

**MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY**  
**(Formerly West Bengal University of Technology)**  
**Syllabus of MBA**  
**(Effective from 2023-2024 Admission Session)**

**Semester-III**

**Compulsory Paper**

MB 301: Corporate Strategy

**Elective Papers for Third Semester**  
**Functional Specialization – Major**

<b>MARKETING</b>		<b>OPERATIONS</b>	
MM 301	Marketing Research and Analytics	OM 301	Operations Strategy
MM 302	Integrated Marketing Communication	OM 302	Supply Chain and Logistics Management
MM 303	Consumer Behaviour	OM 303	Quality Toolkit for Managers
<b>FINANCE</b>		<b>HUMAN RESOURCE</b>	
FM 301	Security Analysis and Portfolio Management	HR 301	HR Analytics and Applications
FM 302	Taxation	HR 302	Manpower Planning, Recruitment, and Selection
FM 303	Financial Market and Services	HR 303	Learning & Development
<b>SYSTEM MANAGEMENT</b>		<b>BUSINESS ANALYTICS</b>	
SM 301	System Development and Project Management	BA 301	Data Visualization for Managers
SM 302	Relational Database Management System	BA 302	Modelling Techniques
SM 303	Business Decisions Using Advanced Excel	BA 303	Data Science using R
<b>HEALTH CARE</b>			
HCM 301	Hospital Support Services		
HCM 302	Concept of Health, Disease and Healthcare		
HCM 303	Hospital Planning and Organising		

**Functional Specialization – Minor**

<b>MARKETING</b>		<b>OPERATIONS</b>	
MM 302	Integrated Marketing Communication	OM 302	Supply Chain and Logistics Management
MM 301	Consumer Behaviour	OM 303	Quality Toolkit for Managers
<b>FINANCE</b>		<b>HUMAN RESOURCE</b>	
FM 302	Taxation	HR 302	Manpower Planning, Recruitment, and Selection
FM 303	Financial Market and Services	HR 303	Learning & Development
<b>SYSTEM MANAGEMENT</b>		<b>BUSINESS ANALYTICS</b>	
SM 302	Relational Database Management System	BA 302	Modelling Techniques

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SM 303	Business Decisions using Advanced Excel	BA 303	Data Science using R
	<b>HEALTH CARE</b>		
HCM 302	Concept of Health, Disease and Healthcare		
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**DETAIL CONTENTS**

**MB 301: Corporate Strategy**

**MODULE I:**

1. Strategic Management: Definition of Strategy, Strategic Management Process and Strategy vs. Policy, Concept of Mission, Vision , Objective and Goal [2L]
2. Environmental Scanning: External Environment Analysis (Economic, Legal, Political, Social, Geographic, Technical); Internal Environment Analysis – Strategic Advantage Profile (Finance, Marketing, Production, HR, R & D, etc.) and SWOT Analysis, RBV Framework, Industry Analysis: Porter’s Five Force Model [6L]
3. Competitive positioning – concept, Competitive scope, Concept of competitive advantage, value-chain analysis, competitive strategies [4L]
4. Strategic Planning: Concept of Strategic Planning, Steps of Strategic Plan, Objective Formulation: Factors affecting Objective Formulation, Mintzberg’s Power Configuration, Steps of Objective Formulation, SPACE analysis [4L]
5. Formulation of Strategy: Corporate or Grand Strategies, Business or Generic Strategies, Choice of Strategies, BCG matrix, GE Matrix and Ansoff Matrix [4L]

**MODULE II:**

6. Implementation of Strategy: Structural Implementation, 7S Framework, Leadership Implementation and Functional Implementation. [4L]
7. Strategic Actions: Mergers, Acquisitions, Diversification, Joint Ventures, Takeovers, Joint Ventures, Turnaround, Liquidation, Strategic Alliance etc. Reaching Strategic Edge: Balanced Score Card [6L]
8. Strategic dilemma in dealing with dynamic global business environment in terms of rapidly changing market trends and technological advancement: Sustainable Enterprise and Stakeholder Perspectives, strategic leadership in VUCA world [4L]
9. Challenges faced by managers in implementing and evaluating strategies based on the nature of business, industry, and cultural differences [2L]
10. Evaluation of Strategy: Overview of Evaluation and Control Process, Evaluation and Control Process, Techniques of Strategic Evaluation and Control: Strategic Momentum Control and Strategic Leap Control, Evaluation Techniques for Operational Control (Qualitative/Quantitative), Process of Evaluation [4L]

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**Suggested Readings:**

1. Crafting the Strategy: Das, Ranjan :, Tata McGraw Hill
2. Business Policy and Strategic Management: Kazmi, A., Tata McGraw Hill
3. Global Strategic Management: Mellahi, K.,Frynas, J.G.and Finlay, P., OUP
4. Competitive Strategy: Porter, Michael E., The Free Press
5. Discourses on Strategic Management: Roy, Dilip; Asian Books

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**MM 301: Marketing Research and Analytics**

**MODULE – I**

1. Introduction to Marketing Research  
Introduction, Application of research in managerial decision making, Aims, roles, functions and sources of research, Client-user interface – role conflict and resolution, Research Process: Steps in planning –problem formulation, research design, data collection, analysis, report presentation, Preparation of the research proposal. Research Design: Types of research - exploratory studies, descriptive studies, causal studies. [4L]
2. Data Collection  
Sources of Data: Primary and secondary source (govt., non-govt. and syndicated research), Primary Source – Methods of Data Collection: Focus groups, Observations, Case histories; Surveys – survey methods - structured and unstructured, direct and indirect methods, interview media: personal, telephone, internet and mail, questionnaire construction and pre-testing, qualitative and quantitative research, Errors in data collection [5L]
3. Measurement and Scaling  
Primary Measurement Scale: nominal, ordinal, interval, ratio scales, Comparative and Non-Comparative Scales (paired comparison, rank order, continuous rating scale, Itemized rating scale, Likert Scale, Semantic differential scale) [2L]
4. Sampling  
Census vs. Sample, Steps in Sampling Process: Definition of population, Frame, Unit and Element, Sampling Methods: Probabilistic and non-probabilistic sampling techniques and determination of sample size [2L]
5. Analysis of Data  
Classification of data, Hypothesis Testing – Parametric Tests (t-test, z-test, ANOVA and MANOVA) and Non-Parametric Tests (Chi-square test, Mann-Whitney U test, Wilcoxon Signed Rank test). [7L]

**MODULE – II**

6. Predictive Analytics  
Forecasting using Multiple Linear Regression: Assumptions & mathematical model, Evaluation metrics for regression model. [3L]
7. Segmentation Analytics

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- Factors of Customer Segmentation; Clustering – Hierarchical: Agglomerative & Divisive, Partitioning based clustering: K-Means, Finding Optimal number of clusters, Metrics for evaluating clusters [3L]
8. Positioning Analytics  
Perceptual Mapping: Multi-Dimensional Scaling (MDS), Difference between MDS and Principal Component Analysis (PCA) [3L]
9. Consumer Analytics  
Customer Lifetime Value (CLV) – Concept of CLV and its need, Computation of CLV, Comparative methods to CLV: Recency Frequency Monetization (RFM), Share of Wallet (SoW), Past Customer Value (PCV) [3L]
10. Digital Analytics  
Key metrics in digital marketing: Overall Website traffic, Conversion Rate, Customer Rate Optimization, Exit Rate, Bounce Rate, Click-Through Rate, Pay Per Click, Page Views, Unique Page Views, Sessions [2L]
11. Product Analytics  
Concept of Product Designing, Conjoint Model as a decompositional preference model, Steps in Conjoint Analysis, Uses of Conjoint Analysis [3L]
12. Retail Analytics  
Market Basket Analysis (MBA) and its types, Generating Association Rules using Support, Confidence and Lift (examples), Uses of Market Basket Analysis [3L]

