, thus exploring the relationship between technology management and technology strategy.

Prerequisites: No departmental prerequisites required.

UNIT-I

Definition, key concepts, role, importance, life cycle approach, innovation process, integrating people and technology, human factors in technology operations.

Technology – strategy relationship in the large corporation, global technology comparison, resource leverage. Generic competitive technology strategies, relationship between technology strategy and corporate strategy, strategic shifts and resource commitments, technology vision and goals, technology leadership.

UNIT-II

SWOT analysis for technology, matching business portfolio and technology portfolio, technology – market mix, flexibility in technology strategy.

Strategic technology planning, investment in technology, technology strategy and functional strategy and functional strategy, implementation and control of technology strategy, global linkages.

Text Books:

- 1. Strategic Technology Management-Frederick Betz, Mcgraw Hill
- 2. Reward Management: A Handbook of salary administration by Armstrong, Michael and

Marlis.

3. Management of Technology; Tarek M Khalil; Tata McGraw-Hill education

Reference Books:

- 1. Strategic Management of Technology and Innovation; Burgelman, Christensen, and Wheelwright; McGraw Hill
- 2. Handbook of Technology Management; Gerar H. Gaynor; McGraw Hill

Data Warehousing and Data Mining (Subject Code: BA20335A)

Contact Hours: 4 Hrs./Week Credit: 4

Course Objectives: The objective of the course is to mine interesting and useful patterns from the explosive volume of data by application of analytical techniques. The course is designed to extract new and valuable information by learning core data mining concepts, which, when properly implemented, can yield business solutions and profitable enterprises.

Prerequisites: No departmental prerequisites required.

UNIT-I

Introduction to data mining: Why data mining? What is data mining? Kinds of data, kinds of patterns, technologies, Kinds of applications, Major issues in data mining.

Data exploration and preprocessing: Data objects and attribute types, basic statistical descriptions of data, data visualization, measuring data similarity & dissimilarity, Data preprocessing: Overview, data cleaning, data integration, data reduction, data transformation & data discretization.

Data Warehousing & Online Analytical Processing: Data Warehouse: Basic Concepts, Data warehouse modeling: Data cube & OLAP, Data warehouse design & usage, data warehouse implementation, data generalization by attribute-oriented induction.

UNIT-II

Clustering: Basic concepts & Methods: Cluster Analysis, Partitioning methods, hierarchical methods, density-based methods, grid based methods, evaluation of clustering.

Data Mining Trends & Research: Frontiers Mining complex data types, other methodologies of data mining, data mining applications, data mining & society, data mining trends.

Mining Unstructured Data: Text mining What is unstructured data? Importance of text mining, characteristics of text mining, steps in text mining: Representation of text documents, preprocessing techniques, feature selection, constructing a vector space model, predicting and validating the text classifier.

Text Books:

- 1. Han, J., Kamber, M., Pei, J. Data Mining: Concepts & Techniques, Morgan Kauffmann, Third Edition.
- 2. Malhotra, R. Empirical Research in Software Engineering: Concepts, Analysis & Applications, CRC press.

Reference Books:

- 1. Bramer, M. Principles of Data Mining, Springer-Verlag.
- 2. Hand D., MannilaH. and Smyth P. Principles of Data Mining, MIT Press.
- 3. Dunham, D.H. Data Mining: Introductory and Advanced Topics, Pearson Education, First Edition.
- 4. Pudi, V. &Radha Krishna, P. Data Mining: Concepts and Techniques, Oxford University Press.

LAB-2

Forecasting using Python (Subject Code: BA 20406A)

Contact Hours: 2 Hrs/Week Credit: 2

Objective:

- 1. Understanding fundamentals of Python and Juypter Notebook.
- 2. Understanding the data structure, data frames and Pandas Idioms.
- 3. Knowledge of Natural Language Processing and learning algorithm for machine learning
- 4. Understanding of Image and Pattern Recognition

Prerequisites: No Departmental Prerequisites required.

