Study Scheme and Syllabus of

Master of Business Administration (MBA)

Batch 2026 onwards

University Main Campus, Constituent Campuses and Affiliated Colleges

Department of Academics
IK Gujral Punjab Technical University

I.K.G. Punjab Technical University

Courses & Examination Scheme:

Credit Distribution

Semester	Core Courses			Elective Courses			Total Credits
	No. of Papers	Credits (L+T/P)	Total Credits	No. of Papers	Credits (L+T/P)	Total Credits	
I	7	4	28	-	-	-	28
II	7	4	28	-	-	-	30
	1	2	2	-	-	-	
III	2	4	8	4	4	16	32
	1	3	3	-	-	-	
	1	1	1	-	-	-	
	2	2	4	-	-	-	
IV	2	4	8	4	4	16	26
	1	2	2	-	-	-	
Total Credits for the Course			**84**			**32**	**116**

First Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 101-18	Core Course	Foundations of Management	4	0	0	40	60	100	4
MBA 102-18	Core Course	Managerial Economics	4	0	0	40	60	100	4
MBA 103-18	Core Course	Quantitative Techniques	4	0	0	40	60	100	4
MBA 104-18	Core Course	Accounting for Management and Reporting	4	0	0	40	60	100	4
MBA 105-18	Core Course	Business Environment and Indian Economy	4	0	0	40	60	100	4
MBA 106-18	Core Course	Business Ethics and CSR	4	0	0	40	60	100	4
MBA 107-18	Core Course	Business Communication for Managerial Effectiveness	4	0	0	40	60	100	4
	TOTAL		**28**	**0**	**0**	**280**	**420**	**700**	**28**

Second Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 201-26	Core Course	Business Analytics for Decision Making	4	0	0	40	60	100	4
MBA 202-18	Core Course	Legal Environment for Business	4	0	0	40	60	100	4

MBA 203-21	Core Course	Marketing Management	4	0	0	40	60	100	4
MBA 204-18	Core Course	Human Resource Management	4	0	0	40	60	100	4
MBA 205-18	Core Course	Production and Operations Management	4	0	0	40	60	100	4
MBA 206-21	Core Course	Corporate Finance and Policy	4	0	0	40	60	100	4
MBA 207-18	Core Course	Entrepreneurship and Project Management	4	0	0	40	60	100	4
MBA 208-26	Core Course	Computer Applications and Data Visualization for Managers	2	0	0	40	60	100	2
	TOTAL		**30**	**0**	**0**	**320**	**480**	**800**	**30**

Note: After second semester every student will be required to undergo summer training of six weeks duration in the corporate sector.

Third Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 301-18	Core Course	Organizational Behaviour & Design	4	0	0	40	60	100	4
MBA 302-18	Core Course	Marketing Research	4	0	0	40	60	100	4
	Elective Course	Major-I	4	0	0	40	60	100	4
	Elective Course	Major-II	4	0	0	40	60	100	4
	Elective Course	Minor-I	4	0	0	40	60	100	4
	Elective Course	Minor-II	4	0	0	40	60	100	4
HVPE101-18	Ability Enhancement Compulsory Course (AECC)	Human Values, De-addiction and Traffic Rules	3	0	0	40	60	100	3
HVPE 102-18	Ability Enhancement Compulsory Course (AECC)	Human Values, De-addiction and Traffic Rules (Lab/ Seminar)	0	0	2	25	--	25	1
MBA 303-18	Core Course	Seminar on Summer Training Report	2			50	-	50	2
MBA 304-18	Core Course	Comprehensive Viva Voce				-	50	50	2
	TOTAL		**27**	**0**	**2**	**355**	**470**	**825**	**32**

Note: Students will opt any two of the following groups (1 as Major and 1 as Minor).

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List of Electives:

Group A: Marketing

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 921-18	Elective Course	Consumer Behaviour	4	0	0	40	60	100	4
MBA 922-18	Elective Course	Services Marketing	4	0	0	40	60	100	4

Group B: Finance

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 911-18	Elective Course	Investment Analysis and Portfolio Management	4	0	0	40	60	100	4
MBA 912-18	Elective Course	Management of Financial Services	4	0	0	40	60	100	4

Group C: Human Resource Management

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 931-18	Elective Course	Organizational Change and Development	4	0	0	40	60	100	4
MBA 932-18	Elective Course	Employee Relations	4	0	0	40	60	100	4

Group D: Management Information Systems

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 941-18	Elective Course	Data Mining for Business Decisions	4	0	0	40	60	100	4
MBA 942-18	Elective Course	E-Commerce and Digital Markets	4	0	0	40	60	100	4

Group E: Operations Management

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 951-18	Elective Course	Operations Strategy	4	0	0	40	60	100	4
MBA 952-18	Elective Course	Operation Research Applications	4	0	0	40	60	100	4

Group F: Business Analytics

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 961-18	Elective Course	Marketing Analytics	3	1	0	40	60	100	4
MBA 962-18	Elective Course	Data Sciences Using R	3	1	0	40	60	100	4

Group G: Digital Marketing

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 971-26	Elective Course	Strategic Digital Marketing	4	0	0	40	60	100	4
MBA 972-26	Elective Course	Search Engine and Performance Marketing	4	0	0	40	60	100	4

Fourth Semester

Course Code	**Course Type**	**Course Title**	**Load Allocations**			**Marks Distribution**		**Total Marks**	**Credits**
			L	T	P	Internal	External		
MBA 401-18	Core Course	Corporate Strategy	4	0	0	40	60	100	4
	Elective Course	Major-III	4	0	0	40	60	100	4
	Elective Course	Major-IV	4	0	0	40	60	100	4
	Elective Course	Major-V	4	0	0	40	60	100	4
	Elective Course	Major-VI	4	0	0	40	60	100	4
MBA 402-18	Core Course	Project / Dissertation	4			--	100	100	4
MBA 403-18	Core Course	Workshop on Indian Ethos	2	0	0	40	60	100	2
	TOTAL		**22**	**0**	**0**	**240**	**460**	**700**	**26**

Note: Four papers of any one group chosen in the 3rd Semester will be studied as electives of Major in the 4th semester.

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List of Electives:

Group A: Marketing

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 923-18	Elective Course	Integrated Marketing Communication and Sales Management	4	0	0	40	60	100	4
MBA 924-18	Elective Course	Retail Management	4	0	0	40	60	100	4
MBA 925-18	Elective Course	International and Social Media Marketing	4	0	0	40	60	100	4
MBA 926-18	Elective Course	Product and Brand Management	4	0	0	40	60	100	4

Group B: Finance

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 913-18	Elective Course	Behavioural Finance	4	0	0	40	60	100	4
MBA 914-18	Elective Course	Mergers, Acquisition and Corporate Restructuring	4	0	0	40	60	100	4
MBA 915-18	Elective Course	International Finance and Financial Derivatives	4	0	0	40	60	100	4
MBA 916-18	Elective Course	Taxation and Personal Financial Planning	4	0	0	40	60	100	4

Group C: Human Resource Management

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 933-18	Elective Course	International Human Resource Management	4	0	0	40	60	100	4
MBA 934-18	Elective Course	Strategic HRM	4	0	0	40	60	100	4
MBA 935-18	Elective Course	Leadership and Team Dynamics	4	0	0	40	60	100	4
MBA 936-18	Elective Course	Performance and Compensation Management	4	0	0	40	60	100	4

Group D: Management Information Systems

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		

MBA 943-18	Elective Course	Managing Software Projects	4	0	0	40	60	100	4
MBA 944-18	Elective Course	Managing Digital Innovation and Transformation	4	0	0	40	60	100	4
MBA 945-18	Elective Course	IT Consulting	4	0	0	40	60	100	4
MBA 946-18	Elective Course	Strategic Management of IT	4	0	0	40	60	100	4

Group E: Operations Management

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 953-18	Elective Course	Supply Chain & Logistic Management	4	0	0	40	60	100	4
MBA 954-18	Elective Course	Quality Toolkit for Managers	4	0	0	40	60	100	4
MBA 955-26	Elective Course	Production Planning and Control	4	0	0	40	60	100	4
MBA 956-26	Elective Course	Inventory Management	4	0	0	40	60	100	4

Group F: Business Analytics

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 963-26	Elective Course	Analytics for Competitive Advantage	4	0	0	40	60	100	4
MBA 964-18	Elective Course	Business Forecasting	3	1	0	40	60	100	4
MBA 965-26	Elective Course	Financial Analytics	4	0	0	40	60	100	4
MBA 966-26	Elective Course	HR Analytics	4	0	0	40	60	100	4

Group G: Digital Marketing

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L	T	P	Internal	External		
MBA 973-26	Elective Course	Social Media, Content and Influencer Marketing	4	0	0	40	60	100	4
MBA 974-26	Elective Course	Digital Analytics, AI and Marketing Automation	4	0	0	40	60	100	4
MBA 975-26	Elective Course	Branding and Reputation Management	4	0	0	40	60	100	4
MBA 976-26	Elective Course	Email and Mobile Marketing	4	0	0	40	60	100	4

I.K.G. Punjab Technical University

Program Educational Objectives (PEOs)

PEO1: To inculcate knowledge in students with experiential learning and prepare for the advance study and life long learning.

PEO2: To develop strategic understanding of fundamental principles of business and competencies in the area of accounts, marketing, interpersonal skills, human resource management and entrepreneurship.

PEO3: To train the students for dynamic business environment and apply their perspectives through innovation and creativity.

PEO4: To develop competencies in qualitative and quantitative techniques to analyse the business data as well as developing an understanding of economic, legal and social environment of Indian business.

PEO5: To inculcate leadership skills, professionalism, effective communication skills, interpersonal skills and team work in students so as to enable them to manage and collaborate in diverse work environments.

PEO6: To develop responsiveness to social issues and ability to identify business solutions to address the same. Students will also be able to understand the issues of business ethics.

Program Outcomes (POs)

The program outcomes specify the knowledge, skills, values and attitudes students are expected to attain in courses or in a program. The six outcomes of MBA program are as below:

1. **Business Environment and Domain Knowledge**: Economic, legal and social environment of Indian business. Graduates are able to improve their awareness sand knowledge about functioning of local and global business environment and society. This helps in recognizing the functioning of businesses, identifying potential business opportunities, evolvement of business enterprises and exploring the entrepreneurial opportunities.

2. **Critical thinking, Business Analysis, Problem Solving and Innovative Solutions**: Competencies in quantitative and qualitative techniques. Graduates are expected to develop skills on analysing the business data, application of relevant analysis, and problem solving in other functional areas such as marketing, business strategy and human resources.

3. **Global Exposure and Cross-Cultural Understanding**: Demonstrate a global outlook with the ability to identify aspects of the global business and Cross Cultural Understanding.

4. **Social Responsiveness and Ethics**: Developing responsiveness to contextual social issues / problems and exploring solutions, understanding business ethics and resolving ethical dilemmas. Graduates are expected to identify the contemporary social problems, exploring the opportunities for social entrepreneurship, designing business solutions and

demonstrate ethical standards in organizational decision making. Demonstrate awareness of ethical issues and can distinguish ethical and unethical behaviors.

5. **Effective Communication**: Usage of various forms of business communication, supported by effective use of appropriate technology, logical reasoning, articulation of ideas. Graduates are expected to develop effective oral and written communication especially in business applications, with the use of appropriate technology (business presentations, digital communication, social network platforms and so on).

6. **Leadership and Teamwork**: Understanding leadership roles at various levels of the organization and leading teams. Graduates are expected to collaborate and lead teams across organizational boundaries and demonstrate leadership qualities, maximize the usage of diverse skills of team members in the related context.

(Source: Model Curriculum for Management programs (MBA) Janauary, 2018, AICTE, New Delhi. www.aicte.india.org)

Program Specific Outcomes (PSOs)

PSO1: Recognize the importance of continuous learning and be proactive in adapting to evolving business environments and innovations.

PSO2: Apply managerial knowledge and functional skills to analyze and solve business problems across diverse sectors and disciplines.

PSO3: Exhibit effective communication, leadership, and teamwork capabilities required to work in dynamic and multicultural environments.

PSO4: Integrate analytical, critical thinking, and quantitative techniques to support data-driven and evidence-based business decision-making.

PSO5: Embrace innovation and adapt to technological advancements and global trends for entrepreneurial ventures and business process improvements.

PSO6: Demonstrate ethical conduct, social sensitivity, and sustainable thinking in professional and organizational decision-making.

I.K.G. Punjab Technical University
MBA 101-18
Foundations of Management

Course Objective: This course presents a thorough and systematic coverage of management theory and practice. The course aims at providing fundamental knowledge and exposure of the concepts, theories and practices in the field of management. It focuses on the basic roles, skills and functions of management, with special attention to managerial responsibility for effective and efficient achievement of goals.

Course Outcomes (COs): After completion of the course, the students shall be able to:

CO1: Describe fundamental concepts and principles and conventions of accounting.
CO2: Explain the role and responsibilities of managers and adapt to the various styles of management across organizations.
CO3: Develop analytical abilities to face the business situations.
CO4: Apply various tools that would facilitate the decision making process in the business.
CO5: Develop peer based learning and working in groups and teams.
CO6: To comprehend the application of various controlling techniques in management.

Unit I
Introduction: Definition, nature, scope, importance, Functions of management and manager, Managerial roles and skills.
Evolution of management thought and Management thinkers: Classical Approach, Neo Classical Approach, Quantitative approach, Behavioral approach, Systems approach, Contingency approach. Contributions of F. W. Taylor, Henry Fayol, Mary Parker Follet, Chester Bernard, Max Weber, Peter, F. Drucker, Gilbreths, Henry Gantt, Abraham Maslow, Herzberg and McGregor.

Unit II
Planning: Importance, types of plans, and process of planning, business forecasting, MBO: Concept, importance, process, benefits and limitations.
Strategic management: Nature, importance, purpose, types, process and major kinds of strategies, McKinsey's 7-S Approach.
Decision-Making: Importance, types, steps and approaches, Decision Making in various conditions, Decision tree.

Unit III
Organizing: Concept and process of organizing, Formal Vs Informal organization, Organizational structure: Types of Organizational structure, Bases of Departmentalization**. Line &Staff:** concept, line-staff conflict.
Authority & Power: concept, responsibility and accountability. **Delegation**: concept, importance, factors affecting delegation, effective delegation, Span of Management, Decentralization and centralization, **Staffing**, importance and process. **Coordination:** Concept, importance, difficulties and techniques to ensure effective coordination.

Unit IV
Control: Concept, importance, characteristics, process of control, types and techniques of control.
Comparative study: Japanese Management and Z-culture of American Companies, Chinese Style Management,

Modern management techniques: an overview of various latest techniques: Business process Re-engineering, Business outsourcing, knowledge management, E-Business Management.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Harold Koontz, and Heinz Weihrich, *Essentials of Management: An International Perspective,* New Delhi, McGraw-Hill, 2010.
- Richard L Daft, *The New Era of Management*, New Delhi, Thomson, 2007.
- Stephen P Robbins, Mary Coulter, and Neharika Vohra, *Management,* New Delhi, Pearson, 2011.
- V. S. P. Rao, V. H. Krishna, *Management: Text and Cases*, Excel Books, New Delhi, 2009.
- P. Subba Rao, *Principles of Management*, Himalaya Publishing House, Mumbai, 2009.
- Andrew J. DuBrin, *Management: Concepts and Cases*, Cengage Learning, New Delhi, 2009.
- O.C. Ferrell, Geoffrey A. Hirt, and Linda Ferrel, *Business: A Changing World*, Tata McGraw Hill, New Delhi, 2015.
- Kumkum Mukherjee, *Principles of Management and Organisational Behaviour*, Tata McGraw Hill, New Delhi, 2009.
- Bateman, T. S., Snell, S. A., *Management*, Tata McGraw Hill, New Delhi, 2008.

I.K.G. Punjab Technical University
MBA 102-18
Managerial Economics

Course Objective: The objective of the paper is to acquaint the students with the economic concepts and principles and to enable them to use them to address business problems in a globalized economic environment.

Course Outcomes: After completing this course, students shall be able to:

CO1: Understand the basic concepts of economics and relate it with other disciplines and identify the importance of economics in managerial decision making.
CO2: Measure price elasticity of demand, understand the determinants of elasticity and apply the concepts of price, cross and income elasticity of demand.
CO3: Analyze the demand and supply conditions and assess the position of a company and explain the concepts of factors of production, collective bargaining and the underlying theories of factors of production.
CO4: Recognize the relationship between short-run and long-run costs and will also be able to establish the linkage between production function and cost function
CO5: Compare and contrast four basic types of market i.e. perfect, monopoly, monopolistic and oligopoly and can determine price and output under different market types.
CO6: Understand basic concepts of macroeconomics and shall be able to measure national income using different approaches.

Unit-I
Introduction to Managerial Economics: Managerial Economics: Meaning, Nature, Scope & Relationship with other disciplines, Role of managerial economics in decision Making, Opportunity Cost Principle, Production Possibility Curve, Incremental Concept, Scarcity Concept.
Demand: Demand and its Determination: Demand function; Determinants of demand; Demand elasticity – Price, Income and cross elasticity, Use of elasticity for analyzing demand, Demand estimation. **Demand forecasting,** Demand forecasting of new product.
Indifference Curve Analysis: Meaning, Assumptions, Properties, Consumer Equilibrium, Importance of Indifference Analysis, Limitations of Indifference Theory.

Unit-II
Production Function: Production function Meaning, Concept of productivity and technology, Short Run and long run production function, Isoquants; Least cost combination of inputs, Producer's equilibrium; Returns to scale; Estimation of production function. **Theory of Cost:** Cost Concepts and Determinants of cost, short run and long run cost theory, Modern Theory of Cost, Relationship between cost and production function. **Revenue Curve:** Concept of Revenue, Different Types of Revenues, concept and shapes of Total Revenue, Average revenue and marginal revenue, Relationship between Total Revenue, Average revenue and marginal revenue, Elasticity of Demand and Revenue relation.

Unit-III
Market Structure: Market Structure: Meaning, Assumptions and Equilibrium of Perfect Competition, Monopoly, Monopolistic Competition, Oligopoly: Price and output determination under collusive oligopoly, Price and output determination under non-collusive oligopoly, Price leadership model. **Supply:** Introduction to supply and supply curves. **Pricing:** Pricing practices**;** Commodity Pricing: Economics of advertisement

costs; Types of pricing practices. **Factor Pricing:** Demand and supply of factors of production; Collective bargaining, Concept of rent, profit, interest- Rate of return and interest rates; Real vs. Nominal interest rates. Basic capital theory–Interest rate and return on capital, Measurement of profit.

Unit-IV

Product market: Saving and Investment function, Consumption function, Aggregate supply and Aggregate demand, Investment multiplier, Foreign trade and budget multiplier. **Money market:** Motive for holding money; Liquidity preference, Money demand, Money market equilibrium. IS-LM Analysis: Derivation of nominal IS-LM and equilibrium. **National Income:** Conceptual Framework, Measures of National Income, Methods of Measurement, Limitations of National Income. **Consumption Function:** Meaning, and Nature, Determinants and Measures to Raise Propensity to Consume. Keynes Psychological Law of Consumption - Meaning, Properties and Implications, **Inflation:** Meaning, Types, Theories, Causes, Effects and Control, Unemployment Trade off, **Trade Cycles:** Concept and Theories of trade cycles.

Note: Relevant Case Studies will be discussed in class.

Suggested Readings/ Books:

- D. M. Mithani, *Managerial Economics: Theory and Applications*, Himalaya Publishing House, 2025.
- H. Craig Peterson, and W. Cris Lewis, *Managerial Economics*, Prentice Hall of India Pvt. Ltd., 2006.
- G. S. Gupta, *Managerial Economics*, Tata McGraw Hill, New Delhi, 2011.
- Geetika, Piyali Ghosh, and Purba Roy Choudhury, *Managerial Economics*, Tata McGraw Hill Education, 2018.
- Luke M. Froeb, Brian T. McCann, and Michael R. Ward, and Michael Shor, *Managerial Economics: A Problem Solving Approach*, Cengage Learning, New Delhi, 2018.
- A. Koutsoyiannis, *Modern Microeconomics*, Palgrave Macmillan, New Delhi, 2005.
- Christopher R. Thomas, and S. Charles Maurice, *Managerial Economics: Concepts and Applications*, McGraw Hill Education, 2020.
- Edward Shapiro, *Macroeconomic Analysis*, Galgotia Publications, 2013.
- H. L. Ahuja, *Advanced Economic Theory: Microeconomic Analysis*, S. Chand Publishing, 2017.
- Joel Dean, Managerial Economics, Prentice Hall of India, Pvt. Ltd., New Delhi, 1951
- K. K. Dewett, and M.H. Navalur, *Modern Economic Theory*, S. Chand Publishing, New Delhi, 2010.

I.K.G. Punjab Technical University
MBA 103-18
Quantitative Techniques

Course Objective: The objective of this paper is to acquaint the students with quantitative and operations research techniques that play an important role in managerial decision-making.

Course Outcomes: After completing this course, students shall be able to:

CO1: To have a deeper and rigorous understanding of fundamental concepts in business decision making under subjective conditions.
CO2: To apply the concepts of central tendency and variation in managerial decision making.
CO3: To enhance knowledge in probability theory and normality and its distribution concepts.
CO4: To understand the concept of correlation regression analysis and their applications.
CO5: To apply the learnt techniques to build the best fit route of transportation for carrying schedule of activities.
CO6: To apply the operations techniques in reality to market scenario.

Unit I
Introduction to Statistics: Meaning,Definition in singular and plural sense, Features of statistics,Importance , Functions, Scope and Limitations of Statistics.
Measures of Central Tendency: Mathematical averages including arithmetic mean, geometric mean and harmonic mean, properties and applications. Positional Averages: Mode and median (and other partition values including quartiles, deciles and percentile. Graphic presentation of measures of central tendency.
Measures of Variation: Absolute and relative measures. Range, quartile deviation, mean deviation, standard deviation and their coefficients. Properties of Standard Deviation and Variance. Moments Concept, calculation and Significance. Skewness: Meaning, Measurement using Karl Pearson and Bowley Measures. Concept of Kurtosis.

Unit II
Simple Correlation Analysis: Meaning of Correlation:Simple ,multiple and partial,linear and non linear correlation, correlation and causation ,scatter diagram,pearson's correlation coefficient,calculation and properties of coefficient,Rark Correlation.
Simple Regression Analysis: Meaning of Regression,Principle of least square and regression analysis,Calculation of regression coefficient,properties of regression coefficient,Relationship between correlation and regression cpoefficientg.
Theory of Probability: Meaning of Probility, Approaches to the calculation of probabability.calculation of event probabbilities,Addition and Multiplication Laws of Probabbility (Proof not required),Conditional Probability and Bayes' Theorem (Proof not required).