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**MM 302: Integrated Marketing Communication**

**Module I**

1. Introduction to Integrated Marketing Communication: Definition, features and role of IMC and its relation with marketing program Concept, Evolution of IMC, Reasons for Growth and Features, IMC Planning Process, Communication Process, AIDA and Hierarchy of Effect Model, Establishing Objectives and Budgeting: Determining Promotional Objectives, Sales vs. Communication Objectives, DAGMAR, Problems in setting Objectives, and Setting Objectives for the IMC Program, New Trends in IMC, Budgeting approaches – different methods, allocation of budget [4L]
2. Sales Promotion: Definition, Reasons for rapid growth of sales promotion, Objectives of sales promotion, Types of sales promotion, Tools and techniques of consumer and trade promotion with merits and demerits, Role of sales promotion in IMC programme [2L]
3. Public Relations, Publicity and Corporate Advertising: Definition, New role of PR, Objectives, tools and techniques of public relations with merits and demerits, corporate advertising-scope and types, role of PR in IMC programme, Types of publicity [2L]
4. Personal Selling and Direct Marketing: Definition, Objectives, Types, Tools and techniques [2L]
5. Advertisement: Definition, features and role of advertising, Relationship of advertising with other promotional mixes and marketing mix elements, Various forms of Advertising: (national, retail, cooperative, trade, industrial financial, corporate, public services, political), Advertising Industry: Advertising agencies and support organizations, Types of agencies, Structure, role and functions of ad agencies, Agency compensation and evaluation, Designing an Advertisement: Different dimensions, creative process, developing a creative brief, Creative Strategies: Message structure and approaches, Message appeals- rational, emotional, Rossiter-Percy Grid, Execution Frameworks: for print and electronic media - copywriting, body copy, headlines, layout, visuals, slogans, logos, signatures, storyboards [8L]
6. Media Strategies: Media planning process, Media buying, Media mix, Coverage, Reach, Frequency, Impact, Scheduling, Different types of media – television, radio, print, outdoor, digital –characteristic and features, advantages and limitations, Factors influencing the choice of media flows and functions. [2L]

**Module II**

7. Fundamentals of Digital Marketing: concept, types, implementation and benefits of digital marketing [2L]

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8. Search Engine optimization: concept of Search Engines optimization, how SEO operates, website domain, file name, design layouts, optimized keywords, keyword frequency weightage, prominence, placement of keywords, finding keyword, word stemming, meta-tag-optimization, title optimization, anchor optimization, mobile SEO techniques. [8L]
  
9. Social Media Marketing: concept, as a marketing tool, importance of social media marketing, social marketing strategy for business, key concepts, business profile creation, brand awareness, social engagement; Viral marketing, tools of measurement of popularity, traffic, analytics and statistics; Facebook marketing: overview-types of facebook pages, growth of business through facebook; profile page setup, page navigation, influencer, ad options, page promotion, identity target ,likes philosophy, create and engaging fans, call to action, video promotion, marketing tricks, FB analytics. Twitter Marketing: Concept, advantages, implementation of twitter; creation of twitter account, follower growth, hash tags, sponsor of twitter/hash tags, twitter analytics. Google+: Concepts, advantages, creating page on Google+, customization, integration with website/blog, increase in followers, promotion and tools. Instagram: Benefits, Popularity, promotion and growth of business using Instagram. LinkedIn: concept, benefits, promotion and growth of business using linkedin [10L]



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**MM 303 – CONSUMER BEHAVIOUR**

**MODULE I**

1. Consumer motivation, the interdependence of needs and goals, Role of defense mechanisms in understanding consumer's needs, motivations and arousals, types of needs, self and self-image, extended self, multiple selves, virtual self, Gender roles [6L]
2. Consumer Decision Process: Various models of consumer decision making, Decision making as problem-solving, Four views of consumer decision making – economic, passive, cognitive, and emotional, Types of the decision process - complex decision making, variety seeking, impulse buying, loyalty, degree of involvement in buying, use value and exchange value, value – A Marxian discussion, consuming and possessing, Consumption of Veblen goods, Role of technology in consumer decision making, Sustainable consumption [8L]
3. SOBC theory, Sensation, Perception, Perceptual selection, selective perception, perceptual organization, Figure and ground, Stereotypes, Perceptual mapping Ethics and consumer perception, Personality and Attitude formation, structural models of attitude, cognitive dissonance theory, psychoanalytical analysis of consumption of common products and services [4L]
4. Consumer Learning and Memory: Information acquisition and processing, Cognitive learning and other theories of learning, Memory processes, Recognition and Recall, [2L]

**MODULE II**

5. Concept of family, types of families, socialization of family members, family decision-making – husband-wife decision making, the role of children in decision making, family life cycle, changing role of women, Effect of technology in family's consumption basket, Old and new SEC Classification, urban and rural SEC grid, ISEC and New Consumer Classification System (NCCS), [8L]
6. Reference Groups, their types, and influence on consumer decisions, friendship groups, shopping groups, work groups, Formation of the leisure class and affluent society, conspicuous consumption and conspicuous leisure, invidious distinction, canons of pecuniary taste, economic theory of woman's dress, opinion leadership, word of mouth, intergenerational socialization [6L]
7. Culture, subculture, and cross-culture– Consumer theories from sociology and anthropology – consumerism, socialism, communism, and democracy, the role of technology in modifying consumption patterns, technological rationality, application of

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Hofstede's 5 cultural dimensions in understanding consumer behavior

[6L]

**Suggested Readings**

1. Assael, H.: Consumer Behaviour & Marketing Action; South-Western
2. Blackwell, R.D., Miniard, P.W. & Engel, J.F.: Consumer Behaviour; South-Western
3. Hawkins, D.I., Best, R.J. Koney, K.A. & Mookerjee, A.: TMH
4. Kumar: Conceptual issues in Consumer Behaviors; Pearson Education
5. Loudon & Bitta, Della: Consumer Behaviour; TMH
6. Shiffman & Kanuk: Consumer Behaviour; Pearson Education
7. One Dimensional Man – Herbert Marcuse
8. System of Objects – Jean Baudrillard
9. The Theory of the Leisure Class by Thorstein Veblen
10. Culture's Consequences by Geert Hofstede

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**FM 301: Security Analysis & Portfolio Management**

**MODULE I:**

1. Investment alternatives and Objectives [2L]
2. Risk and Return: Definition of Risk and Return- Different types of Risk measurement of Risk and Return of single security – Beta of Security. [3L]
3. CAPM Model: Idea and interpretation - SML and CML. Analysis and interpretation– Usefulness. [4L]
4. Security Analysis: Concept of Security- Fundamental and Technical Analysis, Economic Analysis , Company Analysis ,Industry Analysis Difference between Fundamental and Technical Analysis – support and resistance Charts and graph – line chart – Candlestick Chart – various patterns) – Dow Theory – Elliot Wave Theory. [6L]
5. Security Valuation: Valuation of Bond – YTM and its calculation- Duration of Bond– Concept of Immunization- Valuation of Shares. [5L]

**MODULE II:**

1. Portfolio Concept: Concept of portfolio , Brief idea on Portfolio Management, measurement of Portfolio risk and return, [4L]
2. Portfolio Theory: Markowitz Portfolio theory – Efficient Frontier and selection of Optimum Portfolio. Sharp Single Index Model - Arbitrage pricing theory and Multi Factor Theory, Case studies [7L]
3. Equity Portfolio Management Overview and Strategies, Passive and Active Management [3L]
4. Bond Portfolio Management Strategies - Overview and Strategies, Passive and Active Management [2L]
5. Mutual fund and performance Evaluation : Concept of Mutual fund , trend of Mutual Fund in India , measuring performance of mutual fund , Sharpe's ratio, Treynor's ratio, alpha ratio, and beta [4L]

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**Suggested readings:**

1. Fischer and Jordon, Security Analysis and Portfolio Management, Prentice Hall.
2. Kevin, S, Security Analysis and Portfolio Management, Prentice Hall
3. Copeland, Weston & Shastri, Multinational financial analysis, Pearson
4. Nagarajan & Jayabal, Security analysis and portfolio management, New Age International
5. Avadhani, V.A., Security Analysis and Portfolio Management, Himalaya Publishing
6. Bhalla. B.K. Investment Management, S Chand Publication
7. Tripathi , V., Security Analysis and Portfolio Management Text and Cases , Taxmann's

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**FM 302: Taxation**

**Module I**

1. Basic concepts, Residential Status and Tax Incidence: Individual and Corporate. [3L]
2. Heads of income: Salaries, Income from House Property, Profits and Gains from Business or Profession, Capital Gains, Income from Other sources. [8L]
3. Deduction from gross total income: 80CCC, 80D, 80DDB, 80E, 80G, 80GG, 80GGA, 80C and 80U [3L]
4. Computation of Tax Liability and Filing of Return; Assessment procedure - Self assessment; Advance tax; Tax deduction at source; Tax collection at source ; Minimum Alternative Tax [6L]

**Module II**

1. Tax Planning: Scheme of Tax Planning, Tax Planning for Salaries, Tax Planning for Profits and gains of Business or Profession, Tax Planning for Capital Gains Tax Planning, Case Studies [6L]
2. Customs Act and Valuation; Levy and Exemption: Basic Concepts only [4L]
3. Goods and Service Tax: GST in India. Features and Advantages, Structure of GST in India: CGST, SGST, UTGST, IGST, Taxes subsumed by GST, Commodities kept outside the scope of GST. Procedure for Registration; Deemed Registration, Cancellation of Registration, Revocation of Cancellation of Registration. Levy and Collection of Tax under GST: 16 Rates structure of GST, Scope of supply, Composition Scheme under GST [10L]

**Suggested Reading:**

1. Lal and Vasisht, Direct Taxes, Pearson Education
2. Singahnia, Direct Taxes, Taxman
3. Singhanian, Indirect Taxes, Taxman
4. Bhagawati Prasad, Direct tax law and Practice.
5. Gaur and Narang, Income Tax law and Practices, Kalyani Publisher
6. T. B. Chatterjee and V. Jalan, How to handle - GST-TDS and GST-TCS, GST audit, GST Annual Return, Book Corporation
7. V. Balachandran : Indirect taxation : Goods and Service Tax and Customs Law , Sultan Chand & Sons

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**FM 303: Financial Markets and Services**

**MODULE I:**

1. Indian Financial System: Financial system, Financial Assets, Financial Intermediaries, Financial Markets, Classification, Components of Financial Market, Financial Instruments, Multiplicity of Financial Instruments. [4L]
2. Money Market : Definition, Money Market and Capital Market and their Features, Objectives, Features of a Developed Money Market, Importance of Money Market, Composition of Money Market, Money Market Instruments, Structure of Indian Money Market, Features of Indian Money Market. [4L]
3. New Issue Market : Relationship between New Issues Market and Stock Exchange, Functions of New Issue Market, methods of floating of new Issues, Players in the New Issue Market, general guidelines for new issue, Recent regulations for IPO. [4L]
4. Secondary Market : Introduction, Control Over Secondary Market, Registration of Stock Brokers, Registration Procedure, Listing of securities, Method of Trading in a Stock Exchange, settlement procedure, online trading, defects of Indian capital markets, Depository services, Emergence of NSE, Objectives, Features of NSE Comparative analysis of BSE & NSE functioning. [4L]
5. Commodity Market: Introduction, Commodity Market in India, Commodity Exchanges [2L]
6. Securities and Exchange Board of India: SEBI – Background, Objectives, Functions, Powers, Organization, SEBI and the Central Government, SEBI Guidelines for Primary Market, Secondary Market. [2L]

**MODULE II:**

1. Mutual Funds: Concept - Types - Nature – NAV& SIP – Trends in Indian Mutual Fund Market - SEBI & Mutual Fund, Role of AMFI. [2L]
2. Merchant Banking: Concept -Types -Functions - Trends in Merchant Banking in India - SEBI & Merchant Banking, features, scope and importance of venture capital, Nitin Desai committee on venture capital, Angel investment. [4L]

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3. Leasing & Hire Purchase Finance: Definition of Leasing, Types of Lease, The Leasing Process, Definition of Hire Purchase, Rights of Hirer, Rate of Interest, and Evaluation of Leasing & Hire Purchase as method of financing, Case studies [6L]
4. Financial Services: Discounting, Factoring – meaning, Types, cost and benefits, Factoring v/s discounting; Forfeiting – working of forfeiting, benefits. Securitisation of Debt - Types of securities, structure and benefits of securitization, securitization v/s factoring. [4L]
5. Credit Rating Agencies: Concept - Functions - Different Credit Rating Agencies - Popular Symbols – SEBI & Credit Rating. [4L]

**Suggested Readings:**

1. Fabozzi: Financial Markets & Institutions, Pearson
2. Guruswamy: Financial services and Markets, Thomson Learning
3. Khan: Indian Financial Systems, Tata McGraw-Hill
4. Gordon Natarajan, Financial Markets and Services, Himalaya Publishing
5. Pathak: Indian Financial System, Pearson
6. L. M. Bhole, Jitendra Mahakund, Financial Institutions & Markets – Structure, Growth & Innovation; Tata McGraw Hill

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**HR 301 : HR Analytics and Applications**

**Module 1**

1. **Overview of HR metrics** – Meaning, Importance, Examples of HR metrics. [2L]
2. **Introduction to HR Analytics** – Big Data and Analytics, Objectives of HR Analytics, Its importance and benefits, Stages in HR Analytics, Types of Analytics, Causal Modelling [4L]
3. **HR Analytics and Business Strategy** - HR Analytics and the role of technology. Leveraging HR Analytics for organizational success. Mapping Business Analytics and HR Analytics. IMPACT Cycle. Pillars of HR Analytics Linking HR metrics to business outcomes [4L]
4. **Descriptive & Diagnostic Analytics in HR Analytics:** Understanding Descriptive and Diagnostic Analytics, KPIs, Leading & Lagging Indicators, Overview of Select Tools for HR Analytics- MS Excel, Tableau, Power BI, SPSS. Data Visualization through Dynamic HR Dashboards. [6L]