UNIT-I

Introduction of Python, Juypter Notebook, Python Functions, Python Types and Sequences, Seaborn Library, Python More on Strings, Lists, tuples and directories

Advanced Python Objects, map(), Numpy, Pandas, Visualization DataMatplotlib, Bar Charts, Line Charts, Scatterplots.

The Series Data Structure, Querying a Series, The DataFrame Data Structure, DataFrame Indexing and Loading, Querying a DataFrame, Indexing Dataframes, Merging Dataframes

Time Series: Forecasting, Forecasting Model creation, Upsampling and Downsampling in Python

Time Series - Power Transformation, Moving Average, Exponential Smoothing, Decomposing Time Series in Python, Naive (Persistence) model in Python

UNIT-II

Auto Regression Model – Auto Regression Model creation in Python, Auto Regression with Walk Forward validation in Python

Time Series –ARIMA model: ACF and PACF, ARIMA model in Python, ARIMA model with Walk Forward Validation in Python

Time Series –SARIMA model: SARIMA model in Python

Natural Language Processing, Image Processing, Machine Learning K Nearest Neighbors Algorithm for Classification, Clustering.

Text Books:

- 1. Learning Python, 5th Edition by Mark Lutz, O'reilly
- 2. Mastering Apache Spark 2.x Second Edition, by Romeo Kienzler, Packt Publishing Ltd.

Reference Book:

1. Python Programming for the Absolute Beginner By Michael Dawson, 2nd Edition, Premier Press

LAB-3

Data Visualization using R (Subject Code: BA 20407A)

Contact Hours: 2 Hrs/Week Credit: 2

Course Objectives:

- 1. To understand the implementation of descriptive statistics in R.
- 2. To understand the basic concept of data visualization with R.
- 3. To apply R functions to visualize categorical data in the form of Bars and Charts.
- 4. To understand the representation of Histogram, Pyramids, and Box plot in R.
- 5. To understand the visualization of time series and scatter plot.

Prerequisites: No Departmental Prerequisites required.

UNIT - I

Descriptive Analysis using R: Computing an overall summary of a variable and an entire data frame, summary function, supply function, stat descriptive function, Case of missing values, Descriptive statistics by groups, Simple frequency distribution: one categorical variable, Twoway contingency table: Two categorical variables, Multiway tables: More than two categorical variables.

Basic Concept in R: Data Structure, Import of Data. Graphic Concept in R: Graphic System, Graphic Parameter Settings, Margin Settings for Figures and Graphics, Multiple Charts, More Complex Assembly and Layout, Font Embedding, Output with cairo, Unicode in figures, Color settings, R packages and functions related to visualization.

Visualization of Categorical Data in R: Bar Chart Simple, Bar Chart with Multiple Response Questions, Column Chart with two-line labeling, Column chart with 450 labeling, Profile Plot, Dot Chart for 3 variables, Pie Chart and Radial Diagram, Chart Tables.

UNIT - II

Distributions: Histogram overlay, Box Plots for group, Pyramids with multiple colors, Pyramid: emphasis on the outer and inner area, Pyramid with added line, Aggregated Pyramids, Simple Lorenz curve. Application of ggplot, heatmap

Shot Time Series, Areas underneath and between time series, presentation of daily, weekly and monthly values, Exceptions and Special cases in Time series, Scatter Plot for Four Quadrants differentiated by colors, Scatter Plot for Outliers Highlighted, Scatter Plot for Areas Highlighted, Exceptions and Special cases in Scatter Plot

Text Books:

- 1. Data Visualization with R 100 Examples by Thomas Rahlf, Springer
- 2. Using R for Introductory Statistics, By John Verzani, CRC Press

- 1. Business Statistics using Excel, Davis Pecar, Oxford
- 2. Business Statistics, 5th ed., by Ken Black, Wiley India
- 3. Statistics for Managers, 1st edition, Chandrasekaran & Umaparvathi, PHI Learning
- 4. Big Data Visualizationby James D. Miller, Packt Publishing Ltd.