Unit III
Probabability Distribution: Binomial Distribution, Poission Distribution and Normal Distribution with threir properties ad applications.
Linear Programming; Formulation of linear programming problems. Solution by Graphic method and by using Simplex method algorithm including Big-M method. Business applications of LP. Degeneracy. Duality. Post-optimality analysis.

Game Theory: Two-person zero-sum games. Games of pure strategies and Games of mixed strategies. Rule of dominance. Graphic solution to games. Business applications.

Unit IV

Transportation: Transportation problem: Initial feasible solution using North-west Corner Rule; Least Cost Method; and Vogel's Approximation Method. Testing optimality using MODI method.

Assignment Problems: Assignment problem: Solution using Hungarian Assignment Method.

Project Scheduling: PERT/CPM: Project networks. Scheduling of projects with known activity times – Critical path and scheduling of activities.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Richard I. Levin, David S. Rubin, *Statistics for Management*, Prentice Hall of India, New Delhi, 2008
- Barry Render, Ralph M. Stair, Michael E. Hanna, Trevor S. Hale and T.N. Badri, *Quantitative Analysis for Management*, Prentice Hall of India, New Delhi, 2016.
- Andrew F. Siegel, *Practical Business Statistics*, 5th Edition, McGraw Hill Irwin, New York, 2001.
- David M. Levine, Timothy C. Krehbiel, and Mark L. Berenson, *Business Statistics: A First Course*, 4th Edition, Pearson Education, 2013.
- David R. Anderson, Dennis J. Sweeney, Thomas A. Williams, Jeffrey D. Camm, and R. Kipp Martin, *An Introduction to Management Science: Quantitative Approaches to Decision Making*, South Western Cengage Learning, 2011.
- Hamdy A. Taha, *Operations Research: An Introduction*, Pearson, New Delhi, 2017.
- Frederick S. Hillier, Gerald J. Lieberman, Bodhibrata Nag, and Preetam Basu, *Introduction to Operations Research*, 9th Edition, McGraw Hill Education, New Delhi, 2017.
- N. D. Vohra, and Hitesh Arora, *Quantitative Techniques in Management*, McGraw Hill Education, 2026.
- J. K. Sharma, *Operations Research: Theory and Applications*, 5th Edition, Macmillan India Ltd., 2012.
- Wayne L. Winston, S. Christian Albright, Mark Broadie, *Practical Management Science*, Duxbury Thomson Learning, 2016.
- C. B. Gupta, V. Gupta, *An Introduction to Statistical Methods*, Vikas Publishing House, 2009.

I.K.G. Punjab Technical University
MBA 104-18
Accounting for Management and Reporting

Course Objective: This course aims to familiarize the students with various accounting concepts, tools and techniques and its application in managerial decision making. It also acquaints the students with the latest accounting practices and reporting standards.

Course Outcomes: After completing this course, students shall be able to:

CO1 – To familiarize the students about the basic concepts, principles and process of accounting and to make them aware about the formats of financial statements of public limited, banking and insurance companies.
CO2 – To explain the students about the concepts of cost and various intricacies for preparing the cost sheet.
CO3 – To acquaint students about the decision making techniques using the concepts of marginal costing, standard costing and budgetary control.
CO4 – To enable the students to analyse financial statements using various tools for financial analyse and interpret the financial position of a business organization.
CO5 – To familiarize the students about the contemporary developments in the accounting.
CO6 – To make students aware about the recent developments in financial reporting and regulations so that they may understand and appreciate the concept and process of harmonization of financial reporting practices.

Unit I
Introduction to Accounting: Accounting as an information system, Accounting Process, concepts, convention and principles of Accounting, Role of accountant in an organization. Branches of accounting: Financial, Cost and Management Accounting and their inter-relationships, Exposure to format of schedule VI of Public Limited, Banking and Insurance Companies.

Unit II
Cost Accounting: Meaning, Objectives, Scope and Classification of costs, Preparation of Cost Sheet. **Marginal Costing –**Concept of Marginal Cost; Marginal Costing Vs Absorption Costing; **Cost-Volume-Profit Analysis**; Break-Even Analysis; Assumptions and its practical applications for managerial Decision making with special reference to pricing, make or buy decisions, selection of Sales-Mix.
Standard Costing: Introduction, Variance Analysis, types of Variances- Materials and Labour Variances. **Budgetary Control-** Types of Budgets Master budget Zero base budgeting, Fixed Budget and Flexible Budgets, Zero Base Budget, Participative Budget and Performance Budget.

Unit III
Financial Statement Analysis: Concepts and objectives, **Tools of Financial Analysis**: trend analysis, common size statements, comparative statements, Ratio analysis-Liquidity, solvency, profitability, turnover ratios, Cash flow statements and funds flow statements.

Unit IV
Recent Developments in Accounting: Introduction to concept of Price Level Accounting, Human Resource Accounting, Transfer Pricing. Target Costing, Kaizen costing, Activity based costing, Life Cycle Costing.

Financial Reporting and Regulations: Meaning, objectives, principles and environment of financial reporting; Introduction to Accounting Standards issued by ICAI, US GAAPs, International Accounting Standards, IFRS, Applicability of various accounting standards, comparison and the process of harmonization.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- N. L. Ahuja, and Varun Dawar, *Financial Accounting and Analysis*, Taxmann Publications, 2023.
- M. Y. Khan, and P. K. Jain, *Management Accounting*, Tata McGraw Hill, 2021.
- J. Madegowda, *Accounting for Managers*, Himalaya Publishing House, 2024.
- Charles T. Horngren, Gary L. Sundem, David Burgstahler, William O. Stratton, and Jeff Schatzberg, *Introduction to Management Accounting*, Pearson Education Asia, 2013.
- N. Ramachandran, and R. Kakani, *Financial Accounting for Management*, Tata McGraw Hill, 2017.
- Jawahar Lal, *Accounting for Management*, Himalaya Publishing House, 2020
- I. M. Pandey, *Essentials of Management Accounting*, Vikas Publishing House, 2018.
- A. Sehgal, and D. Sehgal, *Advanced Accounting: Financial Accounting I*, Taxmann Publications, 2008.
- M. C. Shukla, T. S. Grewal, and S.C. Gupta, *Advanced Accounts, Vol. I and Vol. II*, S. Chand and Company Ltd., 2016.
- Barry Elliott, and Jamie Elliott, *Financial Accounting and Reporting*, Pearson Education, 2019.
- Charles H. Gibson, *Financial Reporting and Analysis: Using Financial Accounting Information*, South Western Cengage Learning, 2012.
- Noel Christopher, and Robert Parker, *Comparative International Accounting*, Prentice Hall, 2020.
- S. K. Bhattacharyya, and John Dearden, *Accounting for Management: Text and Cases*, Vikas Publishing House, 2009.
- M.N. Arora, *Cost Accounting: Principles and Practice (14th edition)*, Vikas Publishing House, 2024.

I.K.G. Punjab Technical University
MBA 105-18
Business Environment and Indian Economy

Course Objective: This course aims at providing knowledge of the environment in which businesses operate, the economic, political, legal and social framework with a basic idea of the Indian Economy.

Course Outcomes: At the end of the course, student should be able to:

CO 1: Outline how an entity operates in a complex business environment.
CO 2: To systematically learn impact of legal & regulatory, macroeconomic, cultural, political, technological, global and natural environment on Business enterprise.
CO 3: To examine the critical opportunities and threats that arise from an analysis of external business conditions by applying scenario planning to synthesize trends prevailing in the external environment.
CO 4: To describe how various types of economic systems play a significant role in the success of a business.
CO 5: To understand the nature of Indian Economy and various issues relating to Indian Economy having a direct or indirect impact on business environment.
CO6: To discuss various development strategies in India.

UNIT I
Business Environment: Meaning, Types: Internal Environment; External Environment; Micro and Macro Environment, Components of Business Environment. **Political Environment**: Three political institutions: Legislature, Executive and Judiciary, Fundamental rights, Directive Principles, Rationale and extent of state intervention.
Economic Environment: Concept, features of various economic systems**,** New Industrial policy and industrial licensing, new economic policies, aspects of economic reforms and their effects on business and emerging economies. Effect of recession on Business and remedies for that, Economic Planning in India: Objectives, Strategies and Evaluation of current five year plan, Monetary and Fiscal Policy.

UNIT II
Legal Environment: Company Regulatory Legislations in India, FEMA, EXIM policy, Competition Law, Right to Information Act 2005.
Public Sector in India: Concepts, Philosophy and Objectives, Performance, Problems and Constraints. Disinvestment and Privatisation, Joint sector and Cooperative sector in India, Deficit Financing and its implications for the Indian Economy; Analysis of current year Annual Budget.
Consumerism: Role of Consumer Groups with Special Reference to India; Consumer Protection Act, 1986 with Latest Amendments.
Ecological Environment: Concepts of Green Management, Global Warming, Carbon Foot Printing, The Environment Protection Act 1986.

UNIT III
Technological Environment: Impact of Technology on Business, Technological Policy, Intellectual Property Rights, Import of Technology, Appropriate Technology, Problems in Technology Transfer.
International Environment: Emergence of Globalisation, Control of Foreign Direct Investment, Benefits and Problems from MNCs. WTO, its role and functions, Implications for India. Trading Blocks, Foreign Trade: SEZ (Special Economic Zones),

EPZ (Export processing zone), EOU (*Export Oriented Units*), Dumping and Anti-Dumping measures.

Introduction to Indian Economy: Colonialism and Development of Indian Economy, Framework of Indian Economy, Demographic Features and Indicators of Economic Growth and Development, Rural-Urban Migration and issues related to Urbanization, Poverty debate and Inequality, Nature, Policy and Implications.

Unit IV

Unemployment-Nature, Central and State Government's policies, policy implications, Employment trends in Organized and Unorganized Sector

Development Strategies in India: Agricultural- Pricing, Marketing and Financing of Primary Sector, Changing structure of India's Foreign Trade. The Economic Policy and Infrastructure Development: Energy and Transport, Social Infrastructure- Education, Health and Gender related issues, Social Inclusion, Issues and policies in Financing Infrastructure Development.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Paul Justin, *Business Environment*, McGraw Hill Education, 2018.
- V. K. Puri, S. K. Misra, *Economic Environment of Business*, Himalaya Publishing House, 2022.
- A.C. Fernando. *Business Environment*, Latest Edition, Pearson Education India, New Delhi. 2011
- Francis Cherunilam. *Business Environment: Text and Cases*, Himalaya Publishing House, Mumbai, 2025.
- K. Aswathappa, and Lalitha Raman, *Essentials of Business Environment*, Latest Edition, Himalaya Publishing House, Mumbai, 2025.
- Government of India, *Five Year Plan Documents*, Planning Commission.

I.K.G. Punjab Technical University

MBA 106-18

Business Ethics and Corporate Social Responsibility

Course Objective: This Paper introduces students to the relationship between business and ethics, and tries them to understand how ethical principles could influence management decisions. It also signifies the concept of CSR and its implications on business.

Course Outcomes: At the end of the course, the student will be able to:

CO1: To integrate and apply contemporary Ethics & Governance issues in a business context

CO2: To analyse and apply ethics to contemporary business practices.

CO3: To analyse key perspectives on corporate social responsibility and their application.

CO4: To evaluate different corporate ownership structures and their key governance features.

CO5: To understand the ethical decision making, ethical reasoning, the dilemma resolution process.

CO6: To analyse and apply corporate governance perspectives to contemporary business practices.

Unit I

Business Ethics: Characteristics, Principles, Types, Importance, Factors highlighting the importance of Business Ethics, Myths about Business Ethics. Ethical Values, Theories of Ethics, Absolutism verses Relativism, Teleological approach, the Deontological approach, Kohlberg's six stages of moral development (CMD), Code of Ethics.

Business Ethics and Social Responsibilities of the firm - relationship of the firms with customers, competitors, stockholders, dealers and suppliers. Ethics v/s Ethos, Indian v/s Western Management, Globalisation and Business Ethics. Emerging issues of Business Ethics.

Unit II

Ethical Dilemma; Characteristics, ethical decision making, ethical reasoning, the dilemma resolution process.

Ethical Considerations in Marketing, Ethics in Accounting and Finance, Ethical Implications at Top Level. Ethical considerations in Human Resource Management, Environmental Ethics.

Note: Relevant Case Studies regarding ethical issues in Marketing, HRM, Accounting and Finance and Environment Management should be discussed in the class.

Unit III

Corporate Social Responsibility: Concept, Definition, Need, Arguments in favour of and against CSR. Historical Phases of Corporate Social Responsibility, Perspectives of CSR. Models of CSR, Drivers of CSR, Corporate Governance, Business Ethics and CSR.

Corporate Social Responsibility and Corporate Sustainability: Meaning, Need and importance of Sustainability, Sustainability Case Studies-Triple Bottom Line (TBL).

Corporate Sustainability Reporting Frameworks- Global Reporting Initiative Guidelines, National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business.

Unit IV

Corporate Social Responsibility within the organisation, CSR and Society, Strategic Planning and CSR, Environmental Aspects of CSR, CSR under the Companies Act, 2013, CSR Practices in India, Case Studies of Major CSR Initiatives.
Corporate Governance: Introduction, Need, Models.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- A. C. Fernando, *Business Ethics and Corporate Governance*, Pearson Education, 2019.
- Manuel G. Velasquez, *Business Ethics: Concepts and Cases*, PHI Learning, 2011.
- B. N. Ghosh, *Business Ethics and Corporate Governance*, Tata McGraw Hill, 2017.
- Thomas M. Garrett, *Business Ethics*, The Times of India, Bombay Press, 1966.
- Peter Pratley, *The Essence of Business Ethics*, Prentice Hall of India, 1995.
- S. K. Chakraborty, *Ethics in Management: Vedantic Perspectives*, Oxford University Press, 1995.
- Keith Davis, *Business and Society*, McGraw Hill, 1975.

I.K.G. Punjab Technical University

MBA 107-18

Business Communication for Managerial Effectiveness

Course Objective: This course presents communication as integral to management and as a critical component for success in the workplace. The students will develop a foundation for designing effective messages, both written and oral, from concept to delivery. They will use various communication models to identify objectives, analyze audiences, choose information, and create the most effective arrangement and channel for that message. Particularly, the course emphasizes elements of persuasive communication: how to design messages for diverse and possibly resistant audiences and how to present that information in a credible and convincing way.

Specifically, students will practice drafting and editing clear, precise, and readable written business documents as well as learn to design documents to make information easily accessible to a busy, executive-level reader. In addition, they will develop and deliver an individual presentation, using appropriate and effective visual support, in which they will present a persuasive argument that demonstrates relevance and benefits to an audience at different levels of expertise or interest and will learn and practice group communication.

Course Outcomes: At the end of the course, the student will be able to:

CO1 - To understand the basics of communication and its process, and the various barriers in the communication.
CO2 – To learn the listening skills and comprehend the value of business etiquettes
CO3 – To comprehend Non – Verbal communication skills and its application for effective Communication.
CO4 – To learn the skills of writing effective business messages, letters and reports
CO5 – To develop the presentation skills and learning to organize and structure a Presentation using visual aids
CO6 – To prepare the students for interview, employment messages and resume writing skills

UNIT - 1

Understanding the Foundations of Business Communication: Business Communication concept, Communication Models, Communication Process, Characteristics of effective business communication, Barriers in communication environment, Communication and Ethics, Cross Cultural Communication;

Guidelines for successful collaborative writing, Social networking technologies in business communication, Importance of listening, business etiquette & nonverbal Communication

UNIT - II

The Three-Step Writing Process: Importance of analyzing the situation before writing a message, Information-gathering options, Information organization, Writing Business Communication: Adapting to your audience, Crafting brief messages, Crafting messages for electronic media, Writing routine and positive messages, Writing negative messages; Planning, Writing, and Completing Reports and Proposal and Emails.

UNIT – III

Designing and Delivering Oral and Online Presentations: Developing oral and online presentations, Enhancing presentations with slides and other visual aids, Just-A-Minute

Presentation, Individual/Group Presentations, Feedback and overcoming Glossophobia, Group discussion.

UNIT - IV

Writing Employment Messages and Interviewing for Jobs: Employment strategy, Planning, writing and completing your resume, Applying and Interviewing for Employment: Understanding, preparing and follow-up, Role Play and Simulation games – Employer - employee and Interviewer – interviewee relationship.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- John M. Penrose, Robert W. Rasberry, and Robert J. Myers, *Business Communication for Managers: An Advanced Approach (5th edition)*, Cengage Learning, 2007.
- Courtland L. Bovee, John V. Thill, and Roshan Lal Raina, *Business Communication Today (13th edition),* Pearson, 2016.
- Ashraf M. Rizvi and Priyadarshi Patnaik, *Effective Technical Communication*, Tata Mcgraw Hills, 2024.
- Raymond Lesikar, Marie Flatley, Kathryn Rentz, and Neerja Pandey, *Business Communication*, Tata Mcgraw Hills, 2014.

I.K.G. Punjab Technical University
MBA 201-26
Business Analytics for Decision Making

Course Objective: This course aims to develop an understanding of statistical and analytical techniques for data-driven business decision-making. It focuses on data preparation, exploratory analysis and the application of descriptive and predictive models. The course also emphasizes forecasting, model evaluation and the use of analytics tools to generate meaningful business insights.

Course Outcomes: At the end of the course, the student will be able to:

CO1: Apply statistical and data preparation techniques to organize, analyze and interpret business data.
CO2: Use hypothesis testing and descriptive analytics methods to draw inferences and support decision-making.
CO3: Develop and evaluate predictive models using regression and basic machine learning techniques.
CO4: Apply time series analysis and forecasting methods to solve real-world business problems and enhance decision-making.
CO5: Use SPSS and analytical reporting techniques to interpret business data and communicate actionable managerial insights.

Unit I
Introduction to Statistics and Data: Meaning, importance and applications of statistics in business decision-making, types of data, primary and secondary data sources.
Data Preparation and Quality: Data preprocessing, data cleaning, handling missing values, data quality issues and feature creation. **Data Organization:** Classification, tabulation and construction of frequency distributions. Introduction to SPSS and basic data preprocessing using SPSS.
Sampling Techniques: Census vs sampling, probability and non-probability sampling methods, sampling errors and their relevance in analytics.
Exploratory Data Analysis (EDA): Measures of similarity and dissimilarity, dimension reduction and feature selection techniques using SPSS.

Unit II
Sampling Distributions and Hypothesis Testing: Concept of sampling distributions and standard error formulation and testing of hypotheses, errors in hypothesis testing, application of Z-test, t-test, F-test, Chi-square test, ANOVA and goodness of fit. Practical interpretation of statistical outputs generated through SPSS.
Association of Attributes: Techniques to analyze relationships among qualitative variables.
Descriptive Analytics: Data visualization techniques and interpretation.
Descriptive Modeling: Introduction to clustering and principal component analysis (PCA); interpretation of descriptive models for business insights.

Unit III
Business Forecasting and Regression: Role and methods of forecasting; correlation (partial and multiple) and regression analysis, testing assumptions such as multicollinearity, heteroscedasticity and autocorrelation.
Predictive Modeling Techniques: Introduction to linear regression, logistic regression, k-nearest neighbors and decision trees.

Model Evaluation: Techniques for assessing predictive models and their effectiveness in decision-making. Regression analysis and predictive modeling using SPSS.

Unit IV

Time Series Analysis: Components and methods of time series, trend analysis using least squares (linear and non-linear models).

Advanced Analytics Applications: Use of predictive and descriptive models in business decision-making, integration of analytics for forecasting and performance measurement. Preparation and presentation of analytical reports, interpretation of findings and managerial recommendations.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- David M. Levine, Mark L. Berenson, and Timothy C. Krehbiel, *Business Statistics: A First Course*, 8th Edition, Pearson Education, 2020.
- Richard I. Levin, David S. Rubin, Masood Husain Siddiqui, and Sanjay Rastogi, *Statistics for Management*, Pearson India, 2017.
- S. P. Gupta, *Statistical Methods*, Sultan Chand and Sons, 2021.
- G. Beri, *Business Statistics*, McGraw Hill Education, 2017.
- J. S. Croucher and D. Cronn-Mills, *Statistics for Business: Decision Making and Analysis*, 2nd Edition, McGraw Hill, 2018.
- C. R. Reddy, *Quantitative Techniques for Managerial Decisions*, Revised Edition, Himalaya Publishing House, 2019.
- David R. Anderson, Dennis J. Sweeney, Thomas A. Williams, Jeffrey D. Camm, James J. Cochran, Michael J. Fry, and Jeffrey W. Ohimann, *Statistics for Business and Economics*, Cengage Learning, 2023.
- Barry Render, Ralph M. Stair Jr., Michael E. Hanna, and Trevor S. Hale, *Quantitative Analysis for Management*, Pearson Education, 2017.
- Andrew F. Siegel, *Practical Business Statistics*, Academic Press, 2016.
- Foster Provost, and Tom Fawcett, *Data Science for Business*, O'Reilly Media, 2013.
- Dean Abbott, *Applied Predictive Analytics: Principles and Techniques for the Professional Data Analyst*, Wiley, 2014.
- Pang Ning Tan, Michael Steinbach, and Vipin Kumar, *Introduction to Data Mining*, 2nd Edition, Pearson Education, 2016.
- Manas Pradhan, and U. Dinesh Kumar, *Machine Learning Using Python*, Wiley, 2021.

I.K.G. Punjab Technical University
MBA 202-18
Legal Environment for Business

Course Objective: The objective of this paper is to give an exposure to students about important commercial, corporate and taxation laws, so that they are able to relate the impact of these legal enactments on business in an integrated manner.

Course Outcomes: Following are the expected outcomes of the course:

CO1 - Students shall be able to understand the legal and regulatory framework of business environment.
CO2 - Students shall be able to identify the fundamental legal principles behind contractual agreements.
CO3 - Students shall be able to understand the legal provisions of sales of goods.
CO4 - Students shall be able to understand the concept of negotiable instruments as well as rules pertaining to crossing, transferring and dishonouring of negotiable instruments.
CO5 -Students shall have understanding of legal rules governing admission, retirement and death of partner and dissolution of partnership firm.
CO6 - Students shall be able to understand the legal framework relating to the process of incorporation of Joint Stock Company

UNIT-I

Introduction to Business Laws:- Business Management and Jurisprudence; Structure of the Indian Legal Systems: sources of Law. **Law of Contract**: Definition, features of a valid contract, offer and Acceptance, Consideration, Capacity of parties, Free consent, Legality of Object, Performance and Discharge of Contract, breach of a contract and its remedies. Meaning and types of agents. Special Contracts-Laws of Agency; Principal-Agent Problem-Bailment, Pledge, Guarantee and Indemnity.