**Module 2**

5. **Performance Management and Analytics** - Metrics and KPIs for performance evaluation, Predictive VS Prescriptive analytics. Linking performance analytics with rewards and recognition, HRIS [6L]
6. **Employee Engagement and Culture Analytics** - Measuring and analysing employee engagement, Cultural diagnostics and alignment with organizational goals, using analytics to enhance employee experience and well-being. [6L]
7. **Training and Compensation Metric** - Goal for world class training Metric, Metric for measuring training effectiveness, and impact; Compensation as a strategic function; Business impact of having weak incentive program; Compensation metric. [6L]
8. **Ethics and Social Responsibility in HR Analytics** - Fairness, transparency, and accountability in HR analytics, Addressing bias and discrimination in algorithmic decision-making, Legal and regulatory considerations. [4L]
9. **Practical Applications and Case Studies** - Real-world applications of HR analytics in different industries, Case studies illustrating successful implementation of HR analytics projects. [2L]



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**HR 302: Manpower Planning, Recruitment & Selection**

**MODULE I:**

1. **Manpower Planning:** Concept, Benefits, Types of manpower planning, Macro Level Scenario of manpower planning, Factors affecting manpower planning, Process of manpower planning, barriers, requisites for successful manpower planning, Linking business plan to manpower plan, timing and sequencing recruitment [4L]
2. **Methods and Techniques :** Demand Forecasting: Managerial judgement, Ratio-Trend Analysis, Work Study Techniques, Delphi Technique, Regression Analysis, New Venture analysis, Markov Analysis, Supply Forecasting: Analysis of existing Manpower, Analysis of internal supply; inflows and outflows, turnover rate, productivity level, movement among jobs, Analysis of external supply, Balancing Supply & Demand, Issues of Shortage and Surplus. [8L]
3. **Job Analysis & Job Evaluation:** Job Analysis - Concepts, Process, Job Description , Job Specification, Uses, Limitations; Job Evaluations – Concepts, Methods, Uses, Limitations, Applying Hay's job evaluation chart to recruitment processes [4L]
4. **Human Resource Information System (HRIS):** Understanding HRIS, its objectives, HRIS Framework, Benefits, Trends, Creating recruitment-focused HRIS Making HRIS interoperable with ERP, Payroll and other technology platforms [2L]
5. **HR Audit, HR Accounting** [2L]

**MODULE II:**

6. **Manpower Planning Implementation Strategies:** Recruitment, Redeployment, Downsizing Plan, Retention Plan, Training Plan, Career Plan, Succession Plan, Compensation Plan and benchmarking exercises [4L]
7. **Strategic Manpower Planning:** Concepts, objectives, SMP Process, Tools, Evaluation, Balanced Score Card, HR Dash Boards, HR scorecard, poaching, war for talent [2L]
8. **Recruitment and Selection:** Concepts, Factors influencing recruitment, reservation rules, resettlement and rehabilitation rules, policy and programmes in Public Sector, Private Sector, MNCs, Government Establishments, Educational Institutions, Health Care & Hospitals, Process of Recruitment, Sources of Recruitment, alternatives to recruitment, The New Techniques: Web, Social Media, Recruiting through LinkedIn, Mobile, Recruitment Issues in Core sector, Service sector and IT sector. Role of manpower consultants and head hunters, CXO recruitment [4L]

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9. **Selection:** Meaning, use of selection for competitive advantage, Selection Process- Tests, types of tests, Group Discussions, Interviews, types of interviews, Use of psychometric instruments, Common Interview Problems, Assessment Centres, Gamification, Physical fitness tests, Hiring Decisions, Barriers to effective selection, Evaluation of selection process, making selection effective, Outsourcing and contract labour-gains, problems, issues. [10L]

**Suggested Readings:**

1. Turner, Paul: HR Forecasting and Planning, Jaico Publishing House
2. Armstrong, Michael: AH and book of Personnel Management Practice, Kogan Page, London
3. Dessler, Gary: Human Resource Management, Pearson Education
4. Aswathappa, K: Human Resource Management, Tata McGraw Hill
5. Pattanayek, B: Human Resource Management, PHI
6. Saiyadain, M.S: Human Resource Management: Tata McGraw Hill

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**HR 303: Learning and Development**

**Module -1**

**1. Introduction to Employee Learning and Development**

Learning, Meaning and significance, Overview of learning theories: Behaviorism, Cognitivism, Constructivism. The Learning Process, Mental and Physical Processes, the Learning Cycle, Instructional Emphasis for Learning Outcomes, Learning through unconscious processes – individual and group [4L]

**2. Training and Learning**

Characteristics and Principles of Learning, Bloom's Taxonomy – Adult learning theories: Andragogy for Adult learners, Assumptions in Andragogy, Differences between Androgogy and Pedagogy- Facilitation Theory- Experimental Learning- Action learning- Blended learning and Problem-Based learning – Project Based learning- Learning Enhancement Factor [6L]

**3. Training Needs Analysis and Program Design**

Conducting training needs assessments, types of needs, components of needs, data collection, analysis and interpretation. Meaning and significance of training design and development, principles of training design, design process, identifying the training objectives, determining structure, content, duration, method, learning activities. [8L]

**Module-2**

**4. Training implementation, methods and development**

Effective training delivery techniques (On-the job, Off-the job ,Presentation Methods, Hands-on Methods, Group Building Methods) Choosing Training methods. E-Learning & Use of Technology in Training: Technology's Influence on Training, Technology & Multimedia, Computer-Based Training, Developing Effective Online Learning, Blended Learning, Simulations, Mobile Technology & Training Methods, Intelligent Tutoring Systems, Distance Learning, Technologies for Training Support, Technologies for Training Administration, Learning Management Systems (LMSs), Facilitation skills for engaging adult learners, Handling challenging training situations and participants. [8L]

**5. Assessing Learning Outcomes**

**Evaluation of Training Program**

Meaning, Reasons for Evaluating Training and significance of training evaluation Evaluating training effectiveness, KIRKPATRICK Model, ADDIE Model, Return on

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investment in Training, Types of Evaluation Designs, Considerations in Choosing an Evaluation Design, Addressing barriers to learning transfer and application [6L]

**6. Emerging Trends and Technologies in L&D**

Blended learning approaches, Gamification and simulations in training, Crisis Communication and Persuasion in Digital Era, Leveraging technology for continuous learning and development [4L]

**7. Executive Development**

Concept of Management/Executive Development – Objectives- Importance and principles of Management Development –Process of Management Development - Methods and Techniques of Executive Development: On the Job and Of the job techniques – Career Development and Talent Management- Professional bodies/ Training organizations in India: ISTD, NHRD [4L]

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**OM 301: OPERATIONS STRATEGY**

**Module-I**

- 1. Introduction to Operations Strategy** – Frameworks for strategy and the decision category approach; Developing an operations strategy; Content of Operations Strategy; The Operations Strategy Matrix; Value chain dynamics and operations decisions; Enterprise architecture and operations strategy ; Proactive and Reactive Strategies [4L]
- 2. Key Elements and Decision Categories** – Vertical integration and outsourcing; Business processes; Process technology decisions and multiple plants; Capacity strategy: How to make decisions on capacity and capacity expansion; Facilities strategies and globalization; Managing Biases in Operational Decisions ; Comparisons of plant productivity; Make to Stock v. Make to Order Strategies [4L]
- 3. Capabilities and Different Approaches** – Competing on quality: Sources of quality and different measures of quality; Competing on cost versus competing on availability; Competing on cost versus competing on features and innovativeness; Competition in the various industries: Improving cost and quality. [4L]
- 4. Strategic Operations Planning** – Environmental assessment including assessment of technology and competition, organization position assessment mission, financial and nonfinancial goals, operational forecasts. [4L]
- 5. Modern Approach to Operations Strategy:** Integrating Operations strategy with Marketing, Finance and HR Strategies. International Operations Management. Operations on the Internet: Online Strategies; Coordination and Information Sharing Strategies; Managing risks in Operations; Environmental and Social sustainability strategy. [4L]

**MODULE II:**

- 6. Sourcing Strategies-** Supply Management; Sourcing Risk Management -Supplier Evaluation and Selection; Supplier Scorecard, Sourcing Risk, Supplier Financial Analysis; Introduction to Outsourcing & Off-shoring Strategies; Pros and Cons of different sourcing strategies; Global Sourcing- Basic concept; Globalization, joint ventures ; Trends in Global Sourcing, Importance of Strategic Sourcing; Outsourcing and other Critical Issues – Models for gaining advantage in a global environment; How to position within a value chain; Negotiation-Performance Measurement and Evaluation [6L]
- 7. Pricing & Revenue Management :** Types of Pricing ; Steps involved in setting the Prices ; Multi product and multi-source pricing ; Price Optimization; Pricing Decision ; Price

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Response with Competition ; Price Differentiation and Variable Pricing, Dynamic Pricing ; Markdown Pricing ; Monopoly Pricing ; Differential Pricing ; Customized Pricing ; Role of competitive pricing ; Bid Price and Bid Price control ; Strategic pricing and its implementation, The role of Supply and Demand in Pricing ,the role of costs in pricing ; Relationship between Quality ,Service and Price ; Revenue Optimization ; network and capacity control in revenue management ; Revenue opportunity assessment and revenue benefits measurement; [ 8L]

- 8. Strategy Implementation:** Tracking goal fulfillment, Quality and productivity, Technology Plans - Mechanization and Automation. Simulation: Techniques of simulation, simulating operational scenarios, integrating operations with other functional areas, simulating service operations based on known distributions. [6L]

**Suggested Readings:**

1. Slack, N., Leewis, M. and Sharma, M.G. – Operations Strategy; Pearson India.
2. Krajewski, L.J. and Ritzman, L.P. – Operations Management – Strategy and Analysis; Addison-Wesley Publishers.
3. Garvin, D.A. – Operations Strategy: Text and Cases; Pearson.
4. Tan, K. H. and Matthews, R. – Operations strategy in action: A guide to the theory and practice of implementation; Edward Elgar Publishing.
5. Hayes, R., Pisano, G. and Upton, D. – Strategic operations: Competing through capabilities; Free Press.
6. Hayes, R. – Operations, Strategy and Technology: Pursuing the Competitive Edge; Wiley India.
7. Philips R.L. – Pricing and Revenue Optimization, Stanford Business Book
8. The Oxford Handbook of Pricing Management Edited by Ozalp Ozer and Robert Philips, Oxford University Press
9. Talluri, K. and Van Ryzin, G. – The Theory and Practice of Revenue Management, Springer.
10. Bodea, T. and Ferguson, M. – Segmentation, Revenue Management and Pricing Analytics, Routledge.
11. Makridakis, S., Wheelright, S.C. and Hyndman, R.J. – Forecasting Methods and Application, Wiley.
12. John Hogan, Joseph Zale and Thomas T Nagle: The Strategy and Tactics of Pricing, published 2016 Routledge.

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**OM 302: Supply Chain And Logistics Management**

**Module I:**

1. **Introduction:** Concepts of Supply Chain Management, Value Chain, Cycle Time, Throughput, & Work-in-process, Supply Chain Drivers and Obstacles. [4L]
2. **Supply Chain Structure** – Push-based Supply Chain vs. Pull-based Supply Chain, Trade-off between Push and Pull Strategies, Agile Supply Chain. [4L]
3. **Forecasting Demand:** Bullwhip Effect, Forecasting Models, Understanding Demand Variability, Monitoring & Controlling Forecasts. [4L]
4. **Role of Sales and Marketing in SCM** – Retail Supply chain: Definition, characteristics of retail supply chain, Challenges faced in retail supply chain. Retail supply chain environment: Drivers of retail supply chain change, Globalization concept of retail supply chain, Nature of demand, Quality function deployment, Retail supply chain risk, Retail supply chain metrics. [4L]
5. **Operational Aspects in SCM** – JIT and Kanban in SCM, improvement approaches: PDCA, Kaizen, BPR, Collaborative Planning, Forecasting and Replenishment (CPFR), Reverse Logistics. [4L]

**Module II:**

6. **Logistics Management:** Transportation in SCM– Key Role Players in Transportation, Transportation Modes, Performance Characteristics and Selection, Vehicle Scheduling and Routing, Distribution Management: Warehousing, Factors affecting Location Decisions, Outsourcing Logistics, Role of Third-party Logistics (3PL and 4PL), Multi-modal transport. [6L]
7. **Sourcing and Inventory Management:** Importance of Sourcing in SCM, Buying Decision, Procurement Process, Strategic Sourcing. Need for Inventory Management, Control of Inventory in Retail and Services, Costs in Inventory Management. [4L]
8. **Emerging Trends in Operations & Supply Chain:** Triple Bottom Line Approach to Sustainability, Green Logistics, Environmental Operational Practices, Social Operational Practice in Operations & Supply Chain, Ethical SCM. [2L]
9. **Packing, Packaging and Shipping:** Meaning, Functions and Essentials of Packing and Packaging, Packing for Storage, Overseas Shipment, Inland Transportation, Product content Protection, Packaging Types: Primary, Secondary and Tertiary, Requirements of Consumer Packaging, Channel Member Packaging and Transport Packaging, Shrink packaging, Identification codes, Bar codes, and Electronic data interchange (EDI) in

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Packaging, Universal Product Code, GS1 Standards, Package labels, Symbols used on packages and labels. Shipping concepts: incoterms, export payment methods [6L]

- 10. Supply Chain Analytics:** The Concepts of Descriptive, Predictive, and Prescriptive Analytics in Supply Chain Management, [2L]

**Suggested Readings:**

1. Chandrasekaran, N. – Supply Chain Management – Process, System and Practice; OUP
2. Altekar, R.V. – Supply Chain Management; PHI
3. Chase, R.B., Shankar, R. and Jacobs, F.R. – Operations and Supply Chain Management; MGH
4. Agarwal, D.K. – Supply Chain Management: Strategy Cases and Best Practices; Cengage Learning
5. Chopra S., Meindl, P. and Kalra, D.V. – Supply Chain Management: Strategy, Planning and Operation; Pearson
6. Shah, J. – Supply Chain Management: Text and Cases; Pearson



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**OM 303: Quality Toolkit for Managers**

**MODULE I:**

1. **Quality Philosophies** – Introduction to Quality: Origin, growth, Philosophies and Frameworks, Historical Approaches to Quality, Management Systems that impact the delivery of quality; Company wide assessment of Quality, Quality Planning, Process Management for controlling and improving quality, and Quality Systems and Organization for building and sustaining total quality ; Introduction and benefits of TQM [6L]
2. **Customer Satisfaction and Concept of QFD** – Defining Customer, Customer Perception of Quality, Feedback, Customer Complaints Analysis, Customer Retention , Quality Function Deployment – Introduction, Benefits of QFD, Voice of Customer, House of Quality, QFD Process [4L]
3. **Quality Leadership**– Characteristics and Role of Quality Leaders/Gurus, Strategic Planning and Decision Making [4L]
4. **Principles of Quality costs:** Concept of Quality cost system, Use of Quality cost ; Cost of Achieving Good Quality, Cost of Poor Quality, Optimum Quality Level [2L]
5. **Quality Management Assistance Tools:** Introduction of 7 QC Tools ;Application of each QC Tool in Problem solving ; Failure Mode and Effects Analysis – Reliability and Reliability Requirements, Failure Rate, Stages of FMEA [4L]

**MODULE II:**

6. **Quality Control and Quality Assurance** - Statistical Process Control ; Acceptance Sampling Plan, Control Charts – Mean and Range Charts, p-Chart, np-Chart, c-Chart [6L]
7. **Continuous Process Improvement** - PDCA / PDSA Cycle, Quality Circles, Poka yoke, Kaizen, Theory of Constraints, Benchmarking, Business Process Reengineering, Radical Change for improvement - Kaikaku [4L]
9. **Quality Awards& Certification**– Quality Audits, Documentation, Implementing the ISO series: ISO series as a system: Basics of QMS: ISO 9000 [2L]
10. **Six Sigma Implementation** – Introduction to Six Sigma, Process Capability Index CPk, Six Sigma in Manufacturing, DMAIC and DMADV, Technology Development using Design for Six Sigma, Product Design using Design for Six Sigma, Six Sigma in Service Industries [4L]
11. **Lean Manufacturing** – Concept of Value and Waste, Importance of 3Ms- Muda Muri Mura in Organisation; VA, NVA and NNVA activities, Value Stream Mapping, Concept

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and Features of Lean Manufacturing, Lean-Six-Sigma methodology in problem solving  
[4L]

**Suggested Readings:**

1. Besterfield, D.H., Besterfield-Michna, C., Besterfield-Sacre, M. Besterfield, G.H.
1. Urdhwareshe, H. and Urdhwareshe, R. – Total Quality Management; Pearson.
2. Feigenbaum, A.V. – Total Quality Control; MGH
3. Urdhwareshe, H. – Six Sigma for Business Excellence; Pearson
4. Charantimath, P.M. – Total Quality Management; Pearson
5. Omachonu, V.K. and Ross, J.E. – Principles of Total Quality; CRC Press
6. Wilson, L. – How to Implement Lean Manufacturing, Indian Edition; MGH
7. Kanishka Bedi, Quality Management, Oxford

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**BA 301: Data Visualization for Managers**

**MODULE I:**

1. **Overview of Data Visualization & Web Technologies** - Visualize Data, Scalable Vector Graphics and Cascading Style Sheets, java script, vizhub., Making a Face with D3.js. [6L]
2. **Shapes of Data** – Data and Tasks, Loading and Parsing Data with D3.js [4L]
3. **Marks and Channels** – Encoding Data with Marks and Channels, Rendering Marks and Channels with D3.js and SVG, D3 Scales, Creating a Scatter Plot with D3.js [6L]
4. **Common Visualization Idioms** - Reusable Dynamic Components, Bar Chart, Vertical & Horizontal, Pie Chart and Coxcomb Plot, Line Chart, Area Chart [4L]

**MODULE II:**

5. **Visualization of Spatial Data** -Networks, and Trees, Making Maps, Visualizing Trees and Networks, Using Color and Size in Visualization [4L]
6. **Encoding Data** – Encoding using Color, Encoding using Size, Stacked & Grouped Bar Chart, Stacked Area Chart & Stream graph, Line Chart with Multiple Lines. [6L]
7. **Interaction Techniques** – Interaction with Unidirectional Data Flow, UI elements to control a scatter plot, Panning and Zooming on a Globe, tooltips [4L]
8. **Multiple Linked Views** – Small Multiples, Linked Highlighting with Brushing, Linked Navigation: Bird's Eye Map [3L]
9. **Data Reduction** - Histograms, Aggregating Data with Group - By, Hexbin Mapping, Cross filtering [3L]

**Suggested Readings:**

1. Scott Murray: Interactive Data Visualization for the Web - 2ndEdition
2. Elijah Meeks: D3.js in Action - 2<sup>nd</sup> Edition
3. Jacques Bertin: Semiology of Graphics
4. Leland Wilkinson: The Grammar of Graphics
5. Hadley Wickham: ggplot2z Elegant Graphics for Data Analysis

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**BA 302: Modeling Techniques**

**MODULE I:**

1. Introduction to Data Modeling: Data Model Concept, Goals, Stages of Modeling, Applications of different types of data models, Importance of data modelling in business. [4L]
2. Data Preprocessing: Data types, Quality, Descriptive data summarization – central tendency and dispersion measure, Data cleaning, Outlier detection, Data integration & transform, Data reduction. [4L]
3. Non-parametric test: Goodness of Fit, Test of independence, Wilcoxon Sign rank test, Mann-Whitney-U test, K-S test. [6L]
4. Classification & Prediction: Decision Tree, Bayesian classification, Discriminant Analysis, Prediction – Linear Regression [4L]

**MODULE II:**

5. Linear Modeling: Theory of linear estimation, Gauss Markov linear models (concepts only), least square estimators, estimation of error variance, properties of least square estimators. [4L]
6. ANOVA & DOE: One and Two way classifications, Types of Experimental Designs [6L]
7. Elements of Decision Theory: Decision making under certainty, uncertainty and risks. Concepts of Decision Modeling. [6L]
8. Simulation Modeling : Monte Carlo simulation, using random numbers, Applications in inventory analysis, Waiting lines, Maintenance and finance areas. [4L]

**Suggested Readings:**

1. David Levine, Mark Berenson and Timothy C.Krehbiel: Basic Business Statistics
2. Jacquelyn G Blac: Business Statistics: Contemporary Decision making
3. Amir Aczel: Complete Business Statistics
4. Hoberman Steve: Data Modeling Master Class Training Manual
5. William W.Gregory: The Data Modeling Handbook: A Best–Practice Approach to Building Quality Data Models
6. Adrienne Watt: Database Design – 2<sup>nd</sup> Edition

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**BA 303: Data Science using R**

**MODULE I:**

1. Programming in R: Basics of R, Conditional and loops, R packages / libraries, Data mining, GUI in R, Data structures in R, Exceptions / debugging in R [6L]
2. Data Wrangling : Reading CSV, JSON, XML, .XLSX and HTML files using R, ETL operations in R, Sorting / merging data in R, Cleaning data, Data management using dplyr in R [4L]
3. Modeling in R: Linear regression model in R, Multiple linear regressions model, Representation of regression results, Non Linear Regression [10L]

**MODULE II:**

4. Mining Algorithms using R : Association analysis, Market-based analysis / rules, Apriori algorithm, Segmentation analysis – types of segmentation, k – means clustering, Bayesian clustering, Principal Component Analysis (PCA) [10L]
5. Time Series Forecasting in R and model deployment : Basics of time series, Components of time series, Time series forecasting, Deploying predictive models [10L]

**Suggested Readings:**

1. R for Data Science – Hadley Wickham and Garrett Grolemund
2. MOTWANI, Bharati Data analytics with R. - New Delhi: Wiley India, 2023
3. R for Everyone : Advanced Analytics and Graphics – Jared P.Lander
4. The R Book – Michael J.Crawley
5. R and Data Mining : Examples and Case Studies – Yanchang Zhao
6. Data Analytics using R – Seema Acharya, Mc Graw Hill Publication
7. Introduction to data science: practical approach with R and Python / by B. Uma Maheswari and R. Sujatha. - New Delhi: Wiley India, 2023

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**SM 301: System Development and Project Management**

**MODULE I:**

**Chapter 1: INTRODUCTION**

Concept of a Project, Project Attributes: Time, Cost, Scope; What is Project Management: Features of projects, Project Classification, Project Management Tools and techniques; Responsibilities of a Project Manager, Project Life Cycle: Project Initiation, Planning & Design, Execution & Controlling, Closure [4L]

**Chapter 2: TECHNOLOGY**

A systems view of project management, The Context of IT Projects; Software Projects, Software Development Process: Waterfall, Spiral, Prototype Model, Iterative Model, Agile development model and Scrum; Requirements Engineering [4L]

**Chapter 3: PROJECT SCHEDULING**

Developing the Project Schedule, Scheduling Tools, Developing Project Budget: Costing, Budgeting, Monitoring System Performance, Key Project Metrics and Developing Project Metrics [6L]

**Chapter 4: PROJECT RISK MANAGEMENT**

The Importance of Project Risk Management: Processes and outputs, Common Sources of Risk in Information Technology projects, Risk Breakdown Structure, Qualitative Risk Analysis, Quantitative Risk Analysis, Using Software to Assist in Project Risk Management [6L]

**MODULE II:**

**Chapter 5: PROJECT PROCUREMENT**

Planning Purchases and Acquisitions (Procurement Planning): Tools and Techniques for Procurement Planning, Requesting Seller Responses (Solicitation): Tools and Techniques for Solicitation, Source Selection (Selecting Sellers): Tools and Techniques for Source Selection, Contract Administration: Tools and Techniques for Contract Administration, Using Software to Assist in Project Procurement Management, Benefits of Outsourcing [7L]

**Chapter 6: CHANGE MANAGEMENT**

Objectives, The Nature of Change: The ADKAR Model, Develop a Strategy for Change, Implement Change Management Plan and Track progress, Dealing with Resistance and Conflict, Project Library Management and Version Control, Case studies [6L]

**Chapter 7: Project Human Resource Management**

The project communications Plan, Project leadership, Multidisciplinary teams [2L]

**Chapter 8: PROJECT IMPLEMENTATION**

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Project Implementation: 1) Direct Cutover 2) Parallel 3) Pilot 4) Phased; Administrative  
Closure: Closing the Project, Project Evaluation [5L]

**Suggested Readings:**

1. Harold Kerzner; Project Management: A Systems Approach to Planning, Scheduling and Controlling– Wiley India
2. Anna Murray; The Complete Software Project Manager: Mastering Technology from Planning to Launch and Beyond – Wiley India
3. Neal Whitten; Managing software development projects–Wiley
4. Richard E. Fairley; Managing and Leading Software Projects – Wiley
5. Joseph Phillips; IT Project Management – Tata McGraw Hill Edition
6. Frank F. Tsui; Managing Software Projects– Jones and Bartlett Publishers

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**SM 302: Relational Database Management System**

**MODULE I:**

1. DBMS: What is a DBMS? Need for using DBMS. Concepts of tables, records, attributes, keys, integrity constraints, 3-schema architecture, data independence. Data models – Hierarchical, Network, Relational [6L]
2. The Relational Model, Language & Systems: The Relational Data Model & Relational Algebra. SQL: DDL, DML, & DCL concepts, SQL commands (ANSI standard). Oracle 8 or above / MSSQLServer / MSAccess [12L]
3. Integrity and Security: Integrity constraints, concept of triggers, stored procedures (theoretical concepts only); Database Security & Authorization (concept of GRANT / REVOKE). [2L]

**MODULE II:**

4. Database Design: ER modelling [Entity-Relationship Diagrams (ERD), construction of tables], Functional Dependencies & Normalization (upto 3NF; concept of BCNF), Denormalization. Case Study on Normalization. [5L]
5. System Implementation Techniques: Query Processing & Optimization (concept only). Transaction Processing Concepts, Concurrency Control and Recovery Techniques (concept only) [7L]
6. Indexing concepts: Ordered indices (primary, secondary, dense, sparse, multilevel), concepts of hashing (static, dynamic) [3L]
7. Advanced Data Models & Emerging Trends : Advanced Data Modeling Concepts, Object–Oriented Databases, Distributed Databases & Client Server Architecture, XML [5L]

**Suggested Readings:**

1. Elmasri, Navathe: Fundamentals of Database System, Pearson Education.
2. Silberschatz, Korth, Sudarshan: Database System Concepts, McGraw Hill International.
3. Date: An Introduction to Database System, Pearson Education.
4. Hopper, Prescott, McFadden: Modern Database Management, Pearson Education.
5. Molina, Ullman, Widom: Database System, Pearson Education.
6. Schaum's Outline Series: Fundamentals of Relational Databases, Tata McGraw Hill.



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**SM 302: Business Decisions Using Advanced Excel**

**Module I:**

1. **Basics of Excel:** Concepts of worksheets & workbooks, Menu & Ribbon, Cell Referencing, Entering & Formatting data, Date & Time functions, Text functions, [4L]
2. **Visualizing data using Charts and Graphs:** Tables, Charts, Types of charts, Formatting charts, Dynamic Named Ranges, Dynamic Charting [3L]
3. **Functions in Excel:** Formulas tab, Basic Functions, Statistical functions, Financial functions, Logical functions, Mathematical functions like Sumif, Countif etc., Lookup & Reference functions, Engineering functions. [4L]
4. **Sorting, Searching and Filtering Data:** Using functions to find, update and sort data, Auto-Filter, Advanced Filter, Error Proofing, Conditional Formatting, Data Validation [5L]
5. **What-If Analysis:** Data Tables, Goal seek, Scenario Manager, Solver. [4L]

**Module II:**

6. **Pivot Table Reports & Charts:** Slicing and Dicing data, Drill down and roll-up [4L]
7. **Statistical Analysis:** Using Data Analysis Add-in, Descriptive Statistics, Scatter plot, Histogram, Rank & Percentile; Correlation, Covariance, Regression, ANOVA, t-test, Z-test, F-test; Time series data Analysis, Moving Average, Exponential smoothing; Random number generation; Sensitivity analysis: Forecasting techniques and Simulation. [8L]
8. **Getting External Data:** Data Cleaning, Audit Tool, Import/ Export Data: Text, Web, Database [4L]
9. **Using AI with Excel:** Application of ChatGPT [2L]
10. **Case Studies** (may include company financial reporting and statement analysis, project finance, event management, personal finance and investment analysis etc.) [2L]

**Suggested Readings:**

1. Bill Jelen, Tracy Syrstad: Microsoft Excel 2019 VBA and Macros, Microsoft Press
2. David Whigham, Business Data Analysis Using Excel, Oxford
3. Ritu Arora, Advance Excel 2016: Training guide, BPB Publications
4. John, Microsoft Excel 2016 Bible, Wiley
5. URL: excel-easy.com

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6. Shmuel Oluwa, Hands-On Financial Modeling with Microsoft Excel 2019: Build practical models for forecasting, valuation, trading, and growth analysis using Excel 2019, Packt Publishing Limited
7. Wayne L Winston, Microsoft Excel 2019: Data Analysis & Business Model, PHI

**HCM 301: HOSPITAL SUPPORT SERVICES**

**MODULE I:**

1. Overview: Hospital Operations Management, role and decisions, Difference of hospital operations from other service and manufacturing organizations. [4L]
2. Out Patient Services: Overview of the department, day care, accident and emergency services, physical medicine and rehabilitation, occupational therapy unit, Physiotherapy department [4L]
3. In Patient Services: Ward design (general & specialized), critical care services – ICU, CCU, NICU, , medical services, surgical services – operation theater, nuclear medicine, burn unit, nursing services and administration. [4L]
4. Specialty Services: Pediatric, OBG & GYN, ENT, Ophthalmology, Orthopedic, Psychiatry, Anesthesia, Dental. [4L]
5. Super-Specialty Services: Cardiology, Thoracic Surgery, Neurology, Neurosurgery, Nephrology- Dialysis Unit, Transplantation Services. Evolution and organization of private health systems in India and Current trends in private health care in India. [4L]

**MODULE II:**

6. Support Services: Diagnostic-Radiology & Imaging Services, Hospital Laboratory etc., Blood Bank & Transfusion Services, Ambulance Services, Pharmacy, CSSD, Oxygen Manifold/Concentrator, Dietary Service, Hospital Laundry and Linen, Medical Social Worker, Marketing and Public Relations, Finance and Administrative Departments, Outsourcing. [6L]
7. Utility Services: Housekeeping, Hospital Engineering and Maintenance, Biomedical Department, Central Stores and Purchase Department, Medical Records-confidentiality of records, reception, enquiry, registration and admission, central billing and accounts, Cafeteria/canteen, Mortuary. [6L]
8. Hospital Acquired Infection: Source and Control, Modern trends in Hospital Administration, Disaster Management, Information Systems, Telemedicine. [4L]

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9. Disaster Management Services: Basics of disaster management and Mass casualties, Components of disaster plan: pre-hospital and hospital, Disaster alertness in Hospital Disaster management planning and implementation, Severity of illness amongst disaster victims and risk assess, Triage. [4L]

Suggested Readings

1. Kunders, Designing for Total Quality in Healthcare, Prism Books Pvt. Ltd.
2. Kunders, Facilities Planning and Arrangement in Healthcare, Prism Books Pvt. Ltd.
3. Sakharkar, Principles of Hospital Administration & Planning-Jaypee Publishers.
4. Goel, S L, Healthcare Systems and Management, Deep and Deep Publications.
5. Tabish, Syed Amin, Hospital Planning, Organization and Management
6. Srinivasan A V, Managing a modern hospital, Response Books.

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**HCM 302: CONCEPT OF HEALTH, DISEASE AND HEALTHCARE**

**MODULE I:**

1. Basic Concept of Health: Meaning of Health & Wellbeing, Genesis & development of concepts of Health, Determinants of Health –Biological, Behavioral, Socio-economic, Cultural, Environmental, and Geographical etc. Determinants of health, Evolution of medicine & Public Health, Health indicators, Health service philosophies [6L]
2. Health and Disease: Concept, Definitions & Meaning of Disease, Disease Control and Levels of Prevention, Changing pattern of diseases, Concept of Health indicators Disease & causation, Changing patterns of disease, Disease classification and International Health (WHO, WB, UN), Medical sociology –Introduction Sociological perspective of health, illness and healing. Institutional perspective and Organizational perspective [6L]
3. Concepts of Healthcare: Primary Health care, Healthcare versus Medical Care, Determinants and Indicators of Health, Health situation and Trends in India. [2L]
4. Health Policy & Government Health Programs/ Systems: National Health Policy of India, Policies for ESI, Railways, Military, etc. Public and Private Health Care Services in India: Evolution of public health systems in India, Health Planning in India, National Health Policies, Public health systems in India (Center, State, District & Village level) [6L]

**MODULE II:**

5. Epidemiology: Principles of Epidemiology, Methods of epidemiology studies, Epidemiology triad, Host defence immunizing agents, disease monitoring and surveillance, Screening and surveys, Investigation of epidemic and role of hospital in its control [8L]
6. Dynamics of disease: transmission Control, Prevention of disease, Immunizing agents, Natural History of disease, Ice berg phenomenon of disease, Basic Concept of Human Anatomy and Physiology, Basic Concept of Medical Terminology. [4L]
7. Medical Sociology: Introduction, Sociological perspective of health illness and healing, Institutional and organizational perspective of Medical Sociology, Health seeking behaviour of various social groups. [4L]
8. Ecology of health: Definition, Concept, Components, Major environmental health problems in Industrialized and Developing countries. [2L]

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9. Globalization and Health: Role of Healthcare Institutions in Global Health System, Emergency, Disaster Preparedness and Response activities. [2L]

Suggested Readings:

1. Park K, Text Book of Preventive and Social Medicine. Banarsidas Bhanot Publishers
2. Gupta M C, Chen L C & Krishnan T N, Health Poverty and Development in India. Oxford University Press.
3. White K. The Sage Dictionary of Health and Society. Sage Publications: New Delhi
4. Goel S L. Health Care System and Management: Primary Health Care management. Deep & Deep Publications.
5. Harris M G & Assoc. Managing Health Service: Concepts & Practices. MacLennan & Petty.
6. Bhende A & Kanitkar T. Principles of Population Studies. Himalaya Publishing House.

**MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY**  
**(Formerly West Bengal University of Technology)**  
**Syllabus of MBA**  
**(Effective from 2023-2024 Admission Session)**

**HCM 303: HOSPITAL PLANNING AND ORGANISING**

**MODULE I:**

1. Introduction to hospital planning: Conception of idea, formation of hospital planning team, market survey, feasibility study, selection of location, Financial planning of hospitals. (4L)
2. Macro level planning Conception and commissioning site development, architects brief working drawings and specifications, engineering drawing, equipment planning, bed distribution, space allocation, interior designing and construction of building commissioning, shake down period [10L]
3. Planning of Hospital Facilities: OPD, ICCU, OT, Wards, Emergency Department Planning for the outpatient services, accident and emergency services and day care services, Planning for patient care units, Inpatient services and intensive care units Planning for surgical suites, Planning for labour and delivery suites, LDRP suites. [6L]

**MODULE II:**

4. Planning for laboratory service and blood banking: Planning for imageological services - x-rays, ultra sonography, MRI, CT-scan PET scan and other advances in imageological services [6L]
5. Planning for advanced facilities: Cardiac catheterization laboratory, various endoscopy units, Extra corporeal shock wave lithotripsy, radiotherapy unit, IVF unit, Dialysis unit [6L]
6. Hospital Registration and Licensing. Legal and Environmental Issues (e.g. Fire Safety, CE Act, PNDT Act, Environmental Clearance, Medical gases, Birth & Death Registration, AERB). Planning for supportive services - medical gases, HVAC, housekeeping , CSSD, Food and beverages. [8L]

**Suggested Readings:**

1. Kundurs. J., Planning & Design of Hospitals, Tata McGraw Hill
2. Tabish, Syed Amin, Hospital Planning, Organization and Management [2L]
3. Davies Llewellyn R & Macaulay H M C., Hospital Planning and Administration, Jaypee Brothers, New Delhi.
4. Sakharkar, B. M., Principles of Hospital Administration & Planning, Jaypee Publishers New Delhi.
5. Goel, S. L., Healthcare Systems and Management, Deep and Deep Publications, New Delhi
6. Srinivasan. A. V., Managing a Modern hospital, Response Books, New Delhi