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Third Semester Syllabus

COMPULSARY PAPER

Course Name:	Strategic Management		
Course Code:	MBA 301	**Category:**	Management Science Course
Semester:	Third	**Credit:**	2
L-T-P:	2-0-0	**Pre-Requisites:**	To know the existence of management as a tool for making strategic decision
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To introduce the concepts of strategic management and understand its nature in competitive and institutional landscape
2.	To understand Strategy formulation process and frameworks, tools and techniques of strategic analysis and its application.
3.	To know Key business issues/challenges/problems of business in light of dynamic business environment
4.	Identification, appreciation and interpretation of the critical challenges and opportunities before an organization.

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1.	**Introduction to strategy:** Concepts, relevance and benefit, Levels of strategy, strategic management as a process, strategic intent - Vision, Mission, Goals, Objectives, Policies, formulation of vision, mission and objectives.	4
2.	**Environmental Scanning:** Environmental Scanning— Features of Environmental Analysis—Techniques of Environmental Scanning SWOT Analysis- Meaning, Steps and Advantages and disadvantages. External Environment Analysis- concept of environment, porter's five force analysis Internal Environment Analysis - Strategic Advantage Factors	4
3.	**Types of Strategies:** Corporate Level Strategies; Stability Strategy – BCG portfolio model, Generic strategies; Expansion strategies, Ansoff Matrix, Strategic planning gap, Integration Strategies, Diversification Strategies, sell off, spin off, Cooperative Strategies; Retrenchment Strategies;	4
4.	**Strategic Analysis and Choice:** Process for Strategic Choice—Focusing on a few Alternatives— Considering Selection Factors—Evaluating the Alternatives—Making the Actual Choice—Industry Analysis—Corporate Portfolio Analysis— Display Matrices—Balancing the Portfolio—Portfolio and other Analytical Models—Contingency Strategies.	4

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5.	**Strategic Implementation and Control** Activating Strategies—Nature of Strategy Implementation—Barriers and Issues in Strategy Implementation—Model for Strategy Implementation Strategic Control—Types of Strategic Control—Approaches to Strategic Control—Operational Control—Setting of Standards— Measurement of Performance—Identifying Deviations—Taking Corrective Action—Techniques of Strategic Control	4
Total		**20L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Develop their capacity to think and execute strategically
2.	Demonstrate capability of making their own decisions in dynamic business landscape.
3.	Demonstrate effective application of concepts, tools & techniques to practical situations for diagnosing and solving organizational problems.
4.	Developing and executing strategies and will appreciate its integrative and interdisciplinary nature.
5.	Demonstrate a clear understanding of the concepts, tools & techniques used, theories, background work, concept & research.

Learning Resources:	
1.	Grant, M.A. (2010), Contemporary strategic analysis, John Wiley & Sons, Edition 8th (SIE)
2.	Besanko, David, David Dranove, Mark Shanley and Scott Schaefer. 2009. Economics of strategy, 5th ed. John Wiley & Sons: New York.
3.	Concepts in Strategic Management & Business Policy by Thomas L. Wheelen& J. David Hunger, Pearson
4.	Strategy and the business Landscape by Pankaj Ghemawat; Create Space Independent Publishing Platform,Pearson, Fourth Edition
5.	The Innovator's Dilemma by Clayton Christensen – Harvard Business Review Press

FINANCE MAJOR

Course Name:	**Corporate Finance**		
Course Code:	MBA-FM 302	**Category:**	Management Science Course
Semester:	Third	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	Basic concept of Managerial Finance
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To introduce the functions of finance management and corporate finance
2.	To imbibe basic concepts to take the financial decision making
3.	To analyse capital structure decisions
4.	To analyse investment decisions

Course Contents:

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Module No.	Description of Topic	Contact Hrs.
1.	**Introduction** Introduction to Financial Management: Scope, Objectives, Functions Introduction to Corporate Finance: Meaning of Corporation, Role of Financial Manager, Agency Problem.	4
2.	**Capital Structure:** Concepts, Component of Capital, Leverage, Models of Capital Structure.	6
3.	**NPV as Investment Decision Criteria:** Comparing NPV with other methods of Investment Decisions, The problems of multiple rates of Return, Mutually Exclusive Projects, Capital Rationing. The Investment Decision: The Cash Flow, Equivalent annual Costs, Project Interactions.	6
4.	**Capital Budgeting and Risk:** Company and Project Costs of Capital, Measuring Cost of Equity, Cost of Capital, and Risk Adjusted Discount Rate, Sensitivity Analysis, Monte Carlo Simulation, Real Options and Decision Trees	6
5.	**Alignment of Managers and Owners Goal:** Practical aspects of Capital Investment Process, Information and Capital Investment, Incentives and their role in agency Problem, Measuring and Rewarding Performance: EVA, Pros and Cons of EVA	4
6.	**Market efficiency and Corporate Financing:** Basics of EMH, The Anomalies, The lessons for the Corporate Manager	4
7.	**The Financing Decision:** The Financing Process, The Financing Mix: Tradeoffs and Theory, The Optimal Financing Mix, The Financing Mix and Choices	4
8.	**The Dividend Decision:** Dividend Policy, analyzing Cash Returned to Stockholders, Buybacks, Spinoffs, and Divestures	4
9.	Case Study	2
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	To extend basic knowledge on corporate finance and goal of financial management
2.	To classify different finance functions including capital structure, financing mix and the dividend decision criterion
3.	To choose different capital budgeting technique by considering conventional and non-conventional cash flows and analyse market efficiencies and anomalies in corporate finance.
4.	To build the strong understanding between managers and owners goal

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Learning Resources:	
1.	Brealey, R.A., Myers, S.C., Allen, F. and Mohanty, P., Principles of Corporate Finance, 10th Edition, Tata McGraw-Hill Publishers, 2012.
2.	Damodaran, A., Applied Corporate Finance, 3rd Edition, Wiley, 2012.
3.	Copeland Weston Shastri: Financial theory and Corporate Policies, Pearson Education
4.	Kidwell, D. and Parrino, R., Fundamentals of Corporate Finance, Wiley India Pvt. Ltd., 2011
5.	Madura, J., International Corporate Finance, 10thEdition, Cengage Learning, 2012.
6.	Ross, Westerfield and Jaffe: Corporate Finance, Tata McGraw-Hill

Course Name:	Security Analysis and Portfolio Management		
Course Code:	MBA-FM-303	**Category:**	Finance
Semester:	Third	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	The basic concept of Managerial Finance
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To understand the empirical and theoretical implications of the financial environment
2.	To develop and improve analytic abilities and valuation techniques for optimal portfolio management
3.	To apply the knowledge and skills in the decision-making process.

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1.	**Security Analysis & Risk and Return:** Concept of Security- Fundamental and Technical Analysis- difference between Fundamental and Technical Analysis. Definition of Risk and Return- Different types of Risk- measurement of Risk and Return of single security of Security Beta.	6
2.	**Valuation of Bonds:** Valuation of Bond—YTM and its calculation- Duration of Bond- Concept of Immunization—Valuation of Shares**.**	8
3.	**Valuation of Securities:** Introduction- Important Features- Basis of Valuation. Time value of Money- Income Capitalization method- Dividend Capitalization method- Price Earnings Ratio- Other Methods.	6
4.	**Portfolio Theory:** Concept of Portfolio, measurement of Portfolio risk and return, Markowitz Portfolio theory- Sharp Single Index Model - Arbitrage pricing theory, and Multi-Factor Theory.	8
5.	**CAPM Model**: Idea and interpretation - SML and CML. Analysis and interpretation- Usefulness.	8
6.	**Other Contemporary Theories**: Efficient Market Theory / Hypothesis– (support and resistance- Charts and graph– line chart – Candlestick Chart – various patterns) – Dow Theory –Elliot Wave Theory.	4
Total		**40L**

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Course Outcomes:	
After completion of the course, students will be able to:	
1.	Analyze and evaluate financial markets, how securities are traded, mutual funds, investment companies, and investor behavior.
2.	Construct optimal portfolios and illustrate the theory and empirical applications of asset pricing models.
3.	Explain macro and industry analysis, equity valuation, financial statement, and technical analysis.
4.	Analyze bond prices and yields and fixed-income portfolios.
5.	Characterize the implications of the market efficiency evidence on active portfolio management.
6.	Explain what options and futures are and their use as hedging instruments.

Learning Resources:	
1.	Bhalla. B.K. Investment Management, S Chand Publication
2.	Avadhani, V.A., Security Analysis and Portfolio Management, Himalaya Publishing
3.	Nagarajan & Jayabal, Security analysis and portfolio management, New AgeInternational
4.	Copeland, Weston & Shastri, Multinational financial analysis, Pearson

Course Name:	Taxation		
Course Code:	MBA-FM 304	**Category:**	Management Science Course
Semester:	Third	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	Basic concept of Managerial Finance
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To introduce the concept of direct and indirect taxation
2.	To understand the heads of income and tax calculation process
3.	To have an overall knowhow about the GST
4.	To properly conduct tax planning

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1.	**Concepts:** Cannons of Taxation, Person, Assessee, Income, Previous Year, Assessment Year, Gross Avoidance, Planning, Exemption, Planning, Exemption, Deduction, Rebate, Relief Residential Status and Tax Incidence: Individual and Corporate.	6
2.	**Income Exempted from Tax:** Individual and Corporate.	2
3.	**Computation of Taxable Income of Individual, HUF, Firm and Corporate:** Heads of Income –Salaries, Income from House Property, Profits and Gains from Business or Profession, Capital Gains, Income from Other sources. Deduction from Gross Total Income – 80CCC, 80D,	8

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	80DDB,80E, 80G, 80GG, 80GGA, 80C, 80U; Set Off and Carry Forward of Losses – Principles, Meaning, Inter – sources and Inter – head Set Off, Carry Forward and Set Off of Losses under sections 71, 72and 73.	
4.	**Computation of Tax for Individual, H.U.F, Firm and Corporate:** Rate of Tax and SurchargeTax, Rebate Tax Management – Submission of Return and Procedure of Assessment, Pan, Tan,Preliminary ideas of Deduction and Collection of Tax at Source, Advance Payment of Tax,Refund of Tax, Minimum Alternate Tax.	6
5.	**Customs Act and Valuation:** Basic Concepts only	2
6.	**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	8
7.	**Tax Planning:** Scheme of Tax Planning, Tax Planning for Salaries, Tax Planning for Profits andgains of Business or Profession, Tax Planning for Capital Gains.	6
8.	Case Study	2
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Explain the basic concept of taxation system in India
2.	Analyse the residential status of different assesses and tax liability.
3.	Identify planning, exemption, deduction, rebate, relief and other ways to reduce tax liability.
4.	Assess the Taxable Income of Individual, HUF, Firm and Corporate and different Heads of Income like Salaries, Income from House Property etc.
5.	Identify Indirect tax system in India and Levy and Collection of Tax system under GST rules

Learning Resources:	
1.	Lal and Vasisht, Direct Taxes, Pearson Education
2.	Singahnia, Direct Taxes, Taxman
3.	Singhania, 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, GSTAnnual Return, Book Corporation

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Course Name:	Mergers and Acquisitions		
Course Code:	MBA-FM305	**Category:**	Finance
Semester:	Third	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	The basic concept of Managerial Finance
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To understand the role of mergers and acquisitions in a firm's strategy.
2.	To know the main concepts related to managing mergers and acquisitions.
3.	To be able to apply common frameworks and tools related to mergers and acquisitions.

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1.	**Mergers & Acquisition:** Introduction- Concept of Merger- Traditional & Modern Views- Classification of Mergers. Concept of Acquisition- Types of Acquisition- Distinguish between Merger and Acquisition. Motives behind Merger and Acquisition. Strategies for a Successful M&A- Reasons for failure of M&A. Process of M&A. Financing in M&A. Reverse Merger. Case study.	8
2.	**Takeovers:** Concept of Takeover- Forms of Takeover- Takeover Défense- (Green mail, Crown Jewel, Poison Pill, Flip over, Poison Put, Pac-man Defence, White Knight, Golden Parachute, Leveraged Buyout, Management Buyout, Proxy Fight, Share Re-purchase). Benefits of Takeover- Disadvantages of Takeover. Case study.	6
3.	**Valuation and Accounting Issues:** Concept in Business Valuation- Valuation by Multiples- Business Valuation and Consideration paid in M&A- Brand Valuation- Private Equity and Start-up Valuation. Accounting for Amalgamations.	6
4.	**Due Diligence:** Concept of Due Diligence- Need for Due Diligence- People involved in the Due Diligence process- Parties interested in Due Diligence- Steps in Due Diligence- Types of Due Diligence. Case study.	6
5.	**Post-Merger Issues-** Introduction- Strategies for Post-Merger Success. Post Merger Growth Strategies. Case study.	4
6.	**Cross Border Acquisition:** Concept of Cross-Border Acquisition- Need for Cross-border Acquisition- Benefits of Cross-border Acquisition. Case Study.	4
7.	**Alternatives to M&A:** Introduction- Concept of Divestitures- Types of Divestitures- Reasons for Divestiture- Benefits of Divestiture. Strategies Alliances- Why do companies enter into Strategic Alliances- Types of Strategic Alliances- Benefits of Strategic Alliances- Weaknesses of Strategic Alliances.	6
Total		**40L**

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Course Outcomes:

After completion of the course, students will be able to:	
1.	To know about business expansion strategies.
2.	To gain knowledge from different live cases on Mergers & Acquisitions and their complexities.

Learning Resources:

1.	Sheeba Kapil & Kanwal N. Kapil "Merger &Acquisition (Strategy, Valuation, Leveraged Buyouts, and Financing)" Wiley (2nd Edition)
2.	Aurora, Shetty, Kale "Merger and Acquisition" Oxford.
3.	Abdol S. Soofi (2014), Global Mergers and Acquisitions: Combining Companies across

BUSINESS ANALYTICS MAJOR

Course Name:	Artificial Intelligence and machine Learning		
Course Code:	MBA-BA302	**Category**:	Business Analytics
Semester:	Third	**Credit**:	4
L-T-P:	3-0-1	**Pre-Requisites**:	Programming Knowledge, Algorithm Design
Full Marks:	100		
Examination Scheme:	Semester Examination: 70	Continuous Assessment: 25	Attendance: 05

Course Objectives:

1	To understand the basic concepts of AI and its use as optimization technique.
2	To understand different search strategies and Resolution in AI.
3	To understand classification and clustering methodology
4	To understand Deep Learning Paradigms.

Course Contents:

Module No.	Description of Topic	Contact Hrs.
1.	Introduction To Artificial Intelligence(AI), Machine Learning(ML), Deep Learning(DL): Definitions, AI Vs. ML Vs. DL, Role of AI/ML/DL in Business: Use cases in marketing, finance, HR, and operations.	3
2.	AI Agents: Design, Fucntionality, Limitations, Examples. Different types of AI Environment, Introduction to State Space with example.	2
3..	Uniformed search strategies – Breadth first search, Depth First Seach and their completeness, optimality, complexity and suitable environment to use	2
4.	Informed Search: Greedy Best First Seach, A*their completeness, optimality, complexity and suitable environment to us	2

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5	Introduction to Supervised Learning, Regression, Classification, Linear regression, Logistic Regression, Naïve Bayes clasifier, K-Nearest Neighbour, Decision Tree, Case Studies like, Sales Forecasting, Spam detection, Product reccomendation, Sentiment analysis etc.	6
6	Performance Evaluation metric: Mean Squared Error, R-Squared, Precision, Recall, F1 Scoe, Cross Validiation, Selecting appropiate evaluation metric.	2
7.	Introduction to Unsupervised Learning, Types of clusters, Clustering Algorithm: K-means clustering, Hierarchical clustering, Density based clustering.Case studies like Customer Segmentation, Fraud detection, Market Basket Analysis etc.	5
8.	Introduction to Artificial Neural Networks, Neurons, Activation functions, Feedforward Neural Network, Structure and workflow, Case studies like Demand Forecasting, Retail etc.	5
9.	Introduction to reccomendation system, and its applications, Content-Based Filetering, Colaborative filtering, Case study	2
10.	Introduction to Large Language Model	1
Total		**30**

Course Contents: Practical		
Module No.	**Description of Topic (Practical)**	**Contact Hrs.**
1.	Install and configure Integrated Development Environments (IDEs) such as Jupyter Notebook and Google Colab for business analytics tasks, Installation and overview of essential Python libraries like Numpy, Pandas and Matplotlib.	2
2.	Perform data preprosessing like, handling missing value, removal of outliers,feature scaling, feature engineering and apply different visualization techniques like box plot, bar plot for univariate analysis, scatter plot for bivariate analysis and heat maps, pair plot for multivariate analysis.	4
3..	Implement Naïve Bayes classifier using scikit-learn for classification task like predicting customer categories or purchasing behavior.	2
4.	Implement k-nearest neighbours classification for classification task like classify customer based on patterns in transactional or behavioral data.	2
5	Implement Linear regression using scikit-learn for regression task like predict monthly sales based on historical sales data, seasonal trends, marketing spend and other relevent features.	2
6	Implement logistic regression using scikit-learn for classification task	2
7.	Implement Decision Tree using scikit-learn for classification task like grouping customers based on purchase behavior, age, income levels, engagement with marketing campaigns and other relevent features.	2

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8.	Implement K-means clusteing using scikit-learn for classification like like grouping customers based on purchase behavior, age, income levels, engagement with marketing campaigns and other relevent features.	2
9.	Implement Artificial Neural Nertowk using Tensor flow for classification and regression task.	2
Total		**20**

It is recommended that to use relevant data set for each experiment.
https://archive.ics.uci.edu/
https://www.kaggle.com/

Course Outcomes:	
After completion of the course, students will be able to:	
1	Differentiate between the components of AI and Machine Learning
2	Compare & Contrast between several AI searching strategies and different optimization techniques.
3	Investigate different supervised and unsupervised learning techniques.
4	Explain Matrix Factorization and different Deep Learning Techniques.

Learning Resources:	
1	Artificial Intelligence- Ritch & Knight TMH
2	Machine Learning – Tom Mitchell
3	Deep Learning with Python Paperback- François Chollet (Author)
4.	Pattern Recognition & Machine Learning – C.M. Bishop (Springer)

Course Name:	Introduction to Data Science		
Course Code:	MBA-BA303	Category:	Business Analytics
Semester:	Third	Credit:	4
L-T-P:	4-0-0	Pre-Requisites:	Basic understanding of data
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1	Study the fundamental theories, principles and techniques of data science
2	Examine real world examples and cases to place data science techniques in context.
3	Develop data-analytic thinking.
4	Learn to work with popular data science tools and technologies.

Course Contents:		
Module No.	Description of Topic	Contact Hrs.
01	Familiarization of Data Science Evolution of Data Science, Data Science Roles, Stages in a Data Science Project, Applications of Data Science in various fields, Data Security Issues.	04
02	Data Collection and Data Pre-Processing Data Collection Strategies, Data Pre-Processing Overview, Data Cleaning, Data Integration and Transformation, Data Reduction, Data Discretization. Describe data pre-processing with a Use-Case using MS-Excel.	06

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03	Exploratory Data Analytics (EDA) Descriptive Statistics: Mean, Standard Deviation, Skewness and Kurtosis, Box Plots, Pivot Table, Demonstration of the concept using MS-Excel or any other tool. Heat Map, Correlation Statistics.	06
04	Data Visualization Principles of effective data visualization, Popular data visualization tools (e.g., Tableau, Power BI), Best practices for creating informative and engaging visualizations, Representation using a Use-case.	04
05	Model Development Simple and Multiple Regression, Model Evaluation using Visualization, Residual Plot, Distribution Plot, Polynomial Regression and Pipelines, Measures for In-sample Evaluation, Prediction and Decision Making.	06
06	Real Life Project on regression starting from Questionnaire generation, Data collection, Data Pre-Processing, EDA, Model Selection & Development and Model Evaluation using visualization.	06
07	Machine Learning Fundamentals Introduction to machine learning, Types of machine learning (supervised, unsupervised, reinforcement), Popular machine learning algorithms (e.g., linear regression, decision trees), Introduction to Machine Learning Libraries in Python.	05
08	Introduction to Data Science Tools and Technologies Introduction to popular data science tools (e.g., R, Python, SQL), Overview of data science platforms (e.g., Jupiter Notebook, Apache Zeppelin), Best practices for data science workflow management	03
Total		40 L

Course Outcomes:	
After completion of the course, students will be able to:	
1	Incorporate data science principles to address data-dependent questions in the Humanities, social sciences, and sciences.
2	Apply basic exploratory analysis to identify abnormalities in data (i.e., missing values, outliers, redundant features, etc.)
3	Apply the appropriate set of visualization techniques to highlight stories in Data.
4	Apply data science concepts to solve business problems and improve decision making.

Learning Resources:	
1	"Python Data Science Handbook" by Jake VanderPlas
2	Cathy O'Neil and Rachel Schutt , "Doing Data Science", O'Reilly.
3	"Visualize This: The FlowingData Guide to Design, Visualization, and Statistics" by Nathan Yau
4	David Dietrich, Barry Heller, Beibei Yang, "Data Science and Big data Analytics", EMC
5	"The Elements of Statistical Learning" by Trevor Hastie, Robert Tibshirani, and Jerome Friedman
6	Introduction to Data Science: Practical Approach with R and Python by B. Uma Maheswari, R. Sujatha

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Course Name:	IOT and Cloud Computing		
Course Code:	MBA-BA304	Category:	Business Analytics
Semester:	Third	Credit:	4
L-T-P:	3-0-1	Pre-Requisites:	Basic concepts of computer
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1	Provides a comprehensive **overview of IoT and Cloud Computing** concepts, infrastructures, and capabilities.
2	Equips students with **foundational knowledge of IoT systems** and their application in business environments.
3	Introduces the use of **cloud services for processing and storing data** generated by IoT devices.
4	Emphasizes the **architecture and design** of IoT systems including components like sensors, wireless/mobile technologies, and communication protocols.
5	Covers the **data migration process to the cloud** and its operational significance.
6	Aims to develop a **critical understanding of the principles** behind IoT and Cloud Computing technologies.
7	Highlights the **business and commercial implications** of these emerging technologies.
8	Offers exposure to **hardware and software platforms** relevant for cloud-based IoT solutions
9	Includes **hands-on implementation of AWS services** to address real-world business requirements.

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1	**Introduction to IoT &Cloud:** 1:Trends of Computing Topic 2: Introduction to IoT Topic 3: Basics of Networking and Communication Protocols 4.Cloud Computing Fundamentals & Architecture	6
2	**Internet of Things:** Topic 1: Concept of Smart Things / Objects and IoT Architectures Topic 2: IoT Devices and Sensors Topic 3: IoT communication and protocols (MQTT, CoAP, HTTP) Topic 4: Edge vs Cloud Processing and IoT for Business Process Automation	8
3	**Cloud Computing:** Topic 1: Cloud Computing Fundamentals Topic 2: Cloud Computing Architectures Topic 3: Models of Cloud Computing ,Cloud Types and Services Topic 4: Virtualization and Resource Management Topic 5: Data Storage and Resource Management **Hands On [Lab Session] (20P):**	8L+20P

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	Introduction to AWS Services (6P): Setting up AWS Accounts, Navigation of the AWS Management Console, Overview of Key AWS Services: EC2, S3, and RDS	
	Core AWS Services (8P):	
	EC2: Launching Virtual Machines, Managing Instances, and Monitoring.	
	S3: Creating Buckets, Uploading and Managing Objects, Data Lifecycle Management.	
	RDS: Setting up Databases, Managing Connections, and Basic Queries.	
	Data Visualization with AWS (6P):	
	Query data using AWS Athena (serverless SQL) Connect Athena/S3 with Amazon QuickSight Create Interactive Dashboards (KPIs, Trends, Forecasts)	
4	**Application of IoT & Cloud:** Topic 1: IoT and cloud integration Topic 2: Security and Privacy for IoT/Cloud Computing Topic 3: IoT/Cloud Security Challenges • Authentication, Authorization, and Data Encryption Topic 4: Application of Cloud and IoT for different business with use cases (Applications in Supply Chain, Smart Cities, Healthcare, Retail)	8
Total		**30L+20P**

Course Outcomes:	
After completion of the course, students will be able to:	
1	Describe IoT and Cloud architectures and components.
2	Select appropriate sensors and protocols for IoT systems in business..
3	Use AWS services to implement cloud-based solutions.
4	Address security and privacy issues in IoT and Cloud environments.
5	Identify the possibilities of implementation of IoT and Cloud in different business problems.

Learning Resources:	
1	Cloud Computing: Concepts, Technology & Architecture (The Pearson Service Technology Series from Thomas Erl) by Erl Thomas (Author), Puttini Ricardo (Author), Mahmood Zaigham (Author)
2	Cloud Computing: Focuses on the Latest Developments in Cloud Computing by Shailendra Singh, Oxford University Press
3	Cloud computing a practical approach - Anthony T.Velte , Toby J. Velte Robert Elsenpeter,• TATA McGraw- Hill , New Delhi – 2010
4	AWS official Documents : https://docs.aws.amazon.com/
5	"The Internet of Things: Enabling Technologies, Platforms, and Use Cases", by Pethuru Raj and Anupama C. Raman (CRC Press)
6	"Internet of Things: A Hands-on Approach", by ArshdeepBahga and Vijay Madisetti (Universities Press)
7	Internet of Things –by Surya Durbha (Author), Jyoti Joglekar (Author) (Oxford University Press)
8	Cloud Computing (Principles and Paradigms), Edited by Rajkumar Buyya, James Broberg,• Andrzej Goscinski, John Wiley & Sons, Inc. 2011

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Course Name:	Database Management System		
Course Code:	MBA-BA 305	**Category:**	Business Analytics
Semester:	Third	**Credit:**	4
L-T-P:	3-0-1	**Pre-Requisites:**	Basic Concepts of Computer, Set Theory of Mathematics
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1	To understand the different issues involved in the design and implementation of a database system.
2	To study the physical and logical database designs, database modeling, relational, hierarchical, and network models
3	To understand and use data manipulation language to query, update and manage a database.
4	To develop an understanding of essential DBMS concepts such as: database security, integrity and concurrency.

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
01	**Introduction** Introduction and applications of DBMS, Purpose of data base, Data, Independence, Database System architecture- levels, Mappings, Database, users and DBA.	02
02	**Entity Relationship Model** Basic Concepts, Constraints, Keys, Design Issues, Entity Relation-ship Diagram, Weak Entity Sets, Extended E-R Features and Design of an E-R Database Schema Reduction of an E-R Schema to Tables.	04
03	**Relational Model** Structure of Relational Databases, The Relational Algebra, Extended Relational Algebra Operations, Modifications of the Database Views	03
04	**SQL** Basics of SQL, DDL, DML, DCL, structure – creation, alteration, defining constraints – Primary key, foreign key, unique, not null, check, IN operator, Functions - aggregate functions, Built-in functions – numeric, date, string functions, set operations, sub-queries, correlated sub-queries, Use of group by, having, order by, join and its types, view and its types. Transaction control commands – Commit, Rollback, Savepoint.	05
05	**Relational Database Design** First Normal Form, Pitfall of Relational-Database Condition, Functional Dependencies, Decomposition, Desirable Properties of Decomposition, Third Normal Form, Boyce-Codd Normal Form.	04
06	**PL/SQL Concepts** Introduction to Cursors, Stored Procedures, Stored Functions, Database Triggers, Package	03

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07	**Overview of Storage and Indexing** Data on External Storage – File Organization and Indexing – Cluster Indexes, Primary and Secondary Indexes – Index data Structures – Hash Based Indexing – Tree base Indexing.	02
08	**Transaction Management** Transaction concepts, properties of transactions, serializability of transactions, System recovery, Recovery and Atomicity, Log-based recovery, concurrent executions of transactions and related problems, Locking mechanism, deadlock.	03
09	**Database System Architecture** Centralized and Client-Server Architectures, Server System Architectures, Parallel Systems, Distributed Systems	02
10	**A case-study for application of Database Knowledge** Develop a database for a real world system such as a banking system or an Academic Institution or A production unit of a factory etc.	02
Total		**30 L**

Course Outcomes:	
After completion of the course, students will be able to:	
1	Understand database concepts(Flat-file vs. RDBMS), data-storage and query language
2	Design and build a simple database system and demonstrate competence with the fundamental tasks involved with modeling, designing, and implementing a DBMS
3	Apply various Normalization techniques
4	Apply the knowledge of SQL queries related to Transaction
5	Perform PL/SQL programming using concept of Cursor Management, Error Handling, Package and Triggers

Learning Resources:	
1	A Silberschatz, H Korth, S Sudarshan, "Database System and Concepts"
2	R. Elmasri and S.B. Navathe ,"Fundamentals of Database Systems"
3	C. J. Date, "An Introduction to Database Systems"
4	Raghu Ramakrishnan,Johannes Gehrke, "Database Management Systems"
5	Rob, Coronel, "Database Systems"

Course Name:	Database Management System Lab		
Course Code:	MBA-BA	Category:	Business Analytics
Semester:	Third	Credit:	1
L-T-P:	0-0-2	Pre-Requisites:	Basic Concepts of Computer, Set Theory of Mathematics, DBMS Theoretical Concepts
Full Marks:			
Examination Scheme:	Semester Examination:	Continuous Assessment:	Attendance: 5

Course Objectives:	
1	To apply the different issues involved in the design and implementation of a database system.
2	To create different database objects such as tables, views etc.

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3	To understand and use data manipulation language to query, update and manage a database.	
4	To learn how to control access of data in a database.	

Course Contents:		
Module No.	Description of Topic	Contact Hrs.
01	Design a Database and create required tables. Use case Examples may be a Bank Database, College Database etc.	02
02	Apply the constraints like Primary Key, Foreign key, NOT NULL, Unique to the tables.	02
03	Write SQL statements for implementing DML Operations such as INSERT, UPDATE and DELETE, SELECT.	04
04	Write the queries to implement the different types of joins	02
05	Write the SQL query for implementing the following group functions: MAX(), MIN(), AVG(), COUNT() and write nested queries.	02
06	Write the SQL query to implement the concept of Integrity constrains through ALTER Command	02
07	Write SQL query to create views and use them.	02
08	Perform the following operation for demonstrating the insertion, updation and deletion maintaining the referential integrity constraints	02
09	Write the query for creating the users and their role.	02
Total		20 P

Course Outcomes:	
After completion of the course, students will be able to:	
1	To design and build a simple database system and demonstrate competence with the fundamental tasks involved with modeling, designing, and implementing a DBMS
2	Apply DDL Statements in SQL including integrity constraints
3	Apply DML Statements in SQL
4	Apply DCL Statements in SQL for User Management

Learning Resources:	
1	Kauffman, "Beginning SQL Programming", SPD/WROX
2	Ivan Bayross, "SQL, PL/SQL the Programming Language of Oracle"
3	C. J. Date, "An Introduction to Database Systems"

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MARKETING MAJOR

Course Name:	Integrated Marketing Communication		
Course Code:	MBA-MM 302	**Category:**	Management Science Course
Semester:	Third	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	Knowledge of General Marketing
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To understand role of IMC in marketing mix and to implement those accordingly in promotion program.
2.	To understand and implement role of sales promotion in IMC.
3.	To understand and implement role of public relation, publicity and social media marketing in IMC.
4.	To examine the process by which IMC programme is planned and developed.

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1.	Introduction to Integrated Marketing Communication: What is traditional marketing, Definition, features and role of IMC and its relation with marketing program Concept, Evolution of IMC, Reasons for Growth and Features. Promotional Tools for IMC, 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. One Voice Communication V/s IMC. Introduction to IMC tools Advertising, Sales Promotion, Publicity, Public relations, Exhibition and Sponsorship	8L
2.	Elements of IMC: Sales Promotion – Different Types of Sales Promotion, Advantages and Disadvantages. Public Relation and Publicity – Types of PR, Process, Advantages and Disadvantages, Types of Publicity, Direct Marketing – Features, Advantages and Disadvantages, Personal Selling – Features, Advantages and Disadvantages, Advertising – Features, Advantages and Disadvantages, New Trends in IMC, Sponsorship International Media.	6L
3.	Public Relations 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.	4L

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4.	Evaluation of Promotional Effectiveness: Reasons to measure effectiveness, What, when, where, how to test, Testing methods – pretesting and post testing techniques, Essentials of effective measures, Problems with current methods, Measuring effectiveness of other promotional programmes.	5L
5.	Advertisement: Introduction to Advertising, 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), Different Appeals used in Advertising	4L
6.	Advertising Industry: Advertisers, Advertising agencies and support organizations, Types of agencies, Structure, role and functions of ad agencies, Agency compensation and evaluation	2L
7.	Developing the Integrated Marketing Communication Programme: Planning and development of creative marcom. Creative strategies in advertising, sales promotion, publicity, event sponsorships etc. Creative strategy in implementation and evaluation of marcom- Types of appeals and execution styles. Media planning and selection decisions- steps involved and information needed for media planning. Measuring the effectiveness of all Promotional tools and IMC.	6L
8.	Execution frameworks: for print and electronic media - copywriting, body copy, headlines, layout, visuals, slogans, logos, signatures, storyboards. Social Media marketing: Concept, role and features of SMO, SEO and different social media platforms as means of marketing communication	5L
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Understand how IMC fits into the marketing mix.
2.	Understand how the communications process fits into and works in sync with consumer behaviour
3.	Develop an awareness of the connection between marketing communications tools, and how each can be used effectively- individually or as an integrated mix.
4.	Obtain a practical, real-world application of IMC theory.

Learning Resources:	
1.	Clow K.E: , Baack D.: Integrated Advertising, Promotion and Marketing Communications; Pearson
2.	Belch G.E. and Belch M.A: Advertising and Promotion; TMH

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3.	Arens W.F.: Contemporary Advertising; TMH
4.	O'Guinn T. C., Allen C.T.: Advertising and Integrated Brand Promotion; South Western
5.	Terence A. Shimp, J. Craig Andrews : Advertising, Promotion, and Other Aspects of Integrated Marketing Communications; South West Cingage Learning

Course Name:	Sales and Distribution Management		
Course Code:	MBA-MM 303	**Category:**	Management Science Course
Semester:	Third	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	Knowledge of General Marketing
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To manage and implement the knowledge about personal selling, its importance in sales management
2.	To emphasize on the different issues of planning as well as organizing sales force efforts and sales management
3.	To elucidate different aspects of training, development and the process of directing the sales force
4.	To understand and implement the process of controlling sales, marketing channel designing and logistics management

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1.	Introduction to Sales Management: Evolution of sales department, Nature & scope of personal selling & sales management, Roles and functions of a sales manager. Personal Selling: Types of selling situations, Buyer-seller dyad, Theories of selling, Personal selling process (pre-approach, approach, presentation, handling objections, closing a sale, follow-up)	8L
2.	Planning and Organizing Sales Force Efforts: Strategic planning and sales organization, Sales department relations, Distribution network relations, Sales forecasting, Sales budget, Sales objectives, Sales territories and quotas. Sales Force Management: Different personnel functions of a sales manager, Quantitative and qualitative requirements of sales force planning – determination of sales force size, job analysis for type of sales people required. Recruitment and Selection: Sources of recruitment of salespeople, Selection process of salespeople	8L
3.	Training and Development: Need and purpose of training, Types of training, Designing a training programme - ACMEE model. Directing the Sales Force: Supervision, Territory management, Determination of quota/target, Determination of compensation of sales force, Leading and Motivating the Salesforce	8L

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4.	Controlling: Analysis of sales, Costs and Profitability, Evaluation of sales force performance Marketing Channels: Structure, Functions and advantages, Types of channel intermediaries – wholesalers, distributors, stockists, sales agents, brokers, franchisers, C&F agents, and retailers	8L
5.	Channel Design and management: Channel objectives & constraints, Identification, evaluation and selection of channel alternatives, Channel management and control – recruiting and selecting channel members, motivating, evaluating channel arrangements. Physical Distribution & Logistics: Goals, function, processing, warehousing, inventory & Transportation	8L
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Understand the personal selling process, its importance and sales management
2.	Understand the different aspects of planning as well as organizing sales force efforts and sales management
3.	Understand different aspects of training, development and the process of directing the sales force
4.	Understand and analyze the process of controlling sales, marketing channel designing and logistics management

Learning Resources:	
1.	Panda, Sahadev: Sales & Distribution Management; Oxford University Press
2.	Cundiff, Still & Govoni: Sales Management – Decision, Strategies & Cases; PHI
3.	Johnson, Kurtz & Scheuing: Sales Management Concept, Practices & Cases; Tata McGraw Hill.
4.	Lancaster, David & Jobber, Geoff: Selling & Sales Management; Macmillan (India).
5.	Ingram,T,N., Laforge, R.W. & Avila, R.A.: Sales Management, South-Western

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Course Name:	Retail Management		
Course Code:	MBA-MM 304	**Category:**	Management Science Course
Semester:	Third	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	Knowledge of General Marketing
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To develop competencies in retail marketing and consultancy.
2.	To prepare students for positions in the retail sector or positions in the retail divisions of consulting companies
3.	To foster the development of the students' critical thinking about retail management.

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1.	Introduction to Retailing: Growth, Importance and Evolution, Characteristics of Retailing, Retail Organization and Management, Theories of Structural Change in Retailing, Retail Formats, Challenges and opportunities in Rural Retailing, Evolution and trends in organized retailing, The Indian organized retail market, Foreign Direct Investment (FDI) in the Indian retail sector, The Indian Retail Landscape: Trends, Challenges and Future Prospects, Legan and Legislative Framework of Indian Retailing.	8L
2.	Retail Operations Management: Importance of Location Decision, Levels of Location Decision and its Determining Factors, Objectives of Store design, Responsibilities of a Store Manager, Customer Service and Shopping Experience, Marketing System and Reporting	6L
3.	Retail Planning: Marketing and Strategic Management decisions, financial planning for retail, Mall Management, Product management, Product Assortment Strategy. Brand Management in Retailing.	6L
4.	Retail Sales Techniques and Promotion: Selection of Promotion Mix, Advertising, Media Selection, Sales promotion, Personal Selling and Publicity.	5L
5.	Customer Relationships Management: Understanding Consumer Profile and Market Segmentation, Customer Relationship Management in the Organized and Unorganized Retail Sector, Customer Relationship Management Strategies, Loyalty Programs.	6L

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6.	Managing Supply Chains and Franchising: Introduction, Challenges, Forecasting, Sourcing and Vendor Selection, Routing and Route sequencing and inventory Management.	4L
7.	Electronic Retailing: Introduction, E-commerce Business Models, Growth of Internet and Online Retailing, Planning for Growth.	5
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Clarify the concept and related terms in retailing.
2.	Comprehend the ways retailers use marketing tools and techniques to interact with their customers.
3.	Understand various formats of retail in the industry.
4.	Recognize and understand the operations-oriented policies, methods, and procedures used by successful retailers in today's global economy

Learning Resources:	
1.	Bajaj, Tuli, & Srivastava ——Retail Management‖ Oxford University Press.
2.	Jain J.N.& Singh P.P ― Modern Retail Management – Principal And Techniques ‖ Regal Publications
3.	Berman Barry & Evance J.R ―Retail Management‖ Prentice Hall India
4.	Swapna Pradhan ―Retailing Management- Text And Cases‖ Tata Mcgraw-Hill
5.	Barry Berman, Ritu Srivastava, Patrali Chatterjee and Joel R. Evans: A Strategic Approach, Pearson Education, ISBN: 9789332587694,

Course Name:	**Marketing Research**		
Course Code:	MBA-MM 305	**Category:**	Management Science Course
Semester:	Third	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	Knowledge of General Marketing
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To understand and analyse the marketing research and its detailed process.
2.	To understand different types of research and sources of data.
3.	To examine different types of measurement procedure, scaling technique and sampling process used in research.
4.	To understand the process of data analysis along with different techniques in the context of marketing research

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**

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1.	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 – research purpose and objectives, Converting a manager's problem to a researcher's problem, Problem formulation, research design, data collection, analysis, report presentation, Preparation of the research proposal	6L
2.	Research Design: Types of research - exploratory studies, descriptive studies, causal studies, Types of information needed - behavioural and non-behavioural correlates Sources of Data: Primary and secondary source (govt., non-govt. and syndicated research), Errors in data collection	5L
3.	Primary Source – Methods of Data Collection: Focus groups, Observations, Case histories; Surveys – survey methods - structured and unstructured, direct and indirect methods, in-depth interviews, panels, interview media: personal, telephone, internet & mail, questionnaire construction & pre-testing, qualitative research - projective techniques (word association, sentence completion, thematic apperception test, third person technique), Experimentation - types of causation, inferring causal relationships, natural & controlled experiments, experimental designs	6L
4.	Measurement & Scaling: Types of scales (data/levels of measurements), nominal, ordinal, interval, ratio scales, Attitude measurement methods - variability methods (paired comparison, ranking, rating, ordered category sorting), Quantitative judgement methods - verbal, numerical, graphical scales, factorization, constant sum method scales, Multi-item scales - Semantic differential scale, Likert scale, Thurstone scale (equal-appearing, case V), Stapel, considerations in developing scales, reliability and validity of scales	6L
5.	Sampling: Census vs. sample, Steps in sampling process, Definition of population, frame, unit, and element, Types of sampling: Probability sampling techniques - simple random sampling, systematic random sampling, stratified sampling, cluster sampling, area sampling, Nonprobability sampling techniques - convenience sampling, quota sampling, judgment sampling, snowball sampling, Determination of sample size	4L

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6.	Analysis of Data: Compilation, tabulation & classification of data, Analytical techniques – univariate analysis, hypothesis testing- parametric and non-parametric tests, bivariate analysis. Overview of some multivariate analysis techniques like multiple regression, discriminant analysis, factor analysis, cluster analysis, multi - dimensional scaling and conjoint analysis, forecasting methods (application and interpretation only)	10L
7.	Case Studies	3L
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Apply the detailed process of marketing research for making any marketing decision
2.	Use different sources of data for carrying out successful research for deciding on marketing aspect
3.	Implement and adopt different measurement processes, scaling techniques and sampling processes for successfully carrying out marketing research
4.	Practically implement data analysis process for coming up with proper conclusion and recommendation in the context of marketing oriented decision making

Learning Resources:	
1.	Naresh K Malhotra: Marketing Research; Pearson
2.	P.Green & D. Tull & G Albaum: Research for Marketing Decisions; PHI
3.	Boyd & Westfall: Marketing Research: Text & Cases; All India Traveller Bookseller
4.	G C Beri: Marketing Research; Tata McGraw Hill

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HUMAN RESOURCE MAJOR

Course Name:	Human Resource Planning, Recruitment and Selection		
Course Code:	MBA-HR302	Category:	Management Science Course
Semester:	Third	Credit:	4
L-T-P:	4-0-0	Pre-Requisites:	Basic Knowledge of HRM
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To understand the theoretical concepts and practical aspects of Human Resource Planning, Recruitment, and Selection.
2.	To explore the strategic importance of HR Planning in aligning workforce with organizational goals.
3.	To gain insights into recruitment methods, processes, and challenges in the modern workplace.
4.	To understand the principles and techniques of employee selection and placement.
5.	To analyze real-world cases of recruitment and selection to develop problem-solving skills in HR practices.

Course Contents:		
Module No.	Description of Topic	Contact Hrs.
1.	**Introduction to Human Resource Planning (HRP):** Concept, Importance, and Objectives of HRP, Steps in Human Resource Planning, Forecasting Techniques in HRP, Challenges in HRP, HRP in a Changing Business Environment, **Strategic Manpower Planning**: Concepts, objectives, SMP Process, Tools, Evaluation, Balanced Score Card, HR Dash Boards, HR score card	8
2.	**Job Analysis and Workforce Planning:** Job Analysis: Meaning, process, and Importance, Preparation of Job Description and Job Specification, Workforce Planning: Concept and Need, Techniques for Workforce Planning, Manpower Inventory; Quantitative Aspects; Qualitative Aspects; Methodology of Computerised Manpower Planning Information System; Use and Applicability of Statistical and Mathematical Models in Manpower Planning, Cohort Analysis, Census Analysis, Markov Models	6
3.	**Recruitment:** Concept, Importance, and Objectives of Recruitment, Internal vs. External Recruitment, Sources of Recruitment (e.g., Employee Referrals, Campus Hiring, Digital Platforms), Recruitment Process and Challenges, Impact of Technology on Recruitment, The New Techniques: Web, social media, Mobile, Employer Branding and Talent Acquisition	10
4.	**Selection:** Concept, Objectives, and Importance of Selection, Selection Process: Steps and Techniques, Application screening, Types of Tests: Aptitude, Skill, Personality, and Psychological Tests, Types of Interviews: Structured, Unstructured, Panel, and Group Interviews, Selection Challenges and Decision-Making, Legal and Ethical Considerations in Selection	10

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5.	**Evaluation of recruitment and selection process:** Measuring the Effectiveness of Recruitment and Selection, Key Metrics and Analytics in Recruitment, Cost-Benefit Analysis of Recruitment and Selection, Trends and Future Challenges in Recruitment and Selection	6
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Explain the concept and importance of Human Resource Planning (HRP) in achieving organizational objectives.
2.	Develop and implement effective recruitment strategies aligned with organizational needs.
3.	Demonstrate the ability to design and execute selection processes, including interviews, assessments, and background checks.
4.	Evaluate the legal and ethical considerations involved in recruitment and selection processes.
5.	Apply HRP, recruitment, and selection principles to solve case studies and practical organizational challenges.

Learning Resources:	
1.	**Human Resource Planning** by Dipak Kumar Bhattacharyya
2.	**Recruitment and Selection: Strategies for Workforce Planning** by Margaret Dale
3.	**Human Resource Management** by Gary Dessler
4.	**Effective Recruitment and Selection Practices** by R.L. Compton, Alan R. Nankervis, and Marian Baird

Course Name:	**Industrial Relations and Labour Laws**		
Course Code:	MBA-HR303	**Category:**	Management Science Course
Semester:	Third	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	Basic knowledge of industrial operations and India's regulatory structure
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To enable the learners to understand the theoretical framework of industrial relations.
2.	To enable the learners to apply the relevant laws governing the industrial relations in India.
3.	To enable the learners to apply the pertinent laws related to wages and social security in India.
4.	To enable the learners to apply the relevant laws on occupational safety, health & working conditions in India.

Course Contents:

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Module No.	Description of Topic	Contact Hrs.
1.	**Introduction:** Historical Background of Industrial Relations, Concept, Definition, Scope, Objectives, Factors, Participants & Importance of IR, Approaches to Employee Relations – The Dunlop's Approach. Role of ILO and its Influence on Labour Legislation in India. The mechanism for Harmonious IR: Collective Bargaining - Definition, Meaning, Nature, Essential Conditions, Process and Importance	6
2.	**Legislations Governing Industrial Relations:** *The Industrial Disputes Act 1947* – Definition of Industry, Workmen and Industrial Dispute. Strikes and Lockouts, Layoff, Retrenchment, Termination and Closure. Works Committee – Conciliation – Arbitration – Adjudication – Labour Court – Industrial Tribunal – National Tribunal – Court of Enquiry. Workers Participation in Management & Problem Solving Attitude. Meaning and Forms, Sources, Approaches, Procedures, Model Grievance Procedure and Grievance Redressal Committees. *The Trade Union Act 1926*- Formation and Registration of Trade Unions, Principle Privileges of a Registered Trade Union, Rights of Recognized Trade Unions, Types and Structure of Trade Unions, Impact of Globalisation on Trade Union Movement. *The Industrial Employment (Standing Orders) Act, 1946* - Definition of standing orders, Certification of Standing Orders, Interpretation and Enforcement of Standing Orders, Disciplinary Procedure, Domestic Inquiry and Disciplinary Action at the Firm Level. Select Draft Rules on *Industrial Relation Code 2020.*	16
3.	**Legislations Governing Wages:** Overview of Laws on Wages. Select Draft *Wage Code Central Rule 2020*.	2
4.	**Legislations Governing Social Security:** *Payment of Gratuity Act, 1972* - Short title, extent and commencement, Continuous service, Compulsory Insurance, Power to exempt, Nomination, Determination of the amount of gratuity, Recovery and Protection of Gratuity. *Workmen's Compensation Act, 1923* - Short title, extent and commencement, Employer's liability for compensation and amount of compensation, Method of calculating wages, Commutation of half monthly payment, Protection of compensation, Notice and claim, Report / Statement of fetal accidents / serious bodily injuries, and Medical examination. *Employee's Provident Fund's and miscellaneous Provisions Act, 1952* - Employee's Provident Fund Scheme's, Contributions, EPS and EDLIS, Determination of moneys due from employees, Interest payable by the employer, Modes of recovery, Offences and Penalties. *Employees' State Insurance Act, 1948 (ESIA)* - Applicability to ESIA, Coverage and extension of ESIA, Types of eligible employees for ESIA, Injury and Sickness: Employment injury; Sickness; Disablement – PPD and PTD and TD, Calculation of contributions payable, Different benefit – Sickness Maternity Disablement Dependent's Occupational, Medical; Benefits not to be combined; Accident arising in the course of employment. *Select Draft of the Code on Social Security Central Rules 2020*	10

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5.	**Legislations Governing Occupational Safety, Health & Working Conditions:** ***The Factories Act, 1948*** - Definitions: Factory, Manufacturing Process, Occupier, worker etc., Working Hours, Employment of Young Persons and Adult, and Annual Leave with wages. ***The Contract Labour (Regulation and Abolition) Act 1970*** – Advisory Boards, Registration of Establishment, Licensing of Contractors, Welfare and Health of Contract Labour, Registers and Other Records to be Maintained. *Select Draft rules on* ***Occupational Safety, Health and Working Conditions Code 2020.***	6
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Understand the theoretical framework of industrial relations.
2.	Apply the relevant laws governing the industrial relations in India.
3.	Apply the pertinent laws related to wages and social security in India.
4.	Apply the relevant laws on occupational safety, health & working conditions in India

Learning Resources:	
1.	C.S. Venkat Ratnam, *Globalization and Changes in Industrial Relations.*
2.	M. Marchugton, *Managing Industrial Relations*
3.	S. N. Misra, *Labour & Industrial Laws*
4.	N.D. Kapoor, *Elements of Industrial Law*
5.	*New Labour & Industrial Laws with Draft Rules* by Taxman

Course Name:	**Learning and Development**		
Course Code:	MBA-HR304	**Category:**	Management Science Course
Semester:	Third	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	Basic Knowledge of HRM
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To provide foundational knowledge of learning and development (L&D) as a strategic HR function.
2.	To understand the theoretical underpinnings and principles of adult learning and their application in training design.
3.	To equip learners with skills to conduct effective Training Needs Assessments (TNA) at organizational, task, and individual levels.
4.	To develop the ability to design, deliver, and manage training programs using various instructional design models and modern training methods.
5.	To introduce methods for evaluating training effectiveness and conducting cost-benefit analyses of training programs.

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Course Contents:

Module No.	Description of Topic	Contact Hrs.
1.	**Introduction to Learning and Development:** Definition, Scope, and Importance of Learning and Development, Difference between Training and Development, Learning as a Strategic HR Function, Role of Learning in Organizational Growth and Change	6
2.	**Learning Theories and Principles:** Learning Theories: Behavioral, Cognitive, and Social Approaches, Principles of Adult Learning (Andragogy), Learning Styles and Their Impact on Training Design, Kolb's Experiential Learning Theory	8
3.	**Training Needs Assessment (TNA):** Concept and Importance of TNA, Levels of TNA: Organizational, Task, and Individual, Methods and Tools for Conducting TNA, Challenges in Identifying Training Needs	6
4.	**Designing and Delivering Training Programs:** Steps in Designing a Training Program, Setting Training Objectives, Instructional Design Models: ADDIE, Bloom's Taxonomy, Methods of Training: On-the-Job and Off-the-Job Training, Role of Technology in Training Delivery, Facilitation Skills and Managing Learning Environments	10
5.	**Evaluating Training and Development:** Concept and Need for Evaluation, Kirkpatrick's Model of Training Evaluation, Metrics for Measuring Training Effectiveness, Cost-Benefit Analysis of Training Programs	6
6.	**Contemporary Issues and Trends in Learning and Development:** Micro learning and Gamification in Training, E-learning and Mobile Learning Solutions, Future Skills and Workforce Development, Trends in Organizational Development and Leadership Training	4
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Explain the scope and importance of learning and development in organizational growth and change.
2.	Differentiate between training and development and articulate the role of L&D as a strategic HR function.
3.	Apply learning theories, principles of adult learning, and Kolb's Experiential Learning Theory in the design of training programs.
4.	Conduct comprehensive Training Needs Assessments using appropriate methods and tools
5.	Evaluate training effectiveness using Kirkpatrick's Model and other relevant metrics, including cost-benefit analysis

Learning Resources:	
1.	"Training and Development: Text, Research and Cases" Author: Dr. B. Janakiram and Dr. D. R. Sai Kumar
2.	"Effective Training: Systems, Strategies, and Practices"Author: P. Nick Blanchard and

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	James W. Thacker (Indian Adaptation by V. Anand Ram)
3.	"Human Resource Management"Author: P. Subba Rao

Course Name:	Performance and Compensation Management		
Course Code:	MBA-HR305	Category:	Management Science Course
Semester:	Third	Credit:	4
L-T-P:	4-0-0	Pre-Requisites:	Basic knowledge of performance management and compensation structure
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To enable the learners to understand the concept and theoretical framework of performance management.
2.	To enable the learners to apply the methodology of performance evaluation and employee competency development.
3.	To enable the learners to apply the rules of wage and benefits administration in India.
4.	To enable the learners to apply the relevant laws on wage and benefits as well as professional and income tax administration in India.

Course Contents:		
Module No.	Description of Topic	Contact Hrs.
1.	**Introduction**: An introduction to Performance Appraisal. Understanding performance management. Importance of performance management and appraisal systems. Performance planning- Goal Setting Theory, Expectancy Theory. Understanding linkages between Strategy, organizational structure and performance management systems.	6
2.	**Performance Evaluation:** Methods of Performance Appraisal, Appraisal Communication, Performance Review Discussion, RSDQ Model. Auditing a performance appraisal system	4
3.	**Employee Competency:** Competency Framework, Lancaster Model of Managerial Competencies. Development of Competency Maps and Integration of Competency based HRM: Steps in development of competencies map - Studying Job, Processes, and Environment, Studying attributes of Star Performers, Strategy Structure Congruence. Competency based Training and Development. Competencies needed for Gig-economy, Flexible and Virtual workforce.	8
4.	**Wage and Benefits:** Understanding Wage: Definition, Types of wages. Wage differential. Pay scale, pay band, and pay grade. Pay broadbanding. Benefits – Statutory and Fringe. Cost to Company (CTC) method. Job analysis and job evaluation methods.	6
5.	**Performance-Linked Pay:** Point-factor and Factor comparison methods of job evaluation. Short-term incentives for production workers (all schemes). Long-term incentives: Pension and commutation of pension, profit sharing, stock bonus plan, Employee Stock Ownership Plan (ESOP). Executive Compensation.	4

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6.	**Legislations Governing Wage and Benefits:** The Payment of Wages Act, 1936. The Minimum Wages Act, 1948. The Payment of Bonus Act, 1965. The Equal Remuneration Act, 1976. Select Draft Wage Code Central Rule 2020.	10
7.	**Taxation on salary and benefits**: An overview of Professional Tax and Income Tax.	2
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Understand the concept and theoretical framework of performance management.
2.	Apply the methodology of performance evaluation and employee competency development.
3.	Apply the rules of wage and benefits administration in India.
4.	Apply the relevant laws on wage and benefits as well as professional and income tax administration in India.

Learning Resources:	
1.	T.V. Rao, *Performance Management*
2.	K.K. Chaudhuri, *Personnel Management for Executives*
3.	S. N. Misra, *Labour & Industrial Laws*
4.	Dr. Jyoti Rattan, *Taxation Laws – Income Tax AY 2024-25*
5.	*New Labour & Industrial Laws with Draft Rules* by Taxman

HOSPITAL ADMINISTRATION (MINOR)

Course Name:	**Basics of Hospital Management**		
Course Code:	MBA-HA302	**Category:**	Management Science Course
Semester:	Third	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	The basic concept of Hospital Administration
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	Explain the structure and functions of hospital systems and their role in healthcare delivery.
2.	Describe the classification, planning, and establishment of healthcare facilities.
3.	Learn the basics of strategic planning, leadership, and decision-making in a hospital context.
4.	Understand hospital workflows and the integration of services for smooth operations.
5.	Explore service delivery models and patient flow within a hospital.

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**

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1.	**OVERVIEW OF HOSPITAL ADMINISTRATION** 1. Definition of Management, Functions of Management 2. Management in Hospital 3. Distinction between Hospital and Industry 4. Challenges in Hospital Administration 5. Hospital Planning- Overview, Planning for a new hospital. 6. Equipment Planning 7. Functional Planning of a Hospital	8
2.	**HUMAN RESOURCE MANAGEMENT IN HOSPITAL** 1. Definition of HRM, Principles of HRM, Function of HRM in Hospital Administration 2. Profile of HRD manager 3. Human resource inventory – Overview, HR Records and Forms, Categories of Forms, Permanent Records, Temporary Records. 4. Manpower Planning – Nature and Scope, Need, Benefits, Objectives, and Planning Steps.	7
3.	**SUPPORTIVE SERVICES** 1. Medical Records Department- Overview, Function, Location, Design, Organization, Space Requirement and Other consideration 2. Central Sterilization and Supply Department – Overview, Objectives, Functions, Location, Design, Organization, Facilities and Space Requirement & Other Consideration 3. Pharmacy- Overview, Functions, Drug Distribution, Location, Design, Organization, Facilities and Space Requirement & Other Consideration 4. Food Service – Overview, Function, Location, Design, Functional Area, Organization, Facilities and Space Requirement, Problem situation 5. Laundry Services—Overview, Function, Location, Some Planning Elements, Design, Organization, Facilities and Space Requirements, Equipment Selection, Equipment List, and Problem Situation.	8
4.	**SAFETY ASPECTS IN HOSPITAL** 1. Security and loss-prevention program – Overview, Internal Controls, Methods of Internal Controls. 2. Fire Safety - Overview, What to do in Fire. 3. Alarm System 4. Safety in Hospital – Overview, Hospital Safety Rules.	5
5.	**BASIC KNOWLEDGE OF HOSPITAL STORES AND HOSPITAL PURCHASE MANAGEMENT** 1. a. Location & Layout b. Types of inventory cost c. Standardization d. Codification & Classification of Materials e. Material accounting & physical distribution f. Store documentation g. Condemnation & disposal of scrap h. Surplus & obsolete materials i. Types of stores in hospital j. Preservation of Stores. 2. a. Vendor selection & evaluation b. Vendor rating c. Methods of payments d. Tendering procedures e. Concept & framework of supply chain management	6

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6.	**HOSPITAL EQUIPMENT MANAGEMENT** 1. List common medical equipment- a. Image- Digital X-ray, MRI, CT scan, USG, PET Scan, 3D, Echo. b. Laboratory- Semi+ Full auto-analyzer, ABG. c. Ventilator, Multi-channel Monitor, Syringe pump. d. Bronchoscope, Endoscope, Laparoscope e. Robotics and IoT. f. Justification of purchase proposal, g. hospital needs assessment (Capex) Equipment selection guidelines, h. estimation of cost and planning, purchase, i. installation, and commissioning. j. Replacement and Buyback policy. k. International and Indigenous standards. 2. a. Bio-Medical Technology, b. application in a hospital environment, c. calibration tests, d. maintenance features, e. hazards.	6
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Analyze the roles and responsibilities of hospital administrators and management teams.
2.	Gain knowledge about various hospital departments (clinical, non-clinical, and support services) and their interrelationships.
3.	Apply core management principles such as organizational behavior, resource management, and operational efficiency.
4.	Develop the ability to create and manage purchase orders, and supplier agreements, and negotiate with vendors to secure the best terms for the organization.
5.	Develop in-depth knowledge of various medical equipment used in hospitals, their functions, and applications.

Learning Resources:	
1.	"Hospital Administration and Human Resource Management" by G.D. Kunders
2.	"Hospital Management: An Evaluation" by A.K. Saini
3.	"Essentials of Hospital Management & Administration" by D.K. Sharma and R.C. Goyal
4.	"Hospital Equipment Planning and Management" by Dinesh Badyal
5.	"Hospital Store Management: Concepts and Principles" by V.K. Kapoor

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Course Name:	Legal Aspect of Healthcare Management		
Course Code:	MBA-HA303	Category:	Management Science Course
Semester:	Third	Credit:	4
L-T-P:	4-0-0	Pre-Requisites:	Basic concept of Hospital Management
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	Understand the Legal Framework.
2.	Explore patient rights and provider responsibilities
3.	Develop knowledge of hospital administration law
4.	Examine public health laws
5.	Analyze emerging legal Challenges.
6.	Understand global perspective

Course Contents:		
Module No.	Description of Topic	Contact Hrs.
1.	**Introduction to Legal Aspects in Healthcare:** Overview of Legal Framework in Healthcare - Scope, importance, and objectives of healthcare laws in India. Evolution of healthcare-related legal provisions. Role of legal frameworks in improving healthcare services. Relationship between law and healthcare management. Constitutional Provisions for Healthcare, Right to Health- Legal framework governing healthcare in India	6
2.	**Medical Negligence and Malpractices -** Medical Negligence and Liabilities - Definition and components of negligence. Legal remedies for victims of medical negligence. Types of medical negligence (Civil and Criminal), Doctrine of res ipsa loquitur in healthcare, Key case laws on medical negligence: Landmark judgments in India. Legal Obligations of Healthcare Providers Standards of care and duty of care. Record-keeping requirements for patient safety and compliance. Professional misconduct: Definitions and legal implications.	6
3.	**Legal Framework Governing Healthcare Institution** Regulatory Requirements for Hospitals - Licensing and registration of hospitals under the Clinical Establishments Act. Biomedical Waste Management Rules: Compliance and penalties. Drug storage and prescription regulations. Legal Aspects of Hospital Operations. Handling medico-legal cases (MLC). Compliance with occupational health and safety regulations. Risk management in hospital operations. Laws governing hospitals, clinics, and laboratories Compliance with the Clinical Establishments Act, 2010, Standards and accreditation (NABH, JCI, etc.)	8
4.	**Public Health Laws and Emerging Issues** Consumer Protection and Patient Rights, Consumer Protection Act, 2019: Key provisions for healthcare, Rights of patients (Right to Information, Informed Consent, Right to Privacy), Role of the Consumer Forum in resolving healthcare disputes, Landmark cases in consumer protection in healthcare, Bioethics and Medical Ethics - Principles of	12

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	medical ethics (autonomy, beneficence, non-maleficence, justice) Ethical dilemmas in healthcare (euthanasia, organ donation, surrogacy, etc.) Role of the Medical Council of India (MCI)/National Medical Commission (NMC) in ethical practices Codes of conduct for healthcare professionals, Laws Related to Public Health and Safety - Epidemic Diseases Act, 1897, National Health Mission (NHM) and public health policies, Disaster Management Act, 2005: Healthcare in emergencies Legal provisions for pandemic management (e.g., COVID-19 regulations) Employment Laws in Healthcare - Employment rights of healthcare professionals, Workplace safety laws in hospitals (e.g., OSHA compliance), Sexual harassment and gender equality at the workplace (POSH Act, 2013), Labour laws applicable to hospital staff - Legal Issues in Medical Records and Data Privacy - Legal requirements for maintaining medical records, Electronic Health Records (EHR) and data privacy laws, Data protection laws: IT Act, 2000 and Data Protection Bill (if applicable) Confidentiality and disclosure of patient information, Laws Governing Biomedical Waste and Environmental Safety - Biomedical Waste Management Rules, 2016, Environmental Protection Act, 1986, Handling of hazardous materials in hospitals, Legal consequences of non-compliance Handling Medico-Legal Cases Definition and examples of medico-legal cases, Role of hospitals in managing medico-legal cases, Importance of documentation and reporting in such cases, Collaboration with law enforcement agencies	
5.	**International Legal Perspective and Future Trends** Global Healthcare Laws and Comparisons - HIPAA (USA) and GDPR (Europe): Implications for healthcare providers. Global health treaties and conventions. Role of World Health Organization (WHO) in shaping healthcare policies. Future Trends in Healthcare Legislation - Artificial intelligence and robotics in healthcare: Legal implications. Gene editing, organ donation, and surrogacy laws. Evolving legal frameworks for emerging healthcare technologies.	8
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Demonstrate knowledge of healthcare law
2.	Analyze patient rights and provider duties
3.	Apply legal principles to healthcare administration
4.	Interpret public health legislations
5.	Understanding global healthcare legal systems

Learning Resources:	
1.	Anoop Kaushal K, Medical negligence and legal remedies, 3rd edition, universal law Pllblishcr.5. New Delhi, 2004
2.	R.K. Chaube, consumer protection and the Medical profession, Jaypee Publishing, New Delhi, 2000.
3.	Avtar singh, company law, 13th edition, Taxmann publishers, Lucknow, 2001. Consumer Protection Act 1986

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PHARMACEUTICAL MANAGEMENT (MINOR)

Course Name:	Introduction to Pharmaceutical Management		
Course Code:	MBA-PM302	Category:	Management Science Course
Semester:	Third	Credit:	4
L-T-P:	4-0-0	Pre-Requisites:	Basic knowledge of biological/pharmaceutical science and medico-legal structure of India
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To enable the students to acquire basic and advanced knowledge of pharmacology.
2.	To enable the students to understand the drug actions
3.	To empower the students to deal with the regulatory aspects of pharmacovigilance.
4.	To facilitate the students to develop insight into the post-marketing drug safety issues.

Course Contents:		
Module No.	**Description of Topic**	**Contact Hrs.**
1.	**Introduction to Pharmacology** Definition, historical landmarks and scope of pharmacology, nature and source of drugs. Classification of drugs with respect to Alphabetical, morphological, taxonomical, chemical, pharmacological, chemo and sero-taxonomical classification of drug. Essential drugs concept and routes of drug administration, Agonists, antagonists (competitive and noncompetitive). Spare receptors, addiction, tolerance, dependence, tachyphylaxis, idiosyncrasy, and allergy.	8
2.	**Biopharmaceutics and Pharmacokinetics** Absorption of drug from Non per oral extra-vascular routes, Tissue permeability of drugs, binding of drugs, apparent, volume of drug distribution. Plasma and tissue protein binding of drugs, factors affecting protein-drug binding. Kinetics of protein binding, Clinical significance of protein binding of drugs. Enzyme induction, enzyme inhibition, kinetics of elimination.	8
3.	**Pharmacodynamics** Principles and mechanisms of drug action. Receptor theories and classification of receptors, regulation of receptors. Adverse drug reaction. Dose response relationship, therapeutic index, combined effects of drugs and factors modifying drug action.	4
4.	**Medico-Legal Provisions in India** Definition of Medico – Legal Case (MLC), General Guidelines for Medico – Legal Cases, Record Keeping	4

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5.	**Pharmacovigilance** Drug discovery and clinical evaluation of new drugs -Drug discovery phase, Preclinical evaluation phase, clinical trial phase, Phases of clinical trials and pharmacovigilance	6
6.	**Pharmacoepidemiology** – Drug Safety Policy Evaluation, Risk Evaluation and Mitigation Strategies (REMS), and Patient Registries. Pharmaco vigilance Reporting Systems. Post-Marketing Safety Commitments. Introduction to Machine Learning in Pharmaceutical Outcomes Research	10
Total		**40L**

Course Outcomes:	
After completion of the course, students will be able to:	
1.	Define and explain the various technical aspects of pharmacology
2.	Explain the dimensions of the drug action accurately to the physicians
3.	Apply the knowledge of regulatory aspects of pharmacovigilance in the distribution network
4.	Monitor and control post-marketing drug safety issues

Learning Resources:	
1.	Ajay S. Joseph, *Pharmaceutical Management and Marketing*
2.	Biren N. Shah, Textbook of Pharmaceutical Industrial Management
3.	VN Sharma, Essentials of Pharmacology Basic Principles and General Concepts (Fifth Edition)
4.	R. Hughes, A Manual of Pharmacodynamics - Biochemical and Physiological Effects of Drugs and their Mechanism of Action
5.	National Health Systems Resource Center (nhsrcindia.org), *Medicolegal Issues: Guideline to Medical Officers*
6.	SK Gupta and Sushma Srivastava, Textbook of Pharmacovigilance

Course Name:	**Marketing of Pharmaceutical Product and Brand Management**		
Course Code:	MBA -PM303	**Category:**	Management Science Course
Semester:	Third	**Credit:**	4
L-T-P:	4-0-0	**Pre-Requisites:**	Basic Concept of Marketing, Pharmaceutical Industry along with Product and Brand Management
Full Marks:	100		
Examination Scheme:	Semester Examination:70	Continuous Assessment:25	Attendance:05

Course Objectives:	
1.	To manage and implement the knowledge of marketing management in pharmaceutical industry.
2.	To emphasize on the brand building process in pharmaceutical industry.
3.	To elucidate the Pharmaceutical Marketing Environment and the process of Segmenting, Targeting and Positioning in pharmaceutical industry
4.	To emphasize on the marketing process, different specialization of doctors, profiling of doctors and grooming of sales professional in pharmaceutical industry.

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Course Contents:

Module No.	Description of Topic	Contact Hrs.
1.	Introduction to the concept of Pharmaceutical Product and prevailing competition in Pharmaceutical Industry, Classification of Pharmaceutical Product, Pharmaceutical Product Mix, Marketing Plan in Pharmaceutical Industry, Market Potential and Forecasting with respect to Pharmaceutical Industry	8
2.	New Product Development in Pharmaceutical Industry, Pharmaceutical Sales Ecosystem: Product and Brand Management in Pharmaceutical Industry, Trainings for the professionals in Pharmaceutical Industry, Hierarchical positions in Pharmaceutical Industry, Medical and Scientific Affairs in Pharmaceutical Industry. Grooming of sales professional for pharmaceutical industry, Buyer-Seller Dyad in Pharmaceutical Industry	9
3.	Pharmaceutical Marketing Environment, Branding and its potential within the pharmaceutical industry: History, Meaning, Need and Importance, Branding Process in Pharmaceutical Industry, Considerations of Building a Pharmaceutical Brand, Role of Healthcare Professionals in Pharmaceutical Industry, Detailing and Retailing in Pharmaceutical Industry: Briefing Process of Pharmaceutical Products, Different Specialization of Doctors, Engagement Process of Doctors for promoting a Pharmaceutical Brand, Demand generation for different pharmaceutical products and brands, Distribution System in Pharmaceutical Sector	9
4.	Importance of market segmentation in the context of developing a brand in pharmaceutical industry. Targeting the right segment in the context of Pharmaceutical Industry, Brand positioning in the context of pharmaceutical industry. Brand Repositioning in the context of pharmaceutical industry, Brand Promotion Strategies in Pharmaceutical Industry	8
5.	Strategic Brand Management in Pharmaceutical Industry, Consumer Decision Making Process for selecting a Pharmaceutical Brand, The valuation of pharmaceutical brand: Relevance of brand valuation to the pharmaceutical industry.	6
Total		**40L**

Course Outcomes:
After completion of the course, students will be able to:

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1.	Understand the concept of marketing management in pharmaceutical industry
2.	Understand the selling process of different pharmaceutical products and brands and grooming process of sales professional in pharmaceutical industry
3.	Understand the aspects of strategic brand management process pertaining to pharmaceutical industry
4.	Understand the process of segmenting, targeting and positioning, profiling and specialization of doctors in the context of pharmaceutical industry

Learning Resources:	
1.	High Performance Pharma Brand Management by Manish Khandpekar
2.	Brand Positioning in Pharma by Subba Rao Chaganti
3.	Brand Planning for the Pharmaceutical Industry by Janice MacLennan Grower Publishing Ltd.
4.	Pharmaceutical Marketing in India: For Today and Tomorrow by Subba Rao Chaganti PharmaMedPress/BSP Books

MBA 381: SUMMER INTERNSHIP PROJECT: 6 credits

- At the end of the second semester, the students will undergo Summer Internship Training for about eight weeks duration in a Professional Organization.
- Students need to mandatorily submit a detailed report related to their internships
- Students also need to show a power point presentation related to their internship project in front of a panel comprising of 3-4 faculty members and experts.
- This entire evaluation would be a part of third semester comprising of 6credit points.