UNIT-II
Sales of Goods Act- Principles of Sales of Goods- Transfer of Ownership& Property– Performance of contract.

Unit III

Partnership Act: Introduction to Partnership Act, admission of partner, retirement and death of partner, dissolution of partnership firm.

Negotiable Instrument: Bills of Exchange, Promissory Note, Cheque and Rules Regarding the Crossing of Cheques, Dishonour of cheques and liability of banker and drawer.

UNIT-IV
Company law: Definition and features of company; concept of corporate veil; distinction between company and partnership firm; type of companies, Process of formation and incorporation of Company, Memorandum of Association and Articles of Association, Definition, qualification, rights, duties and position of Directors, Constitution of Board of Directors, Chairman of Board, independent and executive directors, Introduction to meetings and resolution.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- C. L. Bansal, *Business Laws*, Taxmann Publications, 2011.
- M. C. Kuchhal, and Vivek Kuchhal, *Business Legislations for Management*, Vikas Publishing House, 2014.
- S. N. Maheshwari, and S. K. Maheshwari, *A Manual of Business Laws*, Himalaya Publishing House, 2024
- Vinod K. Singhania, Kapil Singhania, and Monica Singhania, *Direct Taxes: Law and Practice*, Taxmann Publications, 2025.
- Anil Kumar Swain, and Gopal Prasad Agrawal, *GST: Concepts and Applications*, Himalaya Publishing House, 2026.
- P. C. Tulsian, and Bharat Tulsian, *Business Laws*, McGraw Hill, 2014.

I.K.G. Punjab Technical University
MBA 203-21
Marketing Management

Course Objective: The course aims at making students understand concepts, philosophies, processes and techniques of managing the marketing operations of a firm in turbulent business environment. This course will provide better understanding of the complexities associated with marketing functions, strategies and provides students with the opportunity to apply the key concepts to practical business situations.

Course Outcomes: At the end of the course, the student will be able to:

CO1 - To learn the basics of marketing, selling, marketing mix and its core concepts.
CO2 – To understand the intricacies of the marketing environment and marketing information systems for effective marketing planning and strategies.
CO3 – To equip the students with necessary skills for effective market segmentation, targeting and positioning.
CO4 – To prepare the students for understanding the various components of product mix, product life cycle and comprehend the new product development process.
CO5 – To develop an understanding of promotion mix and strategies for successful promotion.
CO6 – To gain knowledge about the emerging trends in marketing and pyramid marketing.

Unit I
Understanding Marketing and Consumers: Introduction to Marketing Management.
Definition, Importance, Scope, Basic Marketing Concepts, Marketing Mix, Marketing vs Selling, Customer Value, techniques and relevance. **Marketing Environment and Competition:** Analyzing Marketing Environment-Micro, Macro, Impact of environment on marketing. **Corporate Strategic Planning:** Defining role of marketing strategies, marketing planning process. **Marketing Information System:** Concept and Components. **Consumer Behaviour:** Consumer buying process, Factors Influencing Consumer Buying Behaviour,

Unit II
Market Segmentation & Targeting: Product differentiation, Positioning for competitive advantage, Product Decisions: Product Mix, Packaging and Labelling Decisions, Branding, Brand value & Brand Equity. **New Product Development**, Consumer Adoption Process, Product Life Cycle and marketing mix strategies. **Services Marketing** and 7Ps framework.

Unit III
Pricing Decisions: Objectives, Factors Affecting Pricing Decisions, Pricing Methods, Price Changes, Pricing Strategies.
Promoting Product : Concept of Personal Selling Personal Selling Process, Managing the Sales Force. **Promotion Mix:** Advertising, Sales Promotion, Public Relations.

Unit IV

Supply Chain Decisions Nature, Types, Channel Design and Channel Management Decisions, Retailing, Wholesaling

Emerging Trends in Marketing: Green Marketing, Event Marketing, Network Marketing, Social Marketing, Buzz Marketing/ Viral Marketing, Customer Relationship Management (CRM), Global Marketing, Rural Marketing, E-Commerce, Understanding Digital Marketing, Understanding **Bottom of Pyramid Marketing.**

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Philip Kotler, Kevin Lane Keller, Abraham Koshy, and Mithileshwar Jha, *Marketing Management: A South Asian Perspective*, Pearson Education, 2018.
- V. S. Ramaswamy, S. Namakumari, *Marketing Management*, McGraw Hill Education, 2018.
- Michael J. Etzel, Bruce J. Walker, William J. Stanton, and Ajay Pandit, *Marketing*, Tata McGraw Hill, 2017.
- David L. Kurtz, and Louis E. Boone, *Principles of Marketing*, Cengage Learning, 2012.
- Philip Kotler, Gary Armstrong, Sridhar Balasubramanian, and Prafulla Agnihotri, *Principles of Marketing*, Prentice Hall, 2023.
- Biplab S. Bose, *Marketing Management*, Himalaya Publishing House, 2015.
- Subhash C. Jain, *Marketing Management*, Cengage Learning, 2012.
- Rajan Saxena, and Shruti Saxena, *Marketing Management*, Tata McGraw Hill, 2026.

I.K.G. Punjab Technical University
MBA 204-18
Human Resource Management

Course Objective: The objective of the paper is to make student aware of the various functions and importance of HR department in any organization. It is basically concerned with managing the human resources, whereby the underlying objective is to attract retain and motivate the human resources in any organization.

Course Outcomes: At the end of the course, the student will be able to:

CO1- To explain the basics of Human Resource Management and analyse the evolution of HRM.
CO2- To comprehend the environment of HRM.
CO3: To appraise various functions of HRM that facilitate employee hiring viz. human resource planning, job analysis recruitment and selection.
CO4: To understand the role of training, development, career planning and performance appraisal functions in human resource development.
CO5: To examine the provisions of employee health, safety and welfare.
CO6: To analyse the concerns of government, employees and employers in establishing Industrial relations.
CO7: To illustrate mechanisms adopted by the organizations for settlement of disputes and grievances

Unit I
Human Resource Management (HRM): Nature, Scope, Objectives and functions of HRM. Evolution of HRM, HR as a factor of competitive advantage. Organization of HR department, Line ad staff responsibility of HR managers, competencies of HR Manager. Personnel Policies and Principles. **Strategic HRM**: Introduction, Integrating HR strategy with Business Strategy, Difference between SHRM and HRM. HRM Environment and Environment Scanning. **Human Resource Planning**: Meaning, Process and importance, factors affecting Human Resource Planning. **Job Analysis**: Process, methods of Job Description & Job Specification.

Unit II

Recruitment & Selection: Meaning & Concept, Process & Methods Recruitment & Selection, Induction & Placement. **Training & Development**: Meaning & Concept of Training & Development, Methods of Training & Development, Evaluating training effectiveness. HRM vs. HRD. **Career Planning & Development**: concept of career, career planning, career development, process of career planning and development, factors affecting career choices, responsibilities of Employers / managers, organization and employees in career planning and development, career counseling. **Internal Mobility**: Promotion, Transfer, Demotion, Separation, downsizing and outplacement.

Unit III

Performance Appraisal: Meaning & Concept of Performance Appraisal, Methods & Process of Performance Appraisal, Issues in Performance Appraisal, Potential Appraisal. **Compensation Management**- Concept and elements of compensation, Job evaluation, Wage / Salary fixation, Incentives Plans & Fringe Benefits. **Quality of work life (QWL)**: Meaning, Concept, Techniques to improve QWL. Health, Safety & Employee Welfare, Social Security. **Quality Circles**: Concept, Structure, Role of Management, QCs in India.

Unit IV

Industrial Relations: Government's concerns, Union's concerns, Management concerns; Approaches of IR; Dispute Resolution Machinery. **Collective Bargaining:** Meaning, Scope, Objectives, Issues and Strategies, steps of collective bargaining, negotiation skills. Participative Management, Grievance Handling, Disciplining and Counseling of employees, HRIS, HR Audit. Ethical Issues in HRM. Human Resource Management practices in India.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Gary Dessler, *Human Resource Management*, Pearson, 2020.
- K. Aswathappa, *Human Resource Management: Text and Cases*, McGraw Hill Education, 2023.
- Edwin B. Flippo, *Personnel Management*, 5th Edition, McGraw Hill, 1984.
- John M. Ivancevich, *Human Resource Management*, 12th Edition, Tata McGraw Hill, 2013.
- Luis R. Gomez Mejia, David B. Balkin, and Robert L. Cardy, *Managing Human Resources*, 8th Edition, Pearson Education, 2016.
- John Bratton, and Jeff Gold, *Human Resource Management: Theory and Practice*, 6th Edition, Palgrave Macmillan, 2017.
- Mirza S. Saiyadain, *Human Resource Management*, Tata McGraw Hill, 2009.
- Dale Yoder, and Paul D. Staudohar, *Personnel Management and Industrial Relations*, Tata McGraw Hill, 1982.

I.K.G. Punjab Technical University
MBA 205-18
Production & Operations Management

Course Objective: It is a subject where a student learns various steps of product design, development, production, plant location, storage, production planning and control. The students are motivated to apply concepts and principles of management to become more effective professional

Course Outcomes (COs): After completion of the course, the students shall be able to:

CO1: Understand ever growing importance of Production and Operations management in uncertain business environment.
CO2: Gain an in-depth understanding of resource utilization of an organization.
CO3: Appreciate the unique challenges faced by firms in services and manufacturing.
CO4: Understand the subject as a crucial part of functional management.
CO5: Develop skills to operate competitively in the current business scenario.
CO6: Understand the concepts of inventory and purchasing management.

Unit- I

Operations management: concept, functions, transformation process model: inputs, process and outputs; classification of operations; responsibilities of operations manager, contribution of Henryford, Deming, Crossby, Taguchi.

Facility Location – importance, factors in location analysis, location analysis techniques. **Product Design and Development** – product design and its characteristics, product development process (technical), product development techniques. **Process selection**- project, job, batch, mass and process types of production systems. operations management in corporate profitability and competitiveness

Unit- II

Facility Layout – Objectives, Advantages, Basic Types of Layouts, Problems in facility layout. **Production Planning & Control (PPC):** –Concepts, Objectives, and Functions, work study – Productivity: Method study; Work measurement. **Capacity Planning** – Concepts, Factors affecting Capacity Planning, Capacity Planning Decisions.

Unit- III

Quality Management: Introduction, Meaning, Quality Characteristics of Goods and Services, Juran's Quality Trilogy, Deming's 14 principles, Tools and Techniques for Quality Improvement, Statistical Process Control Chart, Quality Assurance, Total Quality Management (TQM) Model Concept of Six Sigma and its Application. **Acceptance Sampling** – Meaning, Objectives, Single Sample, Double Sample and Multiple Sample Plans with sated risk, Control charts for variables – Averages and Ranges, Control Charts for Defectives – Fraction Defective and Numbers Defective.

Unit- IV

JIT and Lean Production System: JIT Approach, Implementation requirements, Services, Kanban System. **Inventory Management**: Concepts, Classification, Objectives, Factors affecting Inventory Control Policy, Inventory Costs, Basic EOQ

Model, Re-order level, ABC analysis. Logistics and Franchising. **Purchasing Management –** Objectives, Functions, Methods, Procedure.

Value Analysis: Concepts, Stock Control Systems, Virtual Factory Concept and Production Worksheets.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings / Books:

- B. Mahadevan, *Operations Management: Theory and Practice*, Pearson Education, 2010.
- Lee J. Krajewski, and Larry P. Ritzman, *Operations Management*, Pearson Education, 1999.
- Elwood S. Buffa, and Rakesh K. Sarin, *Modern Production/ Operations Management*, John Wiley and Sons, 2007.
- S. N. Chary, *Production and Operations Management*, Tata McGraw Hill, 2019.
- Robert Johnston, Stuart Chambers, Christine Harland, Alan Harrison, and Nigel Slack, *Cases in Operations Management*, Pitman Publishing, 2025.
- Douglas McGregor, The Human Side of Enterprise, McGraw-Hill, 1960.
- N. G. Nair, *Production and Operations Management*, Tata McGraw Hill, 2002.

I.K.G. Punjab Technical University

MBA 206-21

Corporate Finance and Policy

Course Objective: To provide an in-depth understanding of the core finance functions and decisions in the area of corporate financial management. Further provide a practical and problem insight for effective financial decision-making.

Course Outcomes: After completing the course, the students shall be able to:

CO1- To explain the evolution, objectives and functions of corporate finance and interface of corporate finance with other functional areas.
CO2- To illustrate the concept of time values of money and valuation of securities.
CO3: To comprehend the significance of capital structure theories in capital structure decisions.
CO4: To facilitate sound investment decisions based on capital budgeting techniques.
CO5: To understand the applications of approaches of working capital management.

Unit I

Introduction to Financial Management and Corporate Finance: Meaning, evolution, objectives, functions and scope of corporate finance. Interface of financial management with other functional areas, Role of financial manager.
Time Value of Money-Introduction, types of cash flows, future value of single cash flow, multiple flows and Annuity. **Valuation of Securities:** Concept of Valuation, Methods for valuation of equity, debt and hybrid securities.
Sources of Finance–Different sources of finance; long term and Short term.

Unit II

Cost of capital: concept, significance of cost of capital, specific costs and weighted average cost of capital,
Capital Structure Decision-Capital Structure Theories: Meaning and features of capital structure decision, Net Income Approach, Net Operating Income Approach, Traditional Approach, Modigliani-Miller Hypotheses with special reference to the process of arbitrage and Agency Cost. Determinants of Capital Structure Decision - Approach to Estimating the Target Capital Structure, EBIT / EPS Analysis and ROI / ROE Analysis

Unit III

Leverage–Business Risk and Financial Risk– Operating and financial leverage, Trading on Equity
Capital Budgeting Decision: Nature of investment decisions; process of capital budgeting, investment evaluation criteria: Discounted and Non-Discounted Methods (Pay-Back Period, Average rate of return, Net Present Value, Benefit Cost Ratio and Internal Rate of Return). Risk analysis in capital budgeting and Capital rationing.

UNIT IV

Dividend Decision-: Issues in dividend decisions. forms of dividend, theories of relevance and irrelevance of dividends.
Management of Working Capital: Meaning, nature, objectives and Approaches of Working Capital (Conservative, Matching and Aggressive approaches), Static vs. Dynamic View of Working Capital. Factors determining the amount and composition of Working Capital. Methods for financing of working capital.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- I. M. Pandey, *Financial Management*, Vikas Publishing House, 2015.
- M. Y. Khan, and P. K. Jain, *Financial Management*, Tata McGraw Hill, 2018.
- Prasanna Chandra, *Financial Management: Theory and Practice*, Tata McGraw Hill, 2026.
- James C. Van Horne, and John M. Wachowicz Jr., *Fundamentals of Financial Management*, Prentice Hall of India, 2015.
- Richard A. Brealey, Stewart C. Myers, and Franklin Allen, *Principles of Corporate Finance*, McGraw Hill Education, 2017.
- L. M. Bhole, *Financial Institutions and Markets*, McGraw Hill Education, 2017.
- R. M. Srivastava, and Divya Nigam, *Management of Indian Financial Institutions*, Himalaya Publishing House, 2021.
- P. N. Varshney, D. K. Mittal, *Indian Financial System*, Sultan Chand and Sons, 2015.

I.K.G. Punjab Technical University
MBA 207-18
Entrepreneurship Development and Project Management

Course Objective: To provide a comprehensive understanding of the concept of an Entrepreneur and intricacies involved in managing entrepreneurial projects. The prime aim is to imbibe the necessary entrepreneurial competencies among students and motivate them choose Entrepreneurship as a feasible and desirable career option.

Course Outcomes: After completing the course, the students shall be able to:

CO1- To explain the characteristics, functions and traits of an entrepreneur.
CO2- To illustrate the concept of corporate entrepreneurship and development of the same in the organizations.
CO3: To comprehend the significance of women entrepreneurs, rural entrepreneurship and social entrepreneurship.
CO4: To examine entrepreneurial strategies to explore new entry opportunities, methods of enhancing creativity and generation of ideas.
CO5: To be able to develop an effective business plan.
CO6: To explain the basic concepts of project management and analyse different phases of project management viz. generation and screening of project ideas, project analysis, selection, financing, implantation and review.

Unit I
Introduction to Entrepreneur: Concept, Characteristics, functions of an entrepreneur, Entrepreneur Vs Manager, Types of entrepreneur, Entrepreneurial Mind Set, Key attributes of an entrepreneur, desirable and acquirable traits and behaviours, Readiness of the entrepreneur: Right age, right time and right conditions, Myths and Realities of entrepreneurship. **Entrepreneurship and Intrapreneurship:** Similarities and variance, Developing Corporate Entrepreneurship.
Women entrepreneurs:- Meaning, role, problems for women entrepreneurs, **Rural entrepreneurship, social entrepreneurship,** Entrepreneurship Development, Entrepreneurial support systems and role of government in Entrepreneurship Development.

Unit II
Entrepreneurial Motivation: Concept and Theories, **Entrepreneurial Strategy: Generating and Exploiting New Entry Opportunities**, Generation of new Entry Opportunity, entry Strategy, Risk reduction strategies for New Entry Exploitation
Creativity and Business Idea Generation: Concept of creativity, ideas from trend analysis, sources of new ideas, Methods of generating new ideas, Creative problem solving, creativity and entrepreneurship. **Entrepreneurial Innovation:** Concept and types, Opportunity Recognition and opportunity assessment plan, product planning and development process.

Unit III
Protecting Ideas and Legal issues for the entrepreneur. Concept of IPR, Patents, Trademarks, Copyrights, Licensing, Product Safety, Other Legal Issues in Setting Up An Organisation. **Business Plan Creating and Starting the Venture:** Concept of Business Plan, Scope and Value, Writing the business plan, Using and implementing business plan. **Succession Planning and Strategies for Harvesting and Ending Venture:** Exit Strategy, succession of Business, Selling off, bankruptcy
Reasons of failure of business plan, Reasons for the failure of entrepreneurial ventures.

Unit IV

Project Management: Concept, facets and Key Issues of project management. **Generation and screening of project ideas**, **Project Analysis:** Market and demand analysis, Technical analysis, Financial estimates and projection, **Project Selection:** Investment criteria, Risk analysis, Social Cost Benefit analysis.

Project Financing: Financing of projects, Concept of Venture Capital in detail, Difference between Venture Capital and Private Equity. **Project Implementation**: Project planning and control, Network techniques for project management: PERT and CPM Models, **Project Review**: Post Audit and Administrative Aspects**.**

Note: Relevant Case Studies should be discussed in class.

Suggested readings:

- Prasanna Chandra, *Projects: Preparation, Appraisal, Budgeting and Implementation*, Tata McGraw Hill, 2017.
- Vasant Desai, *Project Management and Entrepreneurship*, Himalaya Publishing House, 2017.
- David S. Clifton, and David S. Fyffe, *Project Feasibility Analysis*, John Wiley and Sons, 2012.
- Dean A. Shepherd, Robert D. Hisrich, and Michael P. Peters, *Entrepreneurship*, Tata McGraw Hill, 2016.
- Sangram Keshari Mohanty, *Fundamentals of Entrepreneurship*, PHI Learning Pvt. Ltd., 2005.
- K. Natrajan, and E. Gordon, *Entrepreneurship Development*, Himalaya Publishing House, 2022.

I.K.G. Punjab Technical University
MBA 208-26
Computer Applications and Data Visualization for Managers

Course Objective: The course aims to develop managerial competence in the use of digital business applications, office productivity tools and data visualization techniques for effective business decision making and communication. The course focuses on practical application of business computing, spreadsheet based analysis, dashboard creation, data storytelling and AI assisted communication tools for modern organizations.

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

CO1: Apply fundamental business computing concepts and digital productivity tools in organizational settings.
CO2: Use spreadsheet applications and business software for data organization, analysis and reporting.
CO3: Develop effective data visualizations and interactive dashboards using contemporary visualization tools.
CO4: Interpret and communicate business insights through visual storytelling and analytical presentations.
CO5: Utilize AI enabled digital tools for business communication, reporting and managerial decision making.

Unit I
Introduction to Business Computing: Role of computers in business organizations, digital transformation in business, components and classification of computers, hardware and software concepts.
Operating Systems and Business Environment: Functions of operating systems, file and folder management, cloud based business applications, collaborative digital platforms.
MS Office and Productivity Applications: Overview of MS Office applications, business use of Word, Excel and PowerPoint, preparation of professional documents, reports and presentations.

Unit II
MS Excel for Business Analytics: Workbook creation, formatting, sorting, filtering and data validation.
Spreadsheet Functions and Analysis: Financial, logical, statistical and text functions, conditional formatting, pivot tables and data summarization.
Business Reporting using Spreadsheets: Charts and graphs, dashboard creation in Excel, scenario analysis and what if analysis.
AI Enabled Business Applications: Use of AI assisted spreadsheet tools, automated report generation and smart business analytics applications.

Unit III
Introduction to Data Visualization: Importance of data visualization in managerial decision making, principles of effective visualization and business storytelling.
Principles of Visual Design: Gestalt principles, cognitive aspects of visualization, visual hierarchy, colour theory and dashboard aesthetics.
Visualization using Tableau and Power BI: Data importing, data preparation, charts, graphs, filters and slicers.

Advanced Visualization Techniques: Geographical maps, calculated fields, KPI visualization, drill down analysis and dynamic dashboards (like sales dashboards, financial dashboards and HR dashboards for managerial communication). Use of dashboards and visualization for managerial performance monitoring and business decision support.

Unit IV

Business Storytelling with Data: Communicating analytical insights through narratives, storytelling frameworks and presentation techniques.

Presentation and Communication of Insights: Designing impactful business presentations, presentation of data, infographic development and visual reports.

Ethical and Communication Challenges: Data security, ethical use of AI and information technology, misleading visualizations and interpretation biases.

Applications in Business Decision Making: Case studies and applications of visualization and communication in finance, marketing, HR, operations and strategy.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- A. Arora, *Computer Fundamentals and Applications*, Vikas Publishing House, 2015.
- Greg Deckler, and Brett Powell, *Mastering Microsoft Power BI*, Packt Publishing, 2022.
- Cole Nussbaumer Knaflic, *Storytelling with Data: A Data Visualization Guide for Business Professionals*, Wiley, 2015.
- Alexander Loth, Nate Vogel, and Sophie Sparkes, *Visual Analytics with Tableau*, Wiley, 2023.
- Manas Pradhan, and U. Dinesh Kumar, *Machine Learning Using Python*, Wiley, 2020.
- V. Rajaraman, and Neeharika Adabala, *Fundamentals of Computers*, Prentice Hall India, 2014.
- P. K. Sinha, and Priti Sinha, *Foundation of Computing*, BPB Publications, 2022.
- Efraim Turban, Carol Pollard, and Gregory Wood, *Information Technology for Management: Driving Digital Transformation to Increase Local and Global Performance, Growth and Sustainability*, Wiley, 202.
- Nathan Yau, *Data Points: Visualization That Means Something*, Wiley, 2013.

I.K.G. Punjab Technical University
MBA 301-18
Organizational Behaviour & Design

Course Objective: The course aims to provide an understanding of basic concepts, theories and techniques in the field of human behaviour at the individual, group and organizational levels in the changing global scenario at workplace.

Course Outcomes: Upon completion of this course, students will be able to:

CO1- To explain the basics of Orgnaizational behaviour and various challenges for OB in national and global environment.
CO2- To illustrate the foundations of Individual Behaviour and analyse the influence of individual level factors viz. learning, personality, perception, attitude and motivation on behaviour in organizations.
CO3: To assess the significance of leadership and role of leadership styles in effectiveness of the team.
CO4: To examine the dynamics of group development, group properties and formation of organizational culture.
CO5: To demonstrate dimensions of organisational design and types of organisational structure and to analyse the influence of environment on organisational design.
CO6: To interpret the effect of political climate (conflict, power and politics) on human behaviour.

Unit I
Organisational Behaviour: Meaning, foundations, contributing disciplines to OB, Challenges and opportunities for OB.
Individual Behaviour: Foundations of individual behaviour, Determinants of individual behaviour.
Learning and Reinforcement: Theories of learning, Schedules of reinforcement, Behaviour modification.
Emotions and Moods: Types and sources of emotions, emotional intelligence, managing emotions at work place.

Unit II
Personality: Determinants of personality, The Myers-Briggs Type Indicator model of personality, The Big five model of personality, traits of personality.
Attitudes & Values: sources and types of attitude, cognitive dissonance theory, Types of attitudes at work place, attitude change.
Perception: factors influencing perception, process of perception, attribution theory of perception, perceptual distortions and improving perceptions.
Motivation: early and contemporary theories of motivation, application of motivation process.
Leadership: nature and significance of leadership, theories of leadership, behavioural styles of leaderships, leadership traits, transactional leadership, concept of charisma leaders.

Unit III
Transactional analysis: Ego states, life positions, Johari window model.
Foundations of Group Behaviour: Nature and concept of group, Group formation, stages of group formation, theories of group formation, Types of teams, issues in team management.

Group Properties: Roles, norms, status, size, cohesiveness and decisions making in groups.

Stress management: sources of stress, approaches for stress management.

Organizational culture: meaning, concept and dimensions of organizational culture, developing organizational culture, cultural differences.

Unit IV

Understanding Organisations: Meaning and importance of organisations, Organisational theory, Organizational life cycle. **Organization and environment**: General vs specific environment, actual vs perceived environment, environmental uncertainty. **Organisational Design:** Meaning, factors influencing organisational design: organizational strategy, size, technology, environment. Dimensions of Organizational design: Complexity, formalization, centralization. Common organizational designs: Traditional designs and contemporary designs. Organisational structure: Meaning and Types of organisational structures.

Conflict Management: Meaning, types and sources of conflict, Process of conflict management, approaches to conflict management. **Learning Organizations:** Meaning of learning organisations, creating learning organisations.

Power and politics in organizations: Nature & concepts, sources and types of power, tactics and techniques of politics.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings /Books:

- Stephen P. Robbins, Timothy A. Judge, and Niharika Vohra, *Organizational Behaviour*, Pearson, 2022.
- Fred Luthans, *Organizational Behaviour*, Tata McGraw Hill, 2011.
- John W. Newstrom, *Organizational Behaviour: Human Behaviour at Work*, Tata McGraw Hill, 2017.
- Thomas Kalliath, Paula Brough, Michael O'Driscoll, Mathew Manimala, Oi-Ling Siu, and Sharon Parker, *Organizational Behaviour*, McGraw Hill Education, 2013.
- Ricky W and Griffin, and Gregory Moorhead, *Introduction to Organizational Behaviour*, Cengage Learning, 2014.
- Paul Hersey, Kenneth H. Blanchard, and Dewey E. Johnson, *Management of Organizational Behaviour: Utilizing Human Resources*, Prentice Hall India, 2008.
- Margie Parikh, and Rajen Gupta, *Organizational Behaviour*, Tata McGraw Hill, 2017.
- K. Aswathappa, *Organizational Behaviour*, Himalaya Publishing House, 2016.
- John W. Slocum, *Fundamentals of Organisational Behaviour*, Cengage Learning, 2007.
- Mirza S. Saiyadain, *Organizational Behaviour*, Tata McGraw Hill, 2003.
- Steven L. McShane, Mary Ann Von Glinow, and Radha R. Sharma, *Organizational Behaviour*, Tata McGraw Hill, 2007.
- Udai Pareek, *Understanding Organizational Behaviour*, Oxford University Press, 2011.
- P. G. Aquinas, *Organization Structure and Design: Applications and Challenges*, Excel Books, 2012.
- Stephen P. Robbins, and Mary Mathew, *Organizational Theory: Structure, Design and Applications*, Pearson Education, 2009.

I.K.G. Punjab Technical University
MBA 302- 18
Marketing Research

Course Objective: The course aims to provide an understanding of basic concepts, theories and statistical techniques used in research. Students will also be given exposure to use and apply SPSS.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: Understand the process of marketing research and its application in managerial decision making
CO2: Identify various sources of data for marketing research.
CO3: Examine different research methods and be able to apply them.
CO4: Identify different research designs and develop a research proposal.
CO5: Design an effective questionnaire and test reliability and validity of the scales.
CO6: Apply different methods of data preparation and data analysis.

Unit I
Marketing Research: Definition, Nature and Scope for marketing decision making. Marketing Research Process. Types of Research – Descriptive research, Exploratory Research and Causal Research.
Sources of Data: Commercial (Syndicated) and Non-commercial Sources of Secondary Data for Marketing Research.

Unit II
Casual Research Designs: Basic designs – After-only design, Before-After design, After only with control group design, Before-After with control group design, Time Series Design Latin Square Design, Factorial Design, Ex-Post Facto Design, Completely Randomized Design, Randomized Block Design.
Observation Research: Direct Observation, Indirect Observation, Observational Variables. **Developing Research Proposal**: purpose, nature and evaluation, content and format.

Unit III
Questionnaire Design: Principles of Writing Questionnaire.
Reliability and Validity: Basic concepts; True Score Model; Measurement Errors in Marketing; Scales of Measurement – Nominal, Ordinal, Interval and Ratio; Coefficient Alpha and Internal Consistency; Types of Reliability – Test-retest Reliability, Alternative Forms and Split-Half Reliability; Types of Validity – Content, Criterion, Concurrent, Predictive Convergent, Construct, Discriminant and Nomological Validity; Concept of Generalizability.

Unit IV
Data Preparation: Understanding SPSS, Creating SPSS Sheet; Entry of Data in SPSS; Basic computations of Descriptive Statistics.
Basic Data Analytic Techniques: Assessing Reliability; Computing Coefficient Alpha Scale Refinement and Item Analysis.
Advanced Data Analytic Techniques: Correlation Analysis, Factor Analysis, Regression Analysis.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Naresh K. Malhotra, *Marketing Research: An Applied Orientation*, Pearson Education, 2009.
- Donald R. Cooper, and Pamela S. Schindler, *Business Research Methods*, Tata McGraw Hill, 2017.
- Thomas C. Kinnear, and James R. Taylor, *Marketing Research: An Applied Approach*, McGraw Hill, 1996.
- Paul E. Green, and Donald S. Tull, *Research for Marketing Decisions*, Prentice Hall of India Pvt. Ltd., 2009.
- Harper W. Boyd Jr., Ralph Westfall, and Stanley F. Stasch, *Marketing Research: Text and Cases*, All India Travellers Bookseller, 1989.
- Ramanuj Majumdar, *Marketing Research*, Wiley Eastern Ltd., 1991.
- David J. Luck, and Ronald S. Rubin, *Marketing Research*, Prentice Hall of India, 1987.
- R. Nargundkar, *Marketing Research: Text and Cases*, Tata McGraw Hill, 2017.
- D. Israel, Dawn Lacobucci and Gilbert A. Churchill, *Marketing Research: A South Asian Perspective*, Cengage Learning, 2010.
- William G. Zikmund, and Barry J. Babin, *Essentials of Marketing Research*, Cengage Learning, 2006.

I.K.G. Punjab Technical University

HVPE 101-18

HUMAN VALUES, DE-ADDICTION AND TRAFFIC RULES

Course Objective: This introductory course input is intended

a. To help the students appreciate the essential complementarily between 'VALUES' and 'SKILLS' to ensure sustained happiness and prosperity which are the core aspirations of all human beings.
b. To facilitate the development of a Holistic perspective among students towards life, profession and happiness, based on a correct understanding of the Human reality and the rest of Existence. Such a holistic perspective forms the basis of Value based living in a natural way.
c. To highlight plausible implications of such a Holistic understanding in terms of ethical human conduct, trustful and mutually satisfying human behavior and mutually enriching interaction with Nature.

Thus, this course is intended to provide a much needed orientational input in Value Education to the young enquiring minds.

Course Methodology

- The methodology of this course is universally adaptable, involving a systematic and rational study of the human being vis-à-vis the rest of existence.
- It is free from any dogma or value prescriptions.
- It is a process of self-investigation and self-exploration, and not of giving sermons. Whatever is found as truth or reality is stated as proposal and the students are facilitated to verify it in their own right based on their Natural Acceptance and Experiential Validation.
- This process of self-exploration takes the form of a dialogue between the teacher and the students to begin with, and within the student himself/herself finally.
- This self-exploration also enables them to evaluate their pre-conditionings and present beliefs.

<u>Content for Lectures:</u>

Module 1: Course Introduction - Need, Basic Guidelines, Content and Process for Value Education [6]

1. Understanding the need, basic guidelines, content and process for Value Education
2. Self Exploration–what is it? - its content and process; 'Natural Acceptance' and Experiential Validation- as the mechanism for self exploration
3. Continuous Happiness and Prosperity- A look at basic Human Aspirations
4. Right understanding, Relationship and Physical Facilities- the basic requirements for fulfillment of aspirations of every human being with their correct priority
5. Understanding Happiness and Prosperity correctly- A critical appraisal of the current scenario
6. Method to fulfill the above human aspirations: understanding and living in harmony at various levels

Module 2: Understanding Harmony in the Human Being - Harmony in Myself! [6]

7. Understanding human being as a co-existence of the sentient 'I' and the material 'Body'
8. Understanding the needs of Self ('I') and 'Body' - *Sukh* and *Suvidha*
9. Understanding the Body as an instrument of 'I' (I being the doer, seer and enjoyer)
10. Understanding the characteristics and activities of 'I' and harmony in 'I'
11. Understanding the harmony of I with the Body: *Sanyam* and *Swasthya*; correct appraisal of Physical needs, meaning of Prosperity in detail
12. Programs to ensure *Sanyam* and *Swasthya*

    - Practice Exercises and Case Studies will be taken up in Practice Sessions.

Module 3: Understanding Harmony in the Family and Society- Harmony in Human-Human Relationship
[6]

13. Understanding harmony in the Family- the basic unit of human interaction
14. Understanding values in human-human relationship; meaning of *Nyaya* and program for its fulfillment to ensure *Ubhay-tripti*;
    Trust (*Vishwas)* and Respect (*Samman)* as the foundational values of relationship
15. Understanding the meaning of *Vishwas*; Difference between intention and competence
16. Understanding the meaning of *Samman*, Difference between respect and differentiation; the other salient values in relationship
17. Understanding the harmony in the society (society being an extension of family): *Samadhan, Samridhi, Abhay, Sah-astitva* as comprehensive Human Goals
18. Visualizing a universal harmonious order in society- Undivided Society (*Akhand Samaj),* Universal Order (*Sarvabhaum Vyawastha)*- from family to world family!

    - Practice Exercises and Case Studies will be taken up in Practice Sessions.

Module 4: Understanding Harmony in the Nature and Existence - Whole existence as Co-existence
[4]

19. Understanding the harmony in the Nature
20. Interconnectedness and mutual fulfillment among the four orders of nature- recyclability and self-regulation in nature
21. Understanding Existence as Co-existence (*Sah-astitva*) of mutually interacting units in all-pervasive space
22. Holistic perception of harmony at all levels of existence

    - Practice Exercises and Case Studies will be taken up in Practice Sessions.

Module 5: Implications of the above Holistic Understanding of Harmony on Professional Ethics [6]

23. Natural acceptance of human values
24. Definitiveness of Ethical Human Conduct
25. Basis for Humanistic Education, Humanistic Constitution and Humanistic Universal Order
26. Competence in professional ethics:

    a) Ability to utilize the professional competence for augmenting universal human order,

b) Ability to identify the scope and characteristics of people-friendly and eco-friendly production systems,

c) Ability to identify and develop appropriate technologies and management patterns for above production systems.

27. Case studies of typical holistic technologies, management models and production systems
28. Strategy for transition from the present state to Universal Human Order:

a) At the level of individual: as socially and ecologically responsible engineers, technologists and managers

b) At the level of society: as mutually enriching institutions and organizations

Text Book

- R. R. Gaur, R. Sangal, and G. P. Bagaria, *A Foundation Course in Value Education*, Excel Books, New Delhi, 2009.

Reference Books

- Ivan Illich, *Energy and Equity*, The Trinity Press, Worcester and HarperCollins, USA, 1974.
- E. F. Schumacher, *Small Is Beautiful: A Study of Economics as if People Mattered*, Blond and Briggs, Britain, 1973.
- A. Nagraj, *Jeevan Vidya Ek Parichay*, Divya Path Sansthan, Amarkantak, 1998.
- Susan George, *How the Other Half Dies*, Penguin Books, London, 1976. Reprinted 1986 and 1991.
- P. L. Dhar, and R. R. Gaur, *Science and Humanism*, Commonwealth Publishers, New Delhi, 1990.
- A. N. Tripathy, *Human Values*, New Age International Publishers, New Delhi, 2003.
- Subhash Palekar, *How to Practice Natural Farming*, Pracheen (Vaidik) Krishi Tantra Shodh, Amravati, 2000.
- Donella H. Meadows, Dennis L. Meadows, Jorgen Randers, and William W. Behrens III, *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*, Universe Books, New York, 1972.
- E. G. Seebauer, and Robert L. Berry, *Fundamentals of Ethics for Scientists and Engineers*, Oxford University Press, New York, 2000.
- M. Govindarajan, S. Natarajan, and V. S. Senthil Kumar, *Engineering Ethics (Including Human Values)*, Prentice Hall of India, Eastern Economy Edition, New Delhi, Latest Edition.
- B. P. Banerjee, *Foundations of Ethics and Management*, Excel Books, New Delhi, 2005.
- B. L. Bajpai, *Indian Ethos and Modern Management*, New Royal Book Company, Lucknow, 2004. Reprinted 2008.

Relevant CDs, Movies, Documentaries & Other Literature:

- Value Education website, *http://uhv.ac.in*
- Story of Stuff, *http://www.storyofstuff.com*
- Al Gore, *An Inconvenient Truth*, Paramount Classics, USA
- Charlie Chaplin, *Modern Times*, United Artists, USA
- IIT Delhi, *Modern Technology – the Untold Story*

I.K.G. Punjab Technical University

HVPE 102-18

Human Values, De-addiction and Traffic Rules (Lab/Seminar)

One each seminar will be organized on Drug De-addiction and Traffic Rules. Eminent scholar and experts of the subject will be called for the Seminar atleast once during the semester. It will be binding for all the students to attend the seminar.

I.K.G. Punjab Technical University
MBA 921-18
Consumer Behaviour

Course Objective: The objective of this course is to help students understanding various factors affecting consumer behavior and to understand the process of consumer buying. Based on the understanding of consumer behavior, the students are expected to design the strategy.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: Provide an understanding of how consumers make decisions.
CO2: Analyze personal and environmental factors that influence consumer decisions.
CO3: Understand the processes used when individuals, group or organizations make buying decisions.
CO4: Understand how and why marketers craft particular messages to appeal to consumers.
CO5: Understand the interrelationship with other functional areas of business as a part of the management process.
CO6: Assess the process of opinion leadership and its relationship with firm's promotional strategy.

UNIT – I
Introduction to Consumer Behaviour
Consumer Behaviour: Scope, importance and interdisciplinary nature. **Consumer Research Process:** Qualitative and Quantitative research. **Market Segmentation:** Uses and bases of segmentation. **Emerging trends in consumer behavior:** Consumer behavior in online space. Use of Information technology and AI in consumer profiling and engagement, concept of materialistic vs spiritualistic consumption.

UNIT – II
Individual Determinants of Consumer Behaviour
Motivation: Nature and Types of Motives, Process of motivation, types of Needs. **Personality:** Theories, Product Personality, Self Concepts. **Consumer Perception:** Concept and Elements of Perception, Consumer Imagery, Perceived Risk. **Consumer Learning:** Behavioural and Cognitive Learning Theories. **Consumer Attitude:** Functions of Attitude and Sources of Attitude Development, Attitude formation Theories (Tricomponent, Multi attribute and Cognitive Dissonance), Attitude Change Strategies.

UNIT – III
External Influences on Consumer Behaviour
Group Dynamics and Reference Groups: Consumer relevant groups, Types of Family: Functions of family, Family decision making, Family Life Cycle (Modern and Traditional) **Culture:** Values and Norms, Characteristics and influence on Consumer Behaviour, sub culture, Cross cultural consumer behavior. **Social Class:** Categories, Measurement and Applications of Social Class.

UNIT – IV
Consumer Decision Making
Process and models (Howard Sheth, Nicosia Model, Engel Blackwell and Kollat). **Personal Influence and Opinion Leadership:** Process of Opinion Leadership, Profile of Opinion Leader, Opinion leadership and Firm's Promotional Strategy. **Diffusion of innovations:** Diffusion Process, Adoption Process, and Profile of Consumer Innovators

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Leon G. Schiffman, and Leslie Lazar Kanuk, *Consumer Behavior*, Prentice Hall of India, 2010.
- David L. Loudon, and Albert J. Della Bitta, *Consumer Behaviour: Concepts and Applications*, Tata McGraw Hill, 2002.
- Henry Assael, *Consumer Behaviour in Action*, Cengage Learning, 2007.
- Roger D. Blackwell, Paul W. Miniard, and James F. Engel, *Consumer Behaviour*, Thomson Learning, 2006.

I.K.G. Punjab Technical University
MBA 922-18
Services Marketing

Course Objective: The objective of this course is to help students understanding various factors affecting consumer behavior and to understand the process of consumer buying. Based on the understanding of consumer behavior, the students are expected to design the strategy.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: Understand the fundamental concepts of service marketing and its functions.
CO2: Identify the role and significance of various elements of service marketing mix.
CO3: Analyze customer requirement, measure service quality and design and deliver better service.
CO4: Analyze integrated services marketing communications and services marketing triangle.
CO5: Examine various pricing strategies and pricing approaches in service sectors.
CO6: Understand service marketing applications in different service sectors.

UNIT – I

Introduction to Services: Growth and development of service sector economy, contribution to the Indian economy, Service Characteristics, Service Classification, Service Marketing Mix. **Consumer Behavior in Services:** Customer Expectation of Service, Customer Perceptions of Service. **Service Quality:** Integrated gaps model of service quality. Prescriptions for closing quality gaps

UNIT – II

Managing relationships in Services: Building customer loyalty, Complaint handling and Service recovery strategies. **Service development and design:** Challenges of service design, types of new services, core and supplementary elements, new service development process. **Service blueprinting**: Nature, need and process of blueprinting. **Physical evidence and the Servicescapes**: Nature, Importance and Types, role and its effect on Consumer behaviour.

UNIT – III

Delivering and performing service through employees and customers: service culture, employee‘s role, strategies to deliver quality, cycle of failure, mediocrity and success, self service technologies and Customer Participation. **Delivering services through intermediaries:** Nature and types of intermediaries, role of electronic channels in service delivery. **Managing demand and capacity**: Waiting line strategies integrated. **Integrated Services Marketing Communications and Services marketing triangle**

UNIT – IV

Pricing of services: Pricing approaches, Pricing Strategies. **Service Marketing Applications:** Marketing of services in Financial, Healthcare and Hospitality sectors.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Valarie A. Zeithaml, Mary Jo Bitner, and Dwayne Gremler, *Services Marketing*, Tata McGraw Hill, 2017.
- Christopher H. Lovelock, and Jochen Wirtz, *Services Marketing*, Pearson Education, 2011.
- P. K. Sinha, and S. C. Sahoo, *Services Marketing*, Himalaya Publishing House, 2009.

I.K.G. Punjab Technical University
MBA 911-18
Investment Analysis and Portfolio Management

Course Objective: This course aims to acquaint students with the market microstructure of financial markets and understanding of economic, industrial and company analysis. It shall also enable them to understand the valuable linkage between modern theories of finance and the analytical techniques used by investors for valuing securities and construct portfolios to achieve investor's investment goals.

Course Outcomes: Upon completion of this course, students will be able to:

CO1 – To familiarize the students about the basic concepts, various investment avenues, process of investment and market microstructure of financial markets.
CO2 - To enable students to understand the operation of primary as well as secondary markets in India and to understand the concepts of risk and its measurement.
CO3 – To familiarize the students with the concepts and process of fundamental analysis so that they may understand the impact of various environmental factors on investment valuation..
CO4 – To explain the concepts and process of technical analysis and enable the students to understand the role of daily price movements in portfolio management.
CO5 – To explain the concepts, process and techniques for portfolio construction, evaluation and revision.
CO6 – To familiarize the students about the financial derivatives and computation of their expected payoffs.

Unit I
Introduction: Concepts of investment, objectives of investment, various alternatives of investments, investment process, financial investments vs. real investments, differentiate investment, speculation and gambling. **Risk and Return:** Concept, types and measurement of risk and return.
Financial Markets - Primary and secondary markets. Introduction to primary market, design of primary market, its role and functions, types of offers in the primary market, SEBI guidelines on primary market
Secondary Market: Introduction, participants, trading and settlement Mechanism, types of orders, stop Loss, margin trading, short selling, price freeze, hair-cut, market wide circuit breakers, insider trading, bulk deals, block deals and arbitrage opportunity in the market.

Unit II
Fundamental Analysis: Meaning, scope and introduction to concept of intrinsic value. Process of conducting economic analysis; industry analysis and company analysis by using E-I-C and C-I-E approaches. Valuation of securities using fundamental analysis.

Unit III
Technical Analysis: introduction, terminology of technical analysis, Dow theory, characteristic phases of Bull and Bear trends, critical appraisal of Dow theory, various types of charts, concept of trend, trend lines: support and resistance, Importance of trading volume, reversal patterns, continuation pattern, moving averages, other market indicators

Portfolio Management: Meaning, importance and approaches of portfolio management, portfolio analysis, portfolio evaluation and revision techniques.

Unit IV

Portfolio Theory: Markowitz Model, Capital Asset Pricing Model, Single-index model, Arbitrage Pricing Theory. Market Efficiency and Behavioral Finance

Derivatives: Introduction, features, derivative instruments, difference between forward and futures contracts, types of option contracts, computing payoffs of forward, futures and option contracts.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings

- Frank K. Reilly, and Keith C. Brown, *Investment Analysis and Portfolio Management*, Cengage Learning, 2012.
- Zvi Bodie, Alex Kane, Alan J. Marcus, and Pitabas Mohanty, *Investments*, Tata McGraw Hill, 2025.
- Donald E. Fischer, Ronald J. Jordan, and A.K. Pradhan, *Security Analysis and Portfolio Management*, Prentice Hall of India, 2022.
- Geoffrey A. Hirt, and Stanley B. Block, *Fundamentals of Investment Management*, Tata McGraw Hill, 2008.
- V. A. Avadhani, *Security Analysis and Portfolio Management*, Himalaya Publishing House, 2026.
- Preeti Singh, *Investment Management*, Himalaya Publishing House, 2026.

I.K.G. Punjab Technical University
MBA 912-18
Management of Financial Services

Course Objective: The objective of the course is to understand role of Financial Services in Business organizations and to give an insight into the strategic, regulatory, operating and managerial issues concerning select financial services. In addition, the course will examine the present status and developments that are taking place in the financial services sector and developing an integrated knowledge of the functional areas of financial services industry in the real services industry in the real world situation.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: To understand the concept of financial services and their importance.
CO2: To know the structure and schemes of mutual funds.
CO3: To understand the importance and process of Dematerialisation and remateralisation.
CO4: To know the structure and system of credit rating ,leasing ,merchant banking and venture capital.
CO5: To know the process and importance of factoring and securitisation.
CO6: To understand the process of asset liability management and risk management in banks.

Unit I

Financial Services: Meaning, types and their importance. Financial sector reforms in India, Future challenges for Indian banks, Improving risk management systems, Banking and the Management of Financial Services

Mutual Funds and Pensions Funds, Insurance Services, Bank assurances, Reinsurances, Venture Capital –Private Equity –strategic secrets of private equity, Investment strategies, Hedge funds, E banking, Securitization –Indian Banking and Financial crisis, Asset Reconstruction Companies, Depositaries, Credit Cards, Micro/Macro finance, Financial Inclusion, Behavioural Finance.

Depository – Introduction, Concept, depository participants, functioning of depository systems, process of switching over to depository systems, benefits, depository system in India, Dematerialization and Re materialization. Role, objectives and functions of SEBI and its guidelines relating to depository system.

Unit II

Credit rating: The concept and objective of credit rating, various credit rating agencies in India, Credit Rating Agencies –Importance, Issue, Difference in credit rating, Rating methodology and benchmarks, Are Indian Credit Rating Credible? International credit rating agencies –crisis of confidence?

Leasing: Concept and development of leasing, business, difference between leasing & hire purchase, types of leasing business, advantages to lessor and lessee. Tax aspect of leasing.

Merchant Banking: Origin and development of merchant banking in India scope, organizational aspects and importance of merchant bankers. Latest guidelines of SEBI w.r.t. Merchant bankers.

Venture Capital: Concepts and characteristics of venture capital, venture capital in India, guidelines for venture capital.

Unit III

Debt Securitization: Meaning, Features, Scope and process of securitization.

Factoring: Development of factoring types & importance, procedural aspects in factoring, financial aspects, prospects of factoring in India.

Plastic Money: Concept and different forms of plastic money – credit and debit cards, pros and cons. Credit process followed by credit card organizations. Factors affecting utilization of plastic money in India.

Unit IV

Asset Liability Management: Significances, ALM process, Techniques – Gap, Duration, Simulation, Value at Risk value of equity and market value of equity perspective.

Risk Management in Banks: Credit risk management, Operational risk management, Market risk management, Corporate treasury management, Liquidity risk management, Governance risk and compliance, Asset Liability Management and Basel 2 – Basel 1 and 2, IPR and Basel 2, Three Pillars, ALM and Interest rate swaps, Swaps as a risk management tool, ALM and Capital Adequacy, ALM Software's.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- M. Y. Khan, *Financial Services*, Tata McGraw Hill, 2019.
- L. M. Bhole, *Financial Institutions and Markets*, Tata McGraw Hill, 2017.
- S. Gurusamy, *Financial Services and System*, Thomson Publications, 2009.
- V. A. Avadhani, *Financial Services in India*, Himalaya Publishing House, 2026.
- E. Gordon, and K. Natarajan, *Financial Markets and Services*, Himalaya Publishing House, 2017.
- Vasant Desai, *Financial Markets and Financial Services*, Himalaya Publishing House, 2026.
- Scott E. Harrington, *Risk Management and Insurance*, McGraw Hill, 2017.
- Jeff Madura, *Financial Markets and Institutions*, South Western College Publishing, 2003.
- Timothy W. Koch, and S. Scott MacDonald, *Bank Management*, Cengage Learning, 2009.
- Frederic S. Mishkin, and Stanley G. Eakins, *Financial Markets and Institutions*, Pearson Education, 2024.
- Peter S. Rose, *Bank Management and Financial Services*, McGraw Hill Education, 2024.
- Anthony Saunders, and Marcia Millon Cornett, *Financial Institutions Management: A Risk Management Approach*, McGraw Hill, 2017.

I.K.G. Punjab Technical University
MBA 931-18
Organizational Change and Development

Course Objective: This course aims to introduce students to theories and concepts of organizational change and development and also it enhances the knowledge and understanding of organizational interventions terminology and provides students with the opportunity to apply the key concepts to practical organizational situations.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: Develop understanding of organization change and Define, explain and illustrate theories of planned change, their relevant foundations, strengths and weaknesses.
CO2: Recognize and comment on issues and problems arising out of organizational change initiatives.
CO3: To Understand concepts related to system theory, Action Research and Models,
CO4: Understand the role of various intervention strategies in organizational development.
CO5: Facilitate organizational change; and apply diagnostic models and concepts to change issues at the organizational, group and individual levels.
CO6: Examine various issues in the relationship between client and consultant relationship.

Unit –I
Introduction to Organizational Change and Development; Definitions & its distinguishing characteristics, Dynamics of planned change, models and theories of planned change, triggers for change, strategies for implementing organizational change.
Foundations of OD: Conceptual Framework of OD, Historical background of OD, Values, assumptions and beliefs in OD, Systems theory, Participation and Empowerment, Teams and Teamwork, Strategies of change, Inter-Disciplinary Nature of OD.

Unit –II
Action Research and OD, Action Research: A Process and an Approach. **Managing OD Process**: Diagnosis, The Six-Box Model, Third Waves Consulting, Nature of OD intervention, Analysis of Discrepancies, Phases of OD Program, Model of Managing Change, Creating Parallel Learning Structures.
OD Interventions: An overview, characteristics of OD interventions. Structural Interventions, Training Experience: T-Groups, Behavioral Modeling and Career Anchors.

Unit –III
Team Interventions, Intergroup and Third-Party Peace-Making Interventions.
Comprehensive Interventions, Power, politics and OD: Power defined and explored, theories about the sources of Power, Organizational Politics in the practice of OD.

Unit –IV
Issue in Consultant-Clint Relations: Entry and contracting, defining the client system, trust, the nature of the consultant's expertise, diagnosis and appropriate, interventions, depth of intervention, on being absorbed by the cultural, the consultant as a model, the consultant team as a microcosm, the dependency issue and terminating the relationship, ethical standards in OD, Implications of OD for the Client. Contemporary Issues in OD. OD and Quality Movement, OD- Now and Beyond.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Wendell L. French, and Cecil H. Bell Jr., *Organization Development*, Prentice Hall, 1999.
- Richard Beckhard, *Organization Development: Strategies and Models*, Tata McGraw Hill, 1969.
- Robert R. Blake, and Jane S. Mouton, *Building a Dynamic Corporation Through Grid Organization Development*, Addison Wesley, 1969.
- Thomas H. Patten, *Organization Development Through Team Building*, Thomas Publications, 1981.
- Edgar F. Huse, *Organization Development and Change*, Thomas Publications, 1980.
- Wyatt Warner Burke, *Organization Development: Principles and Practices*, Sage Publications, 1994.
- S. Ramnarayan, T. V. Rao, and Kuldeep Singh, *Organization Development: Interventions and Strategies*, Response Books, 1998.
- S. Ramnarayan, and T. V. Rao, *Organization Development: Accelerating Learning and Transformation*, Sage Publications, 2011.

I.K.G. Punjab Technical University
MBA 932-18
Employee Relations

Course Objective: The aim of this course is to help students to understand basics of labour laws and industrial relations applicable in various business houses.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: Understand establishing & maintaining a sound relationship between the worker & the employer.
CO2: Understand the significance & functioning of Trade Unions.
CO3: Identify the simmering issues which might take the form of a dispute in the workplace.
CO4: Examine various provisions laid down by laws to settle disputes in the organizations.
CO5: Assess the importance of various Acts in Industrial Relations.
CO6: Comprehend the concept and classification of labour welfare.

Unit –I
Industrial Relations-Concept, Theories and Evolution, System approach to IR-Actors, Context, Web of Rules & Ideology, Trade Unionism, impact of trade unions on wages, The Trade unions Act ,1926 (with amendments), Factories Act, 1947 (with amendments).

Unit –II
Anatomy of industrial disputes. Dispute Settlement Machinery: Conciliation- Concept, Types, Conciliation Procedure and Practices in India; Adjudication – Concept and types; Arbitration: Approaches and types. Sexual Harassment.
Industrial Disputes Act 1947, Provisions in Industrial Disputes- Lay Off, Termination Retrenchment, Closures, VRS, Anatomy of Industrial disputes, Managing foreign nationals in Indian organizations.

Unit –III
Social Security: Concept, Social Assistance, Social Insurance.
Payment of wages Act,1936, Payment of Bonus Act, 1965, Workman's Compensation Act,1923, Payment of Gratuity Act 1982.

Unit –IV
Maternity Benefit Act,1961, ESI Act 1948, Provident Fund and Miscellaneous Provisions Act, 1951.
I.L.O and social Security. The concept of Labour welfare: definition, Scope and Objectives, classification of welfare work, agencies for welfare work. Agencies for administering labour welfare laws in India.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- C. S. Venkata Ratnam, *Industrial Relations*, Oxford University Press, 2017.

- S. C. Srivastava, *Industrial Relations and Labour Laws*, Vikas Publishing House Pvt. Ltd., 2026.
- P. R. N. Sinha, Indu Bala Sinha, and Seema Priyadarshini Shekhar, *Industrial Relations, Trade Unions, and Labour Legislation*, Pearson Education, 2017.
- Ratna Sen, *Industrial Relations in India*, Macmillan, 2003.
- C. B. Mamoria, Satish Mamoria, and S. V. Gankar, *Dynamics of Industrial Relations*, Himalaya Publishing House, 2023.
- Arun Monappa, *Industrial Relations*, Tata McGraw Hill, 1985.
- R. S. Davar, *Personnel Management and Industrial Relations*, Vikas Publishing House Pvt. Ltd., 2018.
- R. Sivarethinamohan, *Industrial Relations and Labour Welfare: Text and Cases*, PHI Learning Pvt. Ltd., 2016.

I.K.G. Punjab Technical University
MBA 941–18
Data Mining for Business Decisions

Course Objective: The objective of this paper is to acquaint the students with an introduction to data analytics, data mining, and data-driven decision making. Data mining enables one to extract useful insights, which then can be utilized for data-driven decision-making and competitive advantage. Data mining and data analytics involve a collection of techniques for extracting patterns and trends in large databases to present results to stakeholders in terms of the business objectives set, and how the information learned can be used to add value to the business. For this course, two software packages that are commonly used throughout industry are: WEKA, a well-established, highly popular data mining application, and R, a powerful open-source statistical language.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: To understand the opportunities, techniques and critical challenges in using data mining and predictive modelling in a business setting.
CO2: Use research-based knowledge and methods including company analysis, primary and secondary data collection, analysis and interpretation of data to find solution to business problems
CO3: To understand and translate business challenges into data mining problems.
CO4: To become familiar with the processes needed to develop, report and analyze business data.
CO5: To gain an understanding of how managers use business analytics to formulate and solve business problems and to support managerial decision making.

Unit I
Need for strategic information, difference between operational and informational data stores Data warehouse: definition, characteristics, role and structure, Introduction to Business Intelligence. Introduction to OLAP and its Operations, Data mart, Building a data warehouse, Introduction to Dimensional Modelling and ETL Process.

Unit II
Introduction to Data mining Process, Data Mining functionalities, various kinds of Data mining (Text mining, Web mining, Pattern Mining, Sequence Mining, Context Based Mining), Introduction to Data Visualization, Predictive Data Mining and descriptive data mining. Need of Data analytics for business intelligence

Unit III
Regression and correlation; Classification: Decision trees; Clustering – Neural networks; Market basket analysis – Association rules – Genetic algorithms and link analysis, Support Vector Machine Bayesian Classification: Bayes theorem, Bayesian belief networks Naive Bayesian classification, Other classification methods: k-Nearest Neighbour, case based reasoning, Genetic algorithms, Fuzzy set approach

Unit IV
Introduction to prediction: linear and multiple regression, Clustering: types of Data in cluster analysis: interval scaled variables, Binary variables, Nominal, ordinal, and Ratio-scaled variables; Major Clustering Methods: Partitioning Methods: K-Mean and K-Mediods, Hierarichal methods: Agglomerative, Density based methods: DBSCAN

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Jiawei Han, and Micheline Kamber, *Data Mining: Concepts and Techniques*, Morgan Kaufmann Publishers, 2011.
- George M. Marakas, *Modern Data Warehousing, Mining and Visualization: Core Concepts*, Pearson Education, 2002.

I.K.G. Punjab Technical University

MBA 942 – 18

E-Commerce and Digital Markets

Course Objective: The objective of this paper is to acquaint the students with the effectiveness of ecommerce and digital marketing. Students will learn about the implications of an increasingly technological Society and to provide insights on how to implement marketing in a digital world.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: To understand of various applications and scope of ecommerce.
CO2: To know the working of various payment modes used in ecommerce today.
CO3: Understand how and why to use digital marketing for multiple goals within a larger marketing and/or media strategy, Developing effective digital and social media strategies
CO4: Understand the major digital marketing channels - online advertising: Digital display, video, mobile, search engine, and social media
CO5: Students will be able to explore the latest digital ad technologies

Unit I

Need and Origin of E-Commerce, Factors affecting E -Commerce, Business dimension and technological dimension of E-Commerce, E-Commerce framework.
Electronic Commerce Models, Value Chains in Electronic Commerce. Internet and E-Business Introduction to Internet and its application, Intranet and Extranets. World Wide Web, Internet Architectures, Internet Applications, Business Applications on Internet, E - Shopping, Electronic Data Interchange, Components of Electronic Data Interchange, Creating Web Pages using HTML.

Unit II

Technology for Online Business: Internet, IT Infrastructure, Middleware Contents, Text and Integrating E-Business Applications, Mechanism of Making Payment Through Internet, Online Payment Mechanism, Electronic Payment Systems, Payment Gateways, Visitors to Website, Tools for Promoting Website, Plastic Money, Debit Card, Credit Card, Laws Relating to Online Transactions. Applications in E-commerce: E-commerce Applications in Manufacturing, Wholesale, Retail and Service Sector

Unit III

Understanding Digital Marketing Process, Digital marketing vs. Traditional marketing, Website Planning Process: Understanding Domain names & Domain extensions, Search Engine Optimization: Understanding SEO, SEO Keyword Planning, On Page SEO, Off Page SEO, Local SEO, Social media marketing, Understanding the existing Social Media paradigms & psychology, How social media marketing is different than others Forms of Internet marketing, Google analytics: Introduction to Google Analytics, how Google Analytics works, Google AdWords & Online Display advertising

Unit IV

Email marketing: Need, working and challenges faced in sending bulk emails, Types of email marketing- Opt-in & bulk emailing, Lead Generation for Business: Understanding lead generation for business and its importance. Landing page vs website, Content marketing, Affiliate marketing: Sources to Make Money Online, Selecting Affiliate Program, Blogging & freelancing to make money, AdSense, approval process and AdSense Administration. E Business Entrepreneurship.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- David Whitley, *E-Commerce Strategy, Technologies and Applications*, Tata McGraw Hill, 2001.
- Gary P. Schneider, and James T. Perry, *Electronic Commerce*, Thomson Learning, 2001.
- Kamlesh K. Bajaj, and Debjani Nag, *E-Commerce: The Cutting Edge of Business*, McGraw Hill, 2005.
- Kenneth C. Laudon, and Carol G. Traver, *E-Commerce: Business, Technology, Society*, Pearson Education, 2021.
- Damian Ryan, and Calvin Jones, *Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation*, Kogan Page, 2012.
- Kent Wertime, *DigiMarketing: The Essential Guide to New Media and Digital Marketing*, Wiley, 2008.
- Seema Gupta, *Digital Marketing*, McGraw Hill, 2022.

I.K.G. Punjab Technical University
MBA 951-18
Operations Strategy

Course Objective: The course aims at providing fundamental knowledge of strategy and its implications in operations management. The course will cover strategy concepts, issues and techniques for efficient and effective operations.

Course Outcomes: At the end of the course, student shall be able to learn the following:
CO1: Understand the strategic role of operations management in creating and enhancing a firm's competitive advantages.
CO2: Analyze, evaluate and recommend changes in the operations strategy of an organization.
CO3: Demonstrate a managerial point of view i.e. capacity for analyzing operations problems on a functional, business and company wide basis.

UNIT-I
Introduction to operations strategy: how does it fit with the firm's overall strategy; competitive positioning and the value chain; operations strategy decision areas. Resources and core capabilities. Relationship between grand business strategy and operation strategy. Location and capacity strategy. **Enterprise Resource Planning:** concepts, scope and its implications.

UNIT-II
Development Strategies: Product development strategy, Service development strategy and implications for the organization. **Inventory management:** Inventory concepts, reasons for holding inventory, types of inventory, inventory reduction tactics and Inventory turnover ratio. **Selective Inventory management**: ABC, VED, and FSN analysis etc., identifying critical items with selective inventory management.

UNIT-III
Vertical integration and outsourcing, Process technology strategy, Information technology and operations. Dimensions of operations for competitive advantage. **Maintenance Strategies**: Classification of maintenance programs, corrective, preventive and predictive maintenance, comparison of maintenance programs, preventive maintenance concept functions, benefits, limitations.

UNIT-IV
Global Sourcing, trends in global sourcing. Outsourcing and off shoring strategy. Global Supply Chain Strategy, Materials Requirements Planning. Innovation management. Environment and social sustainability strategy.

Note: Relevant Case Studies should be discussed in class.
Suggested Readings:

- Kanishka Bedi, *Production and Operations Management*, Oxford University Press, 2004.
- Sunil Chopra, and Peter Meindl, *Supply Chain Management: Strategy, Planning and Operation*, Pearson Education, 2015.
- David Simchi Levi, Philip Kaminsky, Edith Simchi Levi, and Ravi Shankar, *Designing and Managing the Supply Chain*, McGraw Hill, 2022.
- Lee J. Krajewski, Larry P. Ritzman, and Manoj K. Malhotra, *Operations Management*, Pearson Education, 2007.

I.K.G. Punjab Technical University
MBA 952-18
Operation Research Applications

Course Objective: The course aims at familiarizing the students with quantitative tools and techniques, which are frequently applied to business decision-making & to provide a formal quantitative approach to problem solving and an intuition about situations where such an approach is appropriate.

Course Outcomes: At the end of the course, student shall be able to learn the following:

CO1: Be able to understand the characteristics of different types of decision-making environments and the appropriate decision making approaches and tools to be used in each type.
CO2: Model Formulation and applications that are used in solving business decision problems.
CO3: Be able to design new simple models, like: CPM, PERT to improve decision – making and develop critical thinking and objective analysis of decision problems.

UNIT-I
Introduction: Historical Developments in Operations Research; Managerial applications of Optimization; Optimization techniques – classical and advanced techniques. Art of Modeling Origin of OR and its role in solving industrial problems: General approach for solving OR problems. Classification of mathematical models: various decision making environments.

UNIT-II
Linear Programming and its applications: Formulation of linear mathematical models: Graphical and simplex techniques for solution of linear programming problems, Motivation of simplex method, Simplex algorithm and construction of simplex tableau; Simplex criterion; Minimization versus maximization problems, Big-M method and two phase method, Introduction to duality theory and sensitivity analysis.

UNIT-III
Transportation & Assignment Models and its applications: Various initial basic feasible solutions methods, Optimization of transportation and assignment using different methods considering the concept of time and cost function. **Dynamic Programming:** Characteristics of dynamic programming problems, deterministic dynamic programming, and probabilistic dynamic programming. **Queuing Theory:** Basic structure of queuing model, Types of queuing situation: Queuing models with Poisson's input and exponential service, their application to simple situations.

UNIT-IV
Network Models: Shortest route and traveling sales man problems, PERT & CPM, analysis of time bound project situations, construction of networks, identification of critical path, slack and float, crashing of network for cost reduction. **Non-linear Programming Models:** Graphical illustration to non-linear programming problems, introduction to different types of non-linear programming problems. Problems related to the topic.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Hamdy A. Taha, *Operations Research: An Introduction*, Prentice Hall of India, 2019.
- Harvey M. Wagner, *Principles of Operations Research*, Prentice Hall, 1975.
- P. K. Gupta, and D. S. Hira, *Operations Research*, S. Chand and Company, 1976.
- Frederick S. Hillier, and Gerald J. Lieberman, *Introduction to Operations Research*, Holden Day, 1980.
- Jerome D. Wiest, and Ferdinand K. Levy, *A Management Guide to PERT/CPM*, Prentice Hall, 1977.

I.K.G. Punjab Technical University
MBA 961-18 Marketing Analytics

Course Objective: The objective of this paper is to acquaint the students with Product Management, Digital Marketing and analysis of market conditions.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: To learn how to analyse market conditions in the era of social media.
CO2: To learn to apply statistical tools on marketing data metrices.
CO3: Understand how the "first principles" of marketing strategy helps firms organize the analytics opportunity and challenge in today's data era, and
CO4: Use and execute data analytic techniques, and case studies to understand how to solve marketing analytics problems in a scientific and process-driven manner.

Unit I
Understanding Data: Introduction to analytics, Basics of Statistics and Data Interpretation on MS EXCEL.
Market Analysis: Sales Forecasting, Market Share Analysis; Other Market performance Indicators like Penetration, Usage, Brand Performance, Satisfaction.
Customer Analysis: Customer Choice Analysis, Customer Profitability Analysis, Lifetime Value; Acquisition and Retention Costs and Rates
Product Analysis: Product Portfolio Analysis, New Product Sales Forecasting; Cannibalization Analysis

Unit II
Pricing Analysis: Understanding Price; Price Sensitivity; Price-Volume Equation; Price Promotion, Price-Value Equation /Analysis, How to Price
Sales and distribution analysis: Sales Force Sizing, Effort (Call Planning), Territory Planning, Target Setting, Compensation Planning; Performance Appraisal. Distributor, Numbers, Margin and Profitability, Performance Appraisal and People analytics.

Unit III
Advertising and sales promotion: Performance of Ads, Media Planning, Setting Advertising and Sales Promotion Budget. Measuring Retail Lift and Promotional Lift
Social Media Analysis, Understanding the Metrics behind Social Media Spends
Brief information about following: Descriptive Analytics, Diagnostic Analytics, Predictive Analytics, and Prescriptive Analytics.

Unit IV
E-Marketing: Introduction, Objectives, Definition, History, Scope, Benefits and Problems; E- marketing Techniques and Digital Marketing; Components of E-Marketing; E-Customers - Introduction & Objectives, Dealing with Customers' and Online Buying Process; Types & Applications of E-Market
E-Marketing Tools: Introduction, Objectives, E-Mail Marketing, Creating a Website, Social Media Marketing, Pay-Per-Click Advertising, Search Engine Optimization or Paid Search Engine Listing Search Engine Marketing, Blogging and Classified Advertising.
E-Marketing Plan: Introduction, Objectives, Definition of E-Marketing Plan, Situational Analysis, Setting Objectives, Marketing Mix Decision, Budget Allocation, Action Plan, Measuring Success

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- David M. Diez, Christopher D. Barr, and Mine Çetinkaya Rundel, *OpenIntro Statistics*, OpenIntro, 2019.
- David Bell, *Regression Analysis*, Harvard Business Review, 1991.
- Rajkumar Venkatesan, and Shea Gibbs, *Logistic Regression*, Darden Business Publishing, 2013.
- Elie Ofek, *Customer Profitability and Lifetime Value*, Harvard Business Review, 2002.
- Andrew McAfee, and Erik Brynjolfsson, *Big Data: The Management Revolution*, Harvard Business Review, 2012.
- Thomas H. Davenport, and Jinho Kim, *Keep Up with Your Quants*, Harvard Business Review, 2013.
- Thomas H. Davenport, and D. J. Patil, *Data Scientist: The Sexiest Job of the 21st Century*, Harvard Business Review, 2012.
- Dominic Barton, and David Court, *Making Advanced Analytics Work for You*, Harvard Business Review, 2012.
- Nirmalya Kumar, *Marketing as Strategy: Understanding the CEO's Agenda for Driving Growth and Innovation*, Harvard Business Press, 2006.
- John Deighton, *Should You Sell Your Digital Privacy?*, Harvard Business Review, 2003.
- Adam Keiper, *When Folly Is Forever*, *The Wall Street Journal*, 2009.

I.K.G. Punjab Technical University
MBA 962-18 Data Sciences using R

Course Objective: The objective of this paper is to acquaint the students with availability of plethora of data in organizations that need to be analysed to discover the hidden pattern used for solving business problems. This is done through the field of Data Science. After studying this course students will be able to relate the applications of data science with real life business problems in organizations and will be able to provide solutions after rigorous analysis of data through it.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: Know advanced aspects of big data analytics, applying appropriate machine learning techniques to analyse big data sets
CO2: Assess the statistical significance of data mining results, basic statistical modelling and analysis using the open-source tool R
CO3: Describe what Data Science is and the skill sets needed to be a data scientist.
CO4: Understand concepts like Big Data, Data Mining, Data Analytics and Machine Learning
CO5: Understand various algorithm for data analysis (classification and Clustering)

Unit I
Data Science: Understanding Different Components of Data Science & their Roles (introduction to concepts like Big Data, data pre-processing, concepts of supervised and unsupervised learning, Data Mining, Data Analysis, Web Analytics, Machine Learning), Business Applications of Data Science (Internet Search Digital Advertisements, Recommender Systems, Price Comparison Websites, Fraud and Risk Detection, Roles and responsibilities of Data Scientists in Business analytics.

Introduction to R Software, Installation, basic Elements, R- Data Interfaces, R- Charts & Graphs, R- Statistics.
Basic statistics through R: Mean median, standard deviation, variance, correlation, and covariance.

Unit II
Probability Theory for Data science (Bays theorem), Regression- Linear, multiple and logistic regression.
Decision tree and Support Vector Machine (SVM).

Unit III
Ensemble methods: bagging, random forests, boosting. **Clustering:** K-mean Clustering, K- medoids, **Agglomerative**, Hierarchical clustering, X-means, Density-based spatial clustering of applications with noise (DBSCAN).

Unit IV
Evaluation and validation: methods of estimating the performance of classifiers: cross-validation, Holdout Method and Bootstrap Method; Confusion Matrix, assessing the statistical significance of data mining results. **Selection of advanced topics such as:** scalable machine learning, big data related techniques, mining stream data, social networks.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Foster Provost, and Tom Fawcett, *Data Science for Business: What You Need to Know about Data Mining and Data Analytic Thinking*, O'Reilly Media, 2013.
- David Dietrich, Barry Heller, Beibei Yang, *Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data*, John Wiley and Sons, 2015.
- Mohammed J. Zaki, and Wagner Meira Jr., *Data Mining and Analysis: Fundamental Concepts and Algorithms*, Cambridge University Press, 2014.
- Trevor Hastie, Robert Tibshirani, and Jerome Friedman, *The Elements of Statistical Learning*, Springer, 2009.
- Jure Leskovec, Anand Rajaraman, and Jeffrey D. Ullman, *Mining of Massive Datasets*, Cambridge University Press, 2016.
- Kevin P. Murphy, *Machine Learning: A Probabilistic Perspective*, MIT Press, 2012.

I.K.G. Punjab Technical University
MBA 971-26
Strategic Digital Marketing

Course Objective: The course aims to develop strategic understanding of digital marketing concepts, digital consumer behaviour and online business models. The course also focuses on integrated digital marketing planning, customer engagement, digital branding and digital transformation strategies for organizations operating in competitive and technology-driven environments.

Course Outcomes: After studying this course, the students should be able to:

CO1: Analyze the strategic role of digital marketing in contemporary business environments.
CO2: Evaluate digital consumer behaviour and customer journey in online markets.
CO3: Develop integrated digital marketing strategies for business growth and brand positioning.
CO4: Assess the impact of digital transformation and emerging technologies on marketing practices.
CO5: Design digital communication and customer engagement strategies for different industries and
businesses.
CO6: Examine ethical, legal and data privacy concerns associated with digital marketing activities.

UNIT-I

Introduction, meaning, nature and scope of digital marketing; evolution of digital marketing from traditional marketing approaches; digital economy and online business models; omnichannel marketing and customer-centric business environments; digital marketing ecosystem and strategic framework; changing trends in digital business practices; digital consumer behaviour and customer decision journey; customer expectations and online buying behaviour; customer persona development and customer journey mapping; role of data in digital marketing decisions; strategic importance of digital marketing in modern organizations.

UNIT-II

Digital marketing planning process and framework; environmental analysis and competitor analysis in digital markets; segmentation, targeting and positioning in digital environments; online branding and brand equity management; integrated digital marketing communication (IMC); website planning and optimization; digital communication channels and media selection; customer engagement strategies; relationship marketing and customer retention techniques; content planning and storytelling; digital campaign budgeting and resource allocation; online public relations and reputation management.

UNIT-III

E-commerce and platform-based business models; digital marketplaces and platform economy; role of mobile commerce and social commerce; online reputation management and brand trust; cybersecurity issues in digital business; ethical and legal aspects of digital marketing; data privacy and consumer protection regulations; intellectual property issues in online environments; AI and machine learning applications in marketing; chatbot integration and personalization strategies; role of CRM systems in customer engagement and retention.

UNIT-IV

Marketing automation and automated customer communication systems; influencer economy and creator-based marketing; voice search and voice commerce; augmented reality (AR) and virtual reality (VR) in digital marketing; metaverse marketing and immersive brand experiences; blockchain applications in marketing and digital trust systems; digital transformation case studies; strategic applications of digital marketing in retail, banking, healthcare, hospitality and education sectors; future trends and challenges in digital marketing.

Note: Relevant case studies, industry examples and practical exposure to digital marketing tools should be discussed in class.

Suggested Readings:

- Dave Chaffey, and Fiona Ellis Chadwick, *Digital Marketing: Strategy, Implementation and Practice*, Pearson Education, 2016.
- Simon Kingsnorth, *Digital Marketing Strategy*, Kogan Page, 2022.
- Philip Kotler, Hermawan Kartajaya, and Iwan Setiawan, *Marketing 5.0: Technology for Humanity*, Wiley, 2021.
- Ian Dodson, *The Art of Digital Marketing*, Wiley, 2016.
- Alan Charlesworth, *Digital Marketing: A Practical Approach*, Routledge, 2014.
- Seema Gupta, *Digital Marketing*, McGraw Hill Education, 2022.

I.K.G. Punjab Technical University
MBA 972-26
Search Engine and Performance Marketing

Course Objectives: The course aims to provide advanced knowledge of search engine optimization, paid advertising and performance marketing strategies. The course also focuses on analytical tools, conversion optimization techniques and campaign management practices used for improving digital marketing effectiveness and customer acquisition.

Course Outcomes: After successfully completing this course, students will be able to:

CO1: Examine advanced SEO and SEM concepts for improving digital visibility and online traffic.
CO2: Design performance marketing campaigns using paid advertising and programmatic media strategies.
CO3: Apply conversion optimization and audience targeting techniques in digital campaigns.
CO4: Analyze advertising performance using digital metrics and analytical tools.
CO5: Evaluate search engine and performance marketing strategies for different online business models.
CO6: Develop integrated search and paid advertising campaigns using data-driven approaches.

UNIT-I
Introduction to advanced SEO concepts; search engine algorithms and ranking mechanisms; website indexing and crawling processes; technical SEO and website architecture; mobile-first indexing and mobile optimization; keyword research and competitor analysis; on-page optimization techniques; offpage optimization strategies and backlink building; local SEO and geo-targeting; voice search optimization; SEO audit techniques and website performance enhancement.

UNIT-II
Introduction to Search Engine Marketing (SEM); Google Ads ecosystem and campaign structure; Pay-Per-Click (PPC) advertising models; bidding strategies and ad ranking systems; search ads, display ads and shopping ads; video advertising campaigns; remarketing and retargeting strategies; programmatic advertising and media buying; audience targeting and behavioural targeting; ad quality score and campaign optimization; advertising budgets and media planning.

UNIT-III
Concept and importance of performance marketing; conversion rate optimization (CRO); landing page optimization techniques; A/B testing and multivariate testing; affiliate marketing and partner-based promotion; influencer performance campaigns; customer acquisition and lead generation strategies; funnel optimization and customer retention techniques; attribution models in digital advertising; budget allocation and campaign performance management.

UNIT-IV
Digital performance indicators including CTR, CPC, CPA, CPM and ROI; Google Analytics and Search Console applications; dashboard interpretation and reporting systems; campaign monitoring and analytics tools; audience insights and behavioural analytics; advertising fraud and ad blockers; predictive analytics in campaign

management; performance evaluation and strategic recommendations; case studies related to search engine and performance marketing campaigns.

Note: Students should be encouraged to create sample SEO audits, Google Ads campaigns and performance dashboards as practical assignments.
Relevant Case Studies should be discussed in class.

Suggested Readings

- Dave Chaffey, and Fiona Ellis Chadwick, *Digital Marketing: Strategy, Implementation and Practice*, Pearson Education, 2016.
- Simon Kingsnorth, *Digital Marketing Strategy*, Kogan Page, 2022.
- Seema Gupta, *Digital Marketing*, McGraw Hill Education, 2022.
- Kevin Hartman, *Digital Marketing Analytics*, Pearson Education, 2020.
- Ryan Deiss, Russ Henneberry, *Digital Marketing for Dummies*, Wiley, 2017.
- Brad Geddes, *Advanced Google AdWords*, Wiley, 2014.

I.K.G. Punjab Technical University
MBA 401-18 Corporate Strategy

Course Objective: This course aims to familiarize the students with organization perspective from strategic viewpoint integrating different functional areas of management. The aim is to develop an understanding of how organizational strategies are formulated and implemented in a changing global environment.

Course Outcomes: After studying this course, the students should be able to:

CO1: Understand the concepts of strategic management process and strategic decision making process.
CO2: Discuss various techniques of external as well as internal environmental analysis of business.
CO3: Explain various business level and corporate level strategies for the growth of the business along with their implications.
CO4: Illustrate the issues involved in strategy implementation and the role of leadership, communication and organizational structure in implementation of strategy.
CO5: Develop various functional plans for successful implementation of strategy.
CO6: Understand organisational systems and techniques of strategic evaluation and control.

Unit I
Understanding Strategy and Strategic Management: Strategic Management Process, Strategic Decision Making, Levels of Strategy, Role of strategists, Benefits of Strategic Management, Mckinsey's 7 S model.
Defining Strategic Intent: Vision, Mission, Goals and Objectives.
External Environment Analysis: Concept of environment, Strategically Relevant Components of External Environment, Environmental Scanning Techniques- ETOP, PEST, SWOT, TOWS.

Unit II
Industry analysis- Porter's Five Forces Model; Strategic Group Mapping; Industry Driving Forces; Key Success Factors, External Factor Evaluation Matrix.
Internal Environment Analysis – Organisational capabilities in various functional areas and Strategic Advantage Profile. Resource based view of an organization: VRIO Framework; Value Chain Analysis; Competitive Advantage and Core Competency, Identification of Critical Success Factors (CSF). Internal Evaluation Factor Matrix.
Business Level Strategies – Porter's Framework of Competitive Strategies: Cost, Leadership, Differentiation and Focused Strategies, Location and timing tactics. Concept, Importance, Building and use of Core Competence.

Unit III
Corporate Level Strategies – Expansion (growth)-Horizontal and Vertical Integration, Strategic outsourcing, Related and Un-related Diversification, International Entry Options, Corporate restructuring. Concept of Synergy, Mergers & Acquisitions, Stability, harvesting and Retrenchment and Combination strategies.
Strategic Analysis and choice (Multi Business Strategies: Portfolio Strategies) – BCG, GE Nine cell, Product life cycle Matrix).

Unit IV

Strategy Implementation– Strategy- Structure Fit: Resource allocation, Projects and Procedural issues. Organisation structure and systems in strategy implementation. Leadership and corporate culture. Operational and derived functional plans to implement strategy. Integration of functional plans.

Strategy Evaluation and Control – Nature of Strategy Evaluation; Strategic control and operational Control. Organistional systems and Techniques of strategic evaluation, Strategy Evaluation Framework; The Balanced Score Card.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Arthur A. Thompson Jr., A. J. Strickland III, John E. Gamble, and Arun K. Jain, *Crafting and Executing Strategy: The Quest for Competitive Advantage Concepts and Cases*, Tata McGraw Hill, 2019.
- Azhar Kazmi, *Strategic Management*, Tata McGraw Hill, 2020.
- Thomas L. Wheelen, and J. David Hunger, *Concepts in Strategic Management and Business Policy*, Pearson Education, 2012.
- John A. Pearce III, Richard B. Robinson Jr., and Amita Mittal, *Strategic Management: Formulation, Implementation and Control*, Tata McGraw Hill, 2017.
- Fred R. David, *Strategic Management: Concepts and Cases*, Pearson Education, 2016.
- Charles W. L. Hill, and Gareth R. Jones, *An Integrated Approach to Strategic Management*, Cengage Learning, 2012.
- Robert A. Pitts, and David Lei, *Strategic Management: Building and Sustaining Competitive Advantage*, Thomson Learning, 2006.
- Michael E. Porter, *Competitive Advantage: Creating and Sustaining Superior Performance*, Free Press, 1998.

I.K.G. Punjab Technical University
MBA 403-18 Workshop on Indian Ethos

Course Objective: The course is an attempt for the students to learn about how to apply the concepts and theories of ancient Indian management in business.

Courses Outcomes:
CO1: Comprehend and practice Indian Ethos and values system.
CO2: Applying value based management and ethical practices in business.
CO3: To gain the knowledge of management principles from Vedas and other holy books and explain the application of Indian heritage in business.
CO4: To comprehend various stress management techniques and their applications in organizations.
CO5: To describe salient features and advantages of ancient Indian system of learning.
CO6: To describe various laws of Karma and explain the concept of corporate karma.

Unit 1
Indian Ethos: History & Relevance, Principles Practiced by Indian Companies, Role of Indian Ethos in Managerial Practices.

Management Lessons from Vedas, Mahabharata, Bible, Quran, Kautilya's Arthashastra, Indian Heritage in Business, Management-Production and Consumption. Ethics v/s Ethos, Indian v/s Western Management.

Unit 2
Work Ethos: Meaning, levels, dimensions and steps.

Values: Values for Indian Managers, Relevance of Value Based Management in Global Change, Impact of Values on Stakeholders. Trans-Cultural Human Values, Secular v/s Spiritual Values, Value System in Work Culture.

Unit 3
Stress Management: Meaning, types of stress at work, causes of stress, consequences of stress.

Techniques for Managing Stress: Meditation: Meaning, advantages for mental health and its importance in management. Brain storming, brain stilling, Yoga: Meaning, Significance.

Contemporary Approaches to Leadership- Joint Hindu Family Business–Leadership Qualities of Karta.

Unit 4
Indian Systems of Learning- Gurukul System of Learning, Advantages- Disadvantages of Karma, importance of Karma to Managers, Nishkama Karma. Laws of Karma: Law of Creation, Law of Humility, Law of Growth, Law of Responsibility, Law of Connection.

Corporate Karma: Meaning, methodologies, guidelines for good corporate karma.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- N. M. Khandelwal, *Indian Ethos and Values for Management*, Himalaya Publishing House, 2023.
- Tushar Agrawal, and Nidhi Chandorkar, *Indian Ethos in Management*, Himalaya Publishing House, 2026.
- S. K. Chakraborty, *Ethics in Management: Vedantic Approach*, Oxford University Press, 1995.
- Dwijendra Tripathi, *The Oxford History of Indian Business*, Oxford University Press, 2004.
- A. C. Fernando, *Business Ethics: An Indian Perspective*, Pearson Education, 2009.
- Irfan Habib, *The Cambridge Economic History of India, Volume 1*, Cambridge University Press, 1982.
- Swami Jitatmananda, *Indian Ethos for Management*, Ramakrishna Ashrama, 1996.
- Patrick Olivelle, *King, Governance, and Law in Ancient India: Kautilya's Arthashastra*, Oxford University Press, 2013.

I.K.G. Punjab Technical University

MBA 923-18 Integrated Marketing Communication and Sales Management

Course Objective: This course will help the students to understand the principles and practices of marketing communication, tools used by marketers to inform consumers and to provide a managerial framework for integrated marketing communications planning as well as sales management.

Course Outcomes: After successfully completing this course, students will be able to:

CO1: Apply the key terms, definitions, and concepts used in integrated marketing communications.
CO2: Conduct and evaluate marketing research and apply these findings to develop competitive IMC Programme.
CO3: Examine the role of various promotional strategies such as advertising, direct marketing, sales promotion and PR in effectiveness of marketing communication.
CO4: Understand and apply the concepts of sales management and organization.
CO5: Develop sales related marketing policies such as product policies, distribution policies & pricing policies.
CO6: Explain various sales operations such as sales budget, sales territories, sales Quota's, control of sales, sales meeting and sales contest, organizing display, showroom and exhibition.

UNIT I

Role of IMC in marketing process: IMC planning model, IMC components. Communication process, steps involved in developing IMC programme, Effectiveness of marketing communications, Purpose, Functions, Types of IMC. **Advertising management**: Advertising appeals, advertising designs, Advertising agencies, Advertising Budgeting, Media planning and evaluation, Media strategy: Creativity, Elements of creative strategies and its implementation.

UNIT II

Direct Marketing: Features, Advantages/Disadvantages, strategies in Direct Marketing **Promotion:** Meaning, Importance, tools used, push pull strategies, **Publicity/ Public relations:** Meaning, Objectives, strategies and tools of public relations. **Corporate Advertising** Role, Types, Limitations, **Monitoring, Evaluation and control:** Measurement in advertising, various methods used for evaluation, Pre-testing, Post testing. **International Advertising:** Global environment in advertising, **Internet advertising:** Meaning, Components, Advantages and Limitations, Types of Internet advertising.

Unit- III

Sales Management and Organization: Objectives of sales management, sales executive as a coordinator, sales management and control, sales organization - it's purpose, setting up a sales organization, types of sales organization. **Objectives and theories of personal selling**, analyzing market potential, sales potential and sales forecasting method & evaluation, determining sales related marketing policies - product policies, distribution policies & pricing policies.

Unit- IV

Sales Operations: Sales budget , sales territories, sales Quota's, control of sales , sales meeting and sales contest, organizing display , showroom and exhibition. **Sales manager**- Qualities and functions , types of salesman , psychology of customers .

Note: Relevant Case Studies should be discussed in class.

Suggested Readings

- Kenneth E. Clow, and Donald Baack, *Integrated Advertising, Promotion and Marketing Communications*, Prentice Hall of India, 2015.
- Philip J. Kitchen, and Patrick De Pelsmacker, *Integrated Marketing Communications: A Primer*, Routledge, 2004.
- Rosann L. Spiro, William J. Stanton, and Gregory A. Rich, *Management of a Sales Force*, Tata McGraw Hill, 2007.
- Richard R. Still, Edward W. Cundiff, and Norman A. P. Govoni, *Sales Management: Decisions, Strategies and Cases*, Pearson Education, 1998.
- Mark W. Johnston, and Greg W. Marshall, *Sales Force Management*, Tata McGraw Hill, 2013.
- Bert Rosenbloom, *Marketing Channels: A Management View*, Cengage Learning, 2012.
- Krishna K. Havaldar, Vasant M. Cavale, and Subrata Kumar Nandi, *Sales and Distribution Management*, Tata McGraw Hill, 2025.
- S. A. Chunawalla, *Sales and Distribution Management*, Himalaya Publishing House, 2011.

I.K.G. Punjab Technical University
MBA 924-18 Retail Management

Course Objectives: This course enables students to understand the evolution of retailing and the strategic role of retailing in the distribution of consumer goods and services. The content of the course is useful for students interested in a retail career, working for companies that interface with retailers, or interested in owning or running a retail business.

Course Outcomes: After studying this course, the students should be able to:

CO1: Understand opportunities and challenges in retail management and retail management decision process.

CO2: Examine various types of retail formats and comprehend the application of theories of retail development on business models in retail.

CO3: Discuss and apply various function of store management.

CO4: Recognize the importance of store design and apply the concepts of store design to determine store layout and merchandising.

CO5: Understand the importance of customer service in improving retail service qualities.

CO6: Describe the applications of IT in retailing.

Unit - I

Introduction to Retailing: Economic Significance, Opportunities in Retailing, Retail Management Decision Process

Retailing in India: Evolution of Retail in India, Drivers of Retail Change and Challenges to Retail Development in India.

Unit-II

Types of retailers: Food Retailers, General Merchandise Retailers, Non-Store Retail Formats, Services Retailing, Types of Ownership.

Retail Models & Theories of Retail Development: Evolution of Retail Formats, Theories of Retail Development, Concept of Life cycle in Retail, Business Models in Retail

Unit-III

Managing the Store: Store Management Responsibilities, Recruiting & Selecting Store Employees, Socializing & Training New Store Employees Motivating, Managing & Evaluating Store Employees.

Store Layout, Design & Visual Merchandising: Objectives of Good Store Design, Store Layout. Space Planning and Merchandise Presentation Techniques. Atmospherics.

Unit-IV

Customer Service: Strategic Advantages Through Customer Service, Customer Evaluation of Service Quality, GAPS Model for improving Retail Service Quality.

Application of IT to Retailing: Growing Role of IT in Retailing, IT for Competitive Advantage, Data Mining, Database Marketing, Business Intelligence. International Retailing: International Retail Structures, MotiChain Integration.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Michael Levy, and Barton A. Weitz, *Retail Management*, Tata McGraw Hill, 2003.
- P. K. Sinha, and D. P. Uniyal, *Managing Retailing*, Oxford University Press, 2007.
- Andrew J. Newman, and Peter Cullen, *Retailing: Environment and Operations*, Thomson Learning, 2007.
- Swapna Pradhan, *Retail Management: Text and Cases*, Tata McGraw Hill, 2007.
- Roger Cox, and Paul Brittain, *Retailing: An Introduction*, Pearson Education, 2004.
- David Gilbert, *Retail Marketing Management*, Prentice Hall, 1999.
- Patrick M. Dunne, Robert F. Lusch, and David Griffith, *Retailing*, Thomson Learning, 2002.

I.K.G. Punjab Technical University
MBA 925-18 International and Social Media Marketing

Course Objectives: The course aims at acquainting students with the concepts and procedures for international marketing and trains them to develop and implement plans and strategies for entering international markets and managing overseas operations. The course also helps students to understand the basics in Social Media Marketing and Blogging.

Course Outcomes: After successfully completing this course, students will be able to:

CO1: Assess the challenges in international marketing and understand various international market entry strategies.
CO2: Evaluate international marketing environment and identify various international trade barriers and regional blocks.
CO3: Develop international product, pricing and communication policy and examine international distribution system.
CO4: Discuss the evolution of social media marketing and identify various benefits and applications of social media.
CO5: Explain how to develop effective social media marketing strategies for various types of industries and businesses.
CO6: Describe the major social media marketing portals that can be used to promote a company, brand, product, service or person.

Unit-I
Definition and challenges of international marketing, Reasons for going international, International Market Segmentation and Positioning; **International Market Entry Strategies:** Screening and Selection of Markets; Methods to enter International markets. **International Marketing environment:** political, legal, environmental, socio Cultural and Technological environment, Country Risk Analysis, **International Economic environment:** IMF, WTO, International Monetary System, **International Trade Barriers:** Tariff and Non-Tariff. **Regional Blocks**: European Union, NAFTA, SAARC, ASEAN, International Marketing Research.

Unit-II
EXIM policy of India, export promotion organizations, incentives, Export documents. organisation and structure of export and import houses. **International product and pricing policies:** Product standardization & adaptation, international pricing strategies. **International distribution system:** International distribution channels, types, role of internet in international distribution **International communication policy:** communication strategies in international marketing, international promotion mix.

Unit III
Introduction to Social Media Marketing: Evolution, from traditional to Modern marketing, Rise of internet and E concepts. Emergence of social media marketing as a tool. **Social media Channels:** Types and models, Social media benefits and applications. Social media marketing framework. **Consumer behavior on the Internet:** Basics, evolution of the digital consumer, managing consumer demand. IMC. **Social media marketing strategies:** Introduction, defining social media marketing mix, social media marketing planning, social media marketing marketing channels.

Unit IV

Social media marketing campaign: Elements of marketing campaigns, implementing social media marketing campaigns, SEM, SEO, Content marketing, Social media execution, campaign analytics and ROI, **Managing social media marketing revenue:** social media marketing revenue sources, managing service delivery and payments, **Emerging trends in social media marketing:** Big data, IOT, Content Creation and Sharing: Blogging, micro blogging, Streaming Video, Podcasts, and Webinars.

Note: Relevant Case Studies should be discussed in class.

Suggested readings

- Michael R. Czinkota, Ilkka A. Ronkainen, Sutton Brady, Tim Beal, and Nicole Stegemann, *International Marketing*, Cengage Learning, 2014.
- Francis Cherunilam, *International Trade and Export Management*, Himalaya Publishing House, 2025.
- Philip R. Cateora, Bruce Money, Mary C. Gilly, and John L. Graham, *International Marketing*, McGraw Hill, 2019.
- Dan Zarrella, *The Social Media Marketing Book*, O'Reilly Media, 2009.
- Tracy L. Tuten, and Michael R. Solomon, *Social Media Marketing*, Pearson Education, 2018.

I.K.G. Punjab Technical University
MBA 926-18 Product and Brand Management

Course Objective: To create understanding among students for concepts, process, techniques of product and management. The course also aims to familiarize students with the concept of a 'brand', the role of branding in marketing strategy; brand equity, its importance and measurement, how to create and retain brand equity; operational aspects of brand management.

Course Outcomes: After studying this course, the students should be able to:

CO1: Understand what a product is, the various levels which make it up, and different types of products.
CO2: Examine various challenges and issues involved in product planning and development.
CO3: Discuss and apply the concepts of test marketing and market entry of a product.
CO4: Recognize the features and importance of a brand and conduct branding research.
CO5: Understand the concept of brand loyalty and measuring brand performance.
CO6: Describe the role of various branding strategies in brand equity management.

Unit I
Product management: meaning, importance of the product manager's job, planning and control systems for product management, product portfolio planning and analysis, Mapping, understanding company product/brands and competitive brand market position, Impact of global forces on products.

Unit II
Product planning and development: Meaning, objectives, Strategic reasons, processes challenges and issues, Forecasting demand, Estimating market opportunity, test marketing, types, design issues, Evaluation of test marketing results, Market entry decisions - Launching new product programs, National launching of new products, Tracking the launch, absorbing the new product in the mix.

Unit III

Basic understanding of brands: concepts and process, significance of a brand, brand mark and trade mark, **Different types of brand:** family brand, individual brand, private brand, Co-branding, selecting a brand name. **Functions of a brand**: branding decisions, influencing factors. Understanding customer-cased brand equity. Monitoring brand performance. **Branding research**: Designing and implementing branding research, Brand design and structures.

Unit IV

Brand loyalty: loyalty programs, Building strong brands. Measuring brand performance, Brand extensions. **Brand Equity Management**: Brand Equity Measurement, Brand Leverage, Global Branding strategies, Brand Audit, Role of Brand Manager, Branding challenges & opportunities. **Brand rejuvenation and re-launch**, brand development through acquisition takes over and merger, relaunching the brand, need, methods and success rate.

Note: Relevant Case Studies should be discussed in class.

Suggested readings:

- Kevin Lane Keller, *Strategic Brand Management: Building, Measuring and Managing Brand Equity*, Prentice Hall of India, 2008.
- David A. Aaker, *Managing Brand Equity*, The Free Press, 1991.
- Jean-Noël Kapferer, *The New Strategic Brand Management*, Kogan Page, 2008.
- Subroto Sengupta, *Brand Positioning*, Tata McGraw Hill Publishing, 2005.
- K. Venugopal Rao, *Product and Brand Management*, Himalaya Publishing House, 2022.

I.K.G. Punjab Technical University

MBA 913-18 Behavioural Finance

Course Objective: The primary objective of the course is to make the students understand how behavioural bias affects the classical financial theory.

Course Outcomes: After studying this course, the students should be able to:
CO1: Understand and differentiate between different theories of behavioural finance.
CO2: Examine the concepts of bounded rationality.

CO3: Discuss various anomalies in the market giving rise to behavioural bias.

CO4: Describe the basis of behavioural bias of professional investors trading in market.

CO5: Understand the concept of market efficiency and will be able to relate it with the concept of behavioural finance.

CO6: Describe the challenges to the efficient market hypothesis.

Unit I
Introduction: Meaning, features and scope of behavioural finance. Rational Expectations Paradigm and the Behavioural Challenge
Theories of Behavioural Finance: Agency theory, Prospect theory, Reasoned emotions; Overreaction and optimism, Rationality to psychology, Neo-classical finance and Efficient Market Hypothesis

Unit II
Behavioural Aspects of Investing: Heuristics and Biases, Self- deception, Emotional Factors and Social Forces and Neuro-scientific and Biological Perspective, Small / Medium / Large firm effect, Momentum Vs Reversal, Noise trader risk in financial market, Attitude to risk, Expected utility, Mental accounting, Over confidence, Emotion and reasoning, Excessive risk taking, Behavioural explanation for anomalies, Excessive volatility, Loss aversion, Gamblers' fallacy

Unit III
Investor behaviour: Types of investors – on the basis of risk appetite and investment exposure, Conformity, Contrarian investing, Social forces selfishness or altruism, Group psychology on Board, Resistance to recognising failure, Conflict of interest. Value investing and growth investing. Stock market bubbles.

Unit IV
Model of Investor Sentiment
Market Efficiency and Biases in Brokerage Recommendations
Evidence on the Characteristics of Cross-sectional Variation in Stock Returns
Behavioural Corporate Finance and Wisdom from Other Sources

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Prasanna Chandra, *Behavioural Finance*, McGraw Hill, 2017.

- Parag Parikh, *Value Investing and Behavioural Finance: Insights into Indian Stock Market Realities*, Tata McGraw Hill, 2017.
- Gregory B. Davies, and Arnaud D. Servigny, *Behavioural Investment Management: An Efficient Alternative to Modern Portfolio Theory*, McGraw Hill, 2012.
- William Forbes, *Behavioural Finance*, John Wiley and Sons Ltd., 2011.
- M. M. Sulphey, *Behavioural Finance*, PHI Learning, 2014.
- Lucy F. Ackert, and Richard Deaves, *Understanding Behavioural Finance*, Cengage Learning, 2012.
- Benjamin Graham, *The Intelligent Investor*, Harper and Brothers, 2013.

I.K.G. Punjab Technical University

MBA 914-18 Mergers, Acquisitions and Corporate Restructuring

Course Objective: The main objective of this course is to enable the students to understand, evaluate, and interpret the significance of Mergers, Acquisitions and Corporate Restructuring in the current global business environment, and enable them to appreciate how these strategic decisions are affected by various issues like valuation, regulatory environment and methods of payment.

Course Outcomes: After studying this course, the students should be able to:
CO1: To explain the popularity of merger and acquisition strategies in firms competing in the global economy.
CO2: To describe the reasons why firms use an acquisition strategy to achieve strategic competitiveness.
CO3: To describe the issues that are significant in valuation decisions, and the factors which work against achieving success when using an acquisition strategy.
CO4: To define the restructuring strategy and distinguish among its common forms.
CO5: To explain the regulatory aspects of mergers, acquisitions and corporate restructuring.

UNIT-I

Introduction to Mergers, Acquisitions and Corporate Restructuring: Evolution, Need and Reasons/Motives for Mergers and Acquisitions. Forms of Corporate Restructuring. Mergers and Acquisitions as Strategic Choice. Evaluation of Strategic Alternatives. Value Creation in Mergers and Acquisitions. Takeover Defence Strategies. Reasons for Failures of Mergers and Acquisitions.

UNIT-II

Demerger, Reverse Merger and Buyback of Shares. Strategic Alliances: Types, Structure and Problems in Strategic Alliances. LBO (Leveraged Buy Out): Characteristics, Categories, Financing. Types of LBO Sponsor. Restructuring of Sick Companies. Deal Valuation in Mergers and Acquisitions: Factors affecting valuation, Valuation Basics. Valuation of Intangibles.

UNIT-III

Methods of Payment and Financing Options in Mergers and Acquisitions. Impact on EPS (Earning Per Share). Determinants of Mergers and Acquisitions Financing Decisions. Accounting Aspects of Mergers and Acquisitions. Impact of Mergers and Acquisitions on Shareholder Wealth.

UNIT-IV

Tax Implications of Mergers and Acquisitions. The Process of Integration in Mergers and Acquisitions. International Mergers and Acquisitions: Motivations, Strategies and its Execution. Due Diligence in Mergers and Acquisitions. Regulatory Aspects of Mergers and Acquisitions

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Rajinder S. Aurora, Kavita Shetty, and Sharad Kale, *Mergers and Acquisitions*, Oxford Higher Education, 2011.
- Rabi Narayan Kar, *Mergers, Acquisitions and Corporate Restructuring: Strategies and Practices*, International Book House Pvt. Ltd., 2017.
- Chandrashekar Krishnamurti, and S. R. Vishwanath, *Mergers, Acquisitions and Corporate Restructuring: Text and Cases*, SAGE Publications, 2018.
- Sheeba Kapil, and Kanwal N. Kapil, *Mergers and Acquisitions: Strategy, Valuation, Leveraged Buyouts and Financing*, Wiley Publications, 2018.
- Prasad G. Godbole, *Mergers, Acquisitions and Corporate Restructuring*, Vikas Publishing House, 2013.
- Manu Sharma, *Mergers, Acquisitions and Corporate Valuation*, Dreamtech Press, 2015.
- Sudi Sudarsanam, *Creating Value from Mergers and Acquisitions*, Pearson Education, 2016.

I.K.G. Punjab Technical University
MBA 915-18 International Finance and Financial Derivatives

Course Objective: The primary objective of the course is to familiarize the students with the different aspects of finance in respect of international trading and investing and to equip them with the trading framework of different types of derivative contracts.

Course Outcomes: After studying this course, the students should be able to:

CO1: Understand the framework of international exchange rate system including factors influencing exchange rates.
CO2: Discuss the basics of different types of derivative contracts like futures, options and swaps.
CO3: Understand various types of risks / exposures in forex trading and their management.
CO4: Describe various theories underlying the concepts of international finance.
CO5: Understand trading strategies using options contracts.
CO6: Describe the regulatory framework of derivatives contracts in India.

Unit I
International Finance: An overview, importance, nature and scope, recent changes and challenges in IFM. International flow of funds: Balance of Payments (BoP), Fundamentals of BOP, Accounting components of BOP, Factors affecting international trade flows, Agencies that facilitate International flows. **International Monetary System:** Evolution, Gold Standard, Bretton Woods system, the flexible exchange rate regime, the current exchange rate arrangements, the Economic and Monetary Union (EMU).

Foreign Exchange Market: Function and Structure of the Forex markets, Major participants, Types of transactions and settlements dates, Foreign exchange quotations, Factors influencing foreign exchange rates.

Unit II
Parity Conditions in International Finance and Currency Forecasting: PPP, the Fisher effect, The International Fisher Effect, Interest Rate parity Theory, The relationship between forward and future spot rate.

International Sources of Finance: Long Term- International Capital Markets (ADR's, GDR's), Foreign Bond Market, Foreign Banks, Euro Markets, World Bank and IMF. Short Term: Banker's Acceptance, Discounting, Factoring, Forfating, EXIM Bank of India

Unit III
Derivatives: Meaning, Types, Importance, Principles and regulatory framework in India

Forward and Futures Contracts: Meaning, Difference between forward and futures contracts, pricing of futures contracts, determinants of value of futures contracts, Mark-to-Market, Payoffs of futures contracts. Speculation, Hedging and Arbitrage by using futures contracts.

Options Contracts: Meaning, type, importance, Black-Scholes Model for pricing options contracts, factors determining option prices, Payoffs of Call Option and Put

Option contracts, Put-Call Parity. **Option Trading Strategies:** Covered call writing, protective puts, Straddles, Strangles, Strips, Straps, Spreads including butterfly spreads, calendar spreads etc.

Unit IV

Swaps and Swaptions: Meaning, types, importance and pricing of swaps and Swaptions. Factors determining price of swaps and Swaptions.

Credit Derivatives: Meaning, Importance, pricing models and strategies to hedge by using credit derivatives.

Foreign Exchange Risk Management: Measuring and managing Transaction exposure, Measuring and Managing Economic exposure, and Measuring and Managing translation exposure, Country Risk Analysis, Foreign Exchange and Derivative Markets: Currency Futures and option Markets, Swap and Interest rate derivatives.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- P. G. Apte, *International Financial Management*, Tata McGraw Hill, 2020.
- Alan C. Shapiro, *Multinational Financial Management*, Prentice Hall India, 1996.
- Jeff Madura, *International Financial Management*, Thomson Publications, 2014.
- Maurice D. Levi, *International Finance*, Tata McGraw Hill, 2009.
- Cheol S. Eun, and Bruce G. Resnick, *International Financial Management*, Tata McGraw Hill, 2017.
- John C. Hull, *Options, Futures and Other Derivatives*, Prentice Hall of India, 2017.
- Julian Walmsley, *New Financial Instruments*, Prentice Hall of India, 1988.
- John F. Marshall, and Pratima Bansal, *Financial Engineering*, Prentice Hall of India, 1992.
- Robert A. Strong, *Derivatives: An Introduction*, Thomson South Western, 2004.
- S. S. S. Kumar, *Financial Derivatives*, Prentice Hall of India, 2007

I.K.G. Punjab Technical University

MBA 916-18 Taxation and Personal Financial Planning

Course Objective - To enable the students to understand the importance of tax management and various methods available for tax planning. This course also aims to acquaint students with the importance and methods for personal financial planning.

Course Outcomes: After studying this course, the students should be able to:

CO1 – The students will be familiarised with the concepts of tax management, tax avoidance and tax evasion and the methods of ways of tax planning.
CO2 – To acquaint students with the provision of the current finance act with regard to various head of income.
CO3 – To enable students to compute the tax liability of individuals after considering their residential status, various exempted incomes, permissible deduction, clubbing of income and setting off of losses.
CO4 – To familiarise students with the concept, objectives and importance of personal financial planning and enable the students to understand the implications of environmental factors and time value of money on the personal financial statements.
CO5 – To enable students to identify various types of risks any individual is exposed to and how they can hedge diversifiable risk.
CO6 – To familiarise students with various instruments available for investment by an individual for achieving their personal financial goals

UNIT I:
Tax Management: Introduction to tax management, features and scope of tax management. Differentiate between tax planning, tax avoidance and tax evasion.
Tax Planning: Meaning, need, scope, objectives and methods of tax planning.

UNIT II:
Tax planning for Five Heads of Income: Income from salary, house property, profits and gains from business or profession, capital gains and income from other sources.
Tax Planning with reference to Residential status, exempted incomes, permissible deductions, clubbing of income and setting off & carry forward of losses.

UNIT III:
Personal Financial Planning: Introduction, features, objectives and scope of personal financial planning.
Environmental Analysis: Screening and analysis of environmental factors affecting personal financial planning.
Time Value of Money and Personal Financial Statements: Meaning and calculation of present value and future value of money. Factors affecting the time value of money and its impact on the personal financial statements.

UNIT IV:
Personal Risk Management: Meaning of risk, measurement of risk and its identification (Risk taker, moderate risk taker, risk averter), introduction to life insurance and general insurance, differentiate between life insurance and investment. Insurance planning for the individual as well as family.
Investment Planning: Meaning and process of investment planning. Investment Planning objectives – Retirement planning, tax saving, capital growth, liquidity and safety

Investment Instruments for Personal Financial Management: Tax saving instruments (all investments covered u/s 80C like, Provident fund, PPF, ELSS, NPS etc.), Mutual fund schemes (open ended and closed ended; growth and dividend schemes), Fixed income securities (Government bonds, corporate debt securities, bank deposits, fixed income plans by mutual funds, post office saving schemes etc.), Capital market instruments (Equity shares, Preference shares, Debentures, Long-term Government as well as corporate securities, Derivatives etc.), Money market instruments (T-bills, Commercial papers, certificate of deposits etc.) and Real Assets (like Real estate, precious metals, antiques etc.).

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- H. C. Mehrotra, and S. P. Goyal, *Income Tax: Tax Planning and Management*, Sahitya Bhawan Publications, 2020.
- V. K. Singhania, and Kapil Singhania, *Direct Taxes: Law and Practice*, Taxmann Publications, 2023.
- G. Ahuja, and R. Gupta, *Practical Approach to Direct and Indirect Taxes: Containing Income Tax and GST*, Wolters Kluwer, 2022.
- V. P. Gaur, and Rajeev Puri, *Income Tax Law and Practice*, Kalyani Publishers, 2021.

I.K.G. Punjab Technical University

MBA 933-18 International Human Resource Management

Course Objective: This course provides an understanding of the role of human resource management (HRM) in international contexts. The course is divided into three areas of study: the context of international HRM, strategic and functional HRM in international contexts, and comparative international contexts.

Course Outcomes: After studying this course, the students should be able to:

CO1: Understand issues, opportunities and challenges pertaining to international HRM.
CO2: Develop competency in dealing with cross cultural situations.
CO3: Understand the strategic and functional roles of HRM in various international contexts, especially in areas such as recruitment and selection, performance management, training, learning and development, career management, compensation, motivation and repatriation;
CO4: Identify the role of cross cultural leadership in managing multicultural teams.
CO5: Understand external forces (e.g. globalisation, sociocultural changes, political and economic changes) that have the potential to shape international HRM.
CO6: Develop generic and transferable skills-especially in diagnosing international HRM issues critically and analytically and discussing specific cases relating to international HRM.

Unit –I

International Human Resource Management: Concept, Difference between Domestic and International HRM, Variables that moderate difference between Domestic and International HRM.
Sustaining International Business Operations: Approaches to Staffing, Transferring Staff for International Business Activities, Role of Expatriates and Non-Expatriates, Role of the Corporate HR function.
Recruiting and Selection Staff for International Assignments: Concepts, Issues in Staff Selection, Factors Moderating Performance, Selection Criteria, Dual Career Couples and Role of Women in International Management.

Unit –II

Re-entry and Career Issues: Concept and Repatriation Process, Individual Reactions to Re-entry, Multinational Responses, Designing a Repatriation Program.

Training and Development: Concept, Role of Expatriate Training, Expatriates or Local Managers, Components of Effective Predeparture Training Programs, Effective of Pre-Departure Training, Developing Staff through International Assignments. Staffing and Training for Global Operations, Global Staffing Choices, Dynamics of Cross-Cultural leadership, managing and motivating multi culture Teams.

Unit –III

Performance Management: Concept, Multinational Performance Management, Performance Management of International Employees, Performance of Appraisal of International Employees.

Compensation: Concept and Objectives of International Compensation, Key Components of an International Compensation Program, Approaches to International Compensation.

Unit –IV

Knowledge Transfer within a Multinational Company: Organizational Knowledge and its Significance, Sources of Organizational Knowledge; Tacit and Explicit Knowledge; HRM and Organizational Knowledge; Transfer of Knowledge between and within organizations, Transfer of Knowledge within MNCs, Transfer of Knowledge across National Borders, Transfer of Managerial Know-how and HRM across National Borders.

Industrial Relations: Key issues in International Industrial Relations, Trade Union and International Industrial Relations, Responses of Trade Unions to Multinationals; Regional Integration: The European Union, Issue of Social Dumping, Impact of Digital Economy. National Context of HRM: HRM Practices in Japan, United Kingdom, United States, India and China.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings: -

- Peter J. Dowling, and Denice E. Welch, *International Human Resource Management*, Thomson Publishers, 2006.
- K. Aswathappa, and Sadhna Dash, *International Human Resource Management*, McGraw Hill, 2024.
- Monir H. Tayeb, *International Human Resource Management: A Multinational Company Perspective*, Oxford University Press, 2005.
- Anne-Wil Harzing, Anne-Wil k. Harzing, and Joris Van Ruysseveldt, *International Human Resource Management*, SAGE Publications, 2003.
- Ian Beardwell, and Len Holden, *HRM: A Contemporary Perspective*, Macmillan, 2003.

I.K.G. Punjab Technical University

MBA 934-18 Strategic Human Resource Management

Course Objective: The aim of this course is to help students to understanding the strategic approach to human resources as distinguished from the traditional functional approach, understanding the relationship of HR strategy with overall corporate strategy, strategic role of specific HR systems and appreciating SHRM in the context of changing form of organizations in the global environment.

Course Outcomes: After studying this course, the students should be able to:

CO1: Understand an integrated approach to the development of HR strategies that enable the organization to achieve its goals.
CO2: Describe the process of strategic HRM.
CO3: Discuss the strategic role of HR systems such as strategic staffing, strategic appraisal, strategic reward system etc.
CO4: Explain various human aspects of strategy implementation.
CO5: Identify the role of leadership in implementing strategic change.
CO6: Understand Global HRM and role of global HRM in successful implementation of MNC strategy

Unit –I

Strategic HRM: Introduction to business and corporate strategies; Integrating HR strategies with business strategies, Analyzing HR Practices followed by different firms-Human Resource System-HR as a Strategic Partner. Strategic HRM: Scope and process of strategic HRM, traditional vs. strategic HR, typology of HR activities, best fit approach vs best practice approach, the role of national context, sectoral context and organizational context in HR strategy and practices, external and internal analysis for strategic HR management.

Unit –II

Strategic role of HR systems - Strategic staffing, strategic appraisal, strategic executive appraisal, strategic design of reward system, performance management strategies, integrating HR strategy and business strategy, HR strategies and practices in Indian industries and service sector, HR as distinctive competitive advantage, reward and compensation strategies, retrenchment strategies, downsizing strategies. Human Resource Environment- Technology, structure; Workforce diversity; Demographic changes, Temporary & contract labour; Recruitment & Retention strategies, training & development strategies.

Unit –III

Human aspects of strategy implementation: behavioural issues in strategic implementation - matching culture with strategy, leadership factor in strategy and implementing strategic change, HR strategy evaluation and control, IT and future directions in HR strategy, HR strategy in workforce diversity, employee engagement strategies, talent management and retention strategies

Unit –IV

Global HRM: Role of global HRM in successful MNC strategy, HR planning for global demand and diversity at workplace, global staffing approaches - polycentric, ethnocentric, geocentric and region centric, recruitment and selection of human resources for global assignments, training and development imperatives for global workforce, expatriate problems and culture shock, repatriation issues, performance and compensation management for global workforce, global employee relations.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Gary F. Dreher, Dougherty, and Thomas W., *Human Resource Strategy*, Tata McGraw Hill, 2005.
- Tanuja Agarwal, *Strategic Human Resource Management*, Oxford University Press, 2007.
- Michael Armstrong, and Angela Baron, *Handbook of Strategic HRM: The Key to Improved Business Performance*, Jaico Publishing House, 2002.
- Brian E. Becker, Mark A. Huselid, and Dave Ulrich, *The HR Scorecard: Linking People, Strategy and Performance*, Harvard Business School Press, 2001.
- Charles R. Greer, *Strategic Human Resource Management: A General Managerial Approach*, Pearson Education Asia, 2001.
- Linda Holbeche, *Aligning Human Resource and Business Strategy*, Butterworth Heinemann, 2009.
- Gerald Salaman, John Storey, and Jon Billsberry, *Strategic Human Resource Management: Theory and Practice*, SAGE Publications Ltd., 2005.

I.K.G. Punjab Technical University
MBA 935-18 Leadership and Team Dynamics

Course Objective: This course is designed to be an interactive exploration of team dynamics and leadership. Through the introduction of current theories and models, students will learn to work effectively in groups, increase their understanding of leadership, make effective decisions, and stimulate the development of new skills through demonstration and practice.

Course Outcomes: After studying this course, the students should be able to:

CO1: Understand the history of leadership and current leadership theories.
CO2: Explain how leadership models are put into practice personally, locally, and globally.
CO3: Discuss the knowledge of developing leadership abilities.
CO3: Describe the concept of Strategic Leadership and ethical leadership.
CO4: Explain composition, formation, and development of teams.
CO6: Illustrate the dynamics of team Performance and motivation and the role of leadership in dynamics of team management and decision making.

Unit –I
Leadership: Meaning, definitions, Skills and Roles of a leader, analysis of leadership theory; Leadership traits and ethics: Personality traits and leadership, Leadership attitudes, ethical leadership, Leadership behavior and motivation, contingency leadership. Understanding the inspiration, dilemmas and issues in becoming a leader.

Unit –II
Leadership theories and styles, charismatic and transformational leadership, team leadership, organizational Leadership, strategic leadership, Leadership for Creating high performance culture, Leadership development through self-awareness and self-discipline, Development through education, experience and mentoring, Succession, Evaluation of leadership development efforts, leadership communication.

Unit –III
Strategic leadership, ethical leadership, the leader as social architect-creating vision and strategic direction, shaping culture and values, designing and leading a learning organisation, leading change, spiritual foundations of personal effectiveness, the habits of highly effective people.

Unit –IV
Team composition, formation, and development-Team Performance and Motivation-Team Conflict and Leadership-Team Decision Making, Discovering the interpersonal orientation through FIRO-B, Experiential learning methodologies-T- group sensitivity training, encounter groups, appreciative enquiry, Discovering facets of interpersonal trust through Johari window, communication skills, Negotiation skills and strategies for team building, team morale, conflict resolution in teams, competitive vs collaborative behavior, developing collaboration.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings: -

1. Richard L. Hughes, Robert C. Ginnett, and Gordon J. Curphy, *Leadership*, McGraw Hill, 2018.
2. Bernard M. Bass, *Leadership, Psychology and Organizational Behaviour*, Greenwood Publishing Group, 1973.
3. Peter G. Northouse, *Leadership: Theory and Practice*, SAGE Publications, 2018.
4. S. Purohit, and S. Nayak, *Enhancing Personal Effectiveness: Training Instruments for Students, Teachers and Parents*, Tata McGraw Hill, 2003.
5. Robert Tannenbaum, Irving R. Weschler, and Fred Massarik, *Leadership and Organization: A Behavioral Science Approach*, McGraw Hill, 2015.

I.K.G. Punjab Technical University

MBA 936-18 Performance and Compensation Management

Course Objective: The objective of the course is to impart relevant knowledge required to perform the functions of human resource planning in an organisation and equipping seekers with comprehensive and practical skills to manage employees' performance effectively, and to understand the structure and components of wages and salaries, and the wage administration in India

Course Outcomes: After completing the course, the student shall be able to:

CO1: Increase the awareness of the process and principles of performance Management / appraisal.
CO2: Identify the negative aspects of appraisal systems and consider how these might be overcome.
CO3: Discuss performance with regard to pay awards, and whether these should, or should not be automatically related to each other.
CO4: Demonstrate a familiarity with the appeal process relating specifically to the performance review.
CO5: Illustrate different ways to strengthen the pay-for-performance link and also learn the concepts of Payment and employee benefits issues for contingent workers.
CO6: Develop appropriate reward and compensation policies.

Unit –I
Performance Management - Performance management system, performance counseling, performance planning, performance appraisal, potential appraisal, problems and errors in performance appraisal. Performance monitoring, performance implementation, role of HR professionals in performance management, performance management through training and development, ethics in performance management.

Unit –II
Reviewing & Managing Performance–Performance Management and strategic planning, Alternative models for Assessing Performance-Balance score card; EFQM Model; Outcome metrics–Economic Value Added (EVA); other economic measures. Building a High-Performance Culture-Performance Management & Employee Development, Performance Management and Rewards-Ethics in Performance Management.

Unit –III
Compensation and Benefits Management: Job evaluation approach to compensation management- Bonuses- concept & methods of calculation-Pay for performance, competency-based pay, equity based rewards, team rewards-Reward strategy & psychological contract–Law relating to compensation-Executive compensation, Benefits administration, employee welfare and working conditions-statutory and voluntary measures.

Unit –IV
Executive compensation - Components, pay structure in India, linking salary with potential and performance, types of rewards and incentives, wage incentive schemes in India, wage incentive plans, employee benefits and services, special features of fringe benefits, benefit programmes for management and other employees, administration of

benefits and services, recent trends in wages and salaries in Indian industries and service sector.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings: -

- George T. Milkovich, and Jerry M. Newman, *Compensation*, McGraw Hill, 2020.
- D. Goel, *Performance Appraisal and Compensation Management: A Modern Approach*, Prentice Hall of India, 2012.
- Richard I. Henderson, *Compensation Management in a Knowledge Based World*, Prentice Hall, 2006.
- Richard I. Henderson, *Compensation Management: Rewarding Performance in the Modern Organization*, Reston Publishing Company, 1989.
- S. R. Kandula, *Performance Management: Strategies, Interventions, Drivers*, Prentice Hall of India, 2006.
- Douglas R. Marshall, *Successful Techniques for Solving Employee Compensation Problems*, John Wiley and Sons, 1978.
- Thomas H. Patten, *Pay: Employee Compensation and Incentive Plans*, McGraw Hill, 1977.
- Milton L. Rock, and Lance A. Berger, *Compensation Handbook: A State of the Art Guide to Compensation Strategy and Design*, McGraw Hill, 2015.

I.K.G. Punjab Technical University

MBA 943-18 Managing Software Projects

Course Objective: The objective of this paper is to acquaint the students with major issues and techniques of Managing Software Projects. Understanding approaches for managing and optimizing the software development process and choosing an appropriate project development methodology (e.g. waterfall, spiral, agile etc.). Applying efficient techniques for managing each phase of the systems development lifecycle

Course Outcomes: Upon completion of this course, students will be able to:

CO1: Understanding approaches for managing and optimizing the software development process

CO2: Examine contemporary software life cycle processes, activities and work products

CO3: Apply different methods to identify, analyze, and manage software project risks

CO4: Estimate software project effort, cost, and schedule for an intermediate size project

CO5: To make aware about the various software project teams in terms of roles and responsibilities and managers can plan their projects and minutely work out the cost and time overrun of projects.

Unit I

Software Development Process : Introduction to Software and Software Engineering; The Evolving Role of Software, Software: A Crisis on the Horizon and Software Myths, Software Engineering: A Layered Technology, Software Process Models, Water Fall Life Cycle Model, The Prototyping Model, The RAD Model, Evolutionary Process Models, Agile Process Model & Development, Component-Based Development, Product and Process. Choosing an appropriate Project Development Methodology.

Unit II

Managing Software Projects : Software Metrics (Process, Product and Project Metrics), Software Project Estimations, Software Project Planning, Project Scheduling & Tracking, Risk Analysis & Management (Risk Identification, Risk Projection, Risk Refinement and Risk Mitigation). Software Process Improvement and Project Management: Project planning infrastructure, process planning feasibility analysis cost and efforts estimation, models and technique.

Unit III

Software Quality Assurance and Management : Quality Concepts and Software Quality Assurance, Software Reviews (Formal Technical Reviews), Software Reliability, The Quality Standards: ISO 9000, CMM, Six Sigma for SE, SQA Plan, SCM activities and Project Management Plan.

Unit IV

Project management for special classes of software project : Component-Based Software Engineering, Client/Server Software Engineering, Web Engineering, Reengineering, Computer-Aided Software Engineering (CASE), Software Process Improvement, Outsourcing and Software Project Management Standards

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Pankaj Jalote, *Software Project Management in Practice*, Pearson Education, 2002.
- Andrew Stellman, and Jennifer Greene, *Applied Software Project Management*, O'Reilly Media, 2005.
- Bob Hughes, and Mike Cotterell, *Software Project Management*, Tata McGraw Hill, 2009.
- Pankaj Jalote, *CMM in Practice: Processes for Executing Software Projects at Infosys*, Pearson Education, 1999.
- Pankaj Jalote, *An Integrated Approach to Software Engineering*, Narosa Publishing House, 2005.
- Roger S. Pressman, and Bruce R. Maxim, *Software Engineering: A Practitioner's Approach*, McGraw Hill, 2023.
- Ian Somerville, *Software Engineering*, Pearson Education, 2010.

I.K.G. Punjab Technical University

MBA 944-18 Managing Digital Innovation and Transformation

Course Objective: The objective of this paper is to acquaint the students with introduction to digital transformations and innovation and build Digital Capabilities.

Course Outcomes: Upon completion of this course, students will be able to:

CO1 : Identify how Digital Transformation impacts corporate strategies
CO2 : Understand Security Issues in Digital Transformations
CO3 : Understand the risk associated with evolving international clients and environment
CO4 : To learn Security Issues, Methods & Laws
CO5 : Understanding cloud computing

Unit I
Digital transformation & Capabilities: Digital transformation myths and realities. Various Types of digital transformations: Legacy transformation, strategic transformation, cloud first transformation, digital enterprise natives, and disruption embracers. Digitization and essential elements. Digital Disruption, Important causes of digital disruption and transformation. Digital Capabilities and Challenges going to digital transformation, Social media transformation and its benefits & threats. Types of social media and its impact on the business. Role of Digital media in the enhancement of business development skills.

Unit II
Security Issues in Digital Transformations: Security Overview, Digital Threats, Fundamentals of Encryption & Cryptography, Securing E-commerce Networks: Security Protocols such as HTTP, SSL, Firewalls, Personal Firewalls, IDS, VPNs, Public Key Infrastructure (PKI) for Security

Unit III
Security Issues, Methods & Laws: Digital Signature: Digital signature Certificate; Certifying Authorities and liabilities in the event of Digital Signature Compromise; E-Governance in India. Introduction To Information Technology Act, 2000: Object; Scope; Scheme of the Act; Relevancy With Other Laws.

Unit IV
Digital Transformation Framework: Understanding cloud architecture, cloud computing vs peer- to peer architecture, cloud computing vs grid computing, cloud computing vs client server architecture, broad approaches to migrating into the cloud, seven step model of migration into a cloud, components of cloud computing, cloud types- private, public and hybrid; Models of Cloud Computing. Mobile cloud & Understanding cloud security

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Neil Perkin, and Peter Abraham, *Building the Agile Business through Digital Transformation*, Kogan Page, 2021.
- Sundeep Oberoi, *e Security and You*, Tata McGraw Hill, 2001.
- A. Kannammal, *Fundamentals of Cloud Computing*, Cengage Learning, 2015.

- Phil Carpenter, *e Brands: Building an Internet Business at Breakneck Speed*, Harvard Business School Press, 2000.
- Kailash Jayaswal, Jagannath Kallakurchi, Donald J. Houde, Deven Shah, *Cloud Computing Black Book*, Wiley India, 2014.

I.K.G. Punjab Technical University
MBA 945-18 IT Consulting

Course Objective: The objective of this paper is to acquaint the students with role of IT Consulting in Business Processes. It shall enable them to understand Consulting Life Cycle, Consulting Projects, Service Level Agreements (SLA) and Ethics in Consulting.

Course Outcomes: Upon completion of this course, students will be able to understand:

CO1: To analyze the IT requirements of the organization and the underlying environment.
CO2: To advise IT solutions and services based on requirements.
CO3: To understand RFP Analysis.
CO4: To provide an understanding about SLA.
CO5: To familiar with ethics in consulting.

Unit I: Principles of Consultancy
Overview and principles of consultancy, role & competencies of the consultants; Consultancy models; Technology Management; Technology Life Cycles.

Unit II: Life Cycle of Consultancy Assignment
The Life Cycle of a consultancy Assignment : Gaining entry, Contracting and assignment initiation, Identification of problems and business needs, Diagnosis and solution definition, Solution appraisal and evaluation, Implementation and taking action. Life Cycle Assessment (LCA): Evolution, Stages in product LCA. Code of good conduct for LCA.

Unit III: Request For Proposal
Request For Proposal (RFP)**:** Introduction, Scope of Work, Proposal Requirements, Process for Proposal Preparation and Submission, Proposal Review/Evaluation/Selection, Rules, Optional/Possible Appendices.
Service Level Agreements (SLA) : Introduction, Importance, Preparation, Components of SLA. SLA Monitoring and Verification. SLA metrics, Periodic review,

Unit IV
Principles for Ethical Consulting, Different approaches to Ethic, Codes of Ethics, Consultant's Unethical and Avoiding Behaviors. Business Ethics, International business ethics, Ethics and Self-Interest, Responsibility and Accountability

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- V. K. Narayanan, *Managing Technology and Innovation for Competitive Advantage*, Pearson Education, 2002.
- Peter F. Drucker, *The Frontiers of Management*, Harper and Row, 2010
- David H. Maister, Charles H. Green, and Robert M. Galford, *The Trusted Advisor*, Free Press, 2000.

I.K.G. Punjab Technical University
MBA 946-18 Strategic Management of IT

Course Objective: The objective of this paper is to acquaint the students with the value of IT in strategic management and its processes. This course is designed to explore an organization's vision, mission, examine principles, techniques and models of organizational and environmental analysis, discuss the theory and practice of strategy formulation and implementation such as corporate governance and business ethics for the development of effective strategic leadership through the use of IT.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: To develop an understanding of strategic management concepts and techniques and acquire the ability to apply the same in business situations
CO2: Learning how to use IT as a tool to implement business strategies and gain competitive advantage, not merely to support business operations.
CO3: In addition to familiarizing students with new technological changes in management, students are expected to integrate and apply their prior learning to strategic decision making in organisations
CO4: Integrate and apply knowledge gained in basic courses to the formulation and implementation of strategy from holistic and multi-functional perspectives.
CO5: Analyze and evaluate critically real life company situations and develop creative solutions, using a strategic management perspective.

Unit I
Strategic Management: Role of IT and IS in Business. Introduction to Executive Support System (ESS) Importance of Decision-Making Systems in the Business Organization Structure. Planning for IT support. Types of Strategic Management Planning: The Ad Doc Approach, The Data Collection Approach, The Organization Chart Approach, The Top-down Approach and The Bottom-up Approach; Comparison of Top-Down and Bottom-up approach. Process for Strategic Management Approaches and Planning for Strategic IT Applications. Selecting the best approach and the factors playing pivotal roles in it.

Unit II
Strategic Management as Competitive Advantage: Introduction to Value Chain and Porter's Value Chain (Value Chain Model); Understanding the concept of Value chain Analysis and the Competitive Advantage of it to the business/organization. Value Chain Analysis and its advantages. Understanding Linkages and Interrelationships: Approach to IS/IT Strategy Formulation.

Unit III
Turning technology into business transformation. IT as a strategic source. IT as competitive: strategy, advantage and resource. Risks of Using IT Strategically; Inter-organizational systems (IOS): Advantages and opportunities in strategic IT Applications. IOS and Competitive Advantage; Strategic Grid: Organizational movements around the Strategic Grid.

Unit IV
Fundamental characteristics of industrial dynamics of strategic management and IT. Visioning of the strategic role of IT in the organization. Diversification of strategies:

Digital transformation, success factors and implications. Factors for organizations shifting to digital and AI transformations.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- S. A. Kelkar, *Strategic IT Management: A Concise Study*, PHI Learning, 2010.
- Sanjiva Shankar Dubey, *IT Strategy and Management*, PHI Learning, 2019.
- J. David Hunger, and Thomas L. Wheelen, *Essentials of Strategic Management*, Prentice Hall, 1996.
- L. M. Prasad, *Strategic Management*, Sultan Chand and Sons, 2024.
- Wolfgang W. Osterhage, *IT Quality Management*, Springer, 2016.
- David L. Rogers, *The Digital Transformation Playbook*, Columbia Business School Publishing, 2016.

I.K.G. Punjab Technical University
MBA 953-18 Supply Chain & Logistic Management

Course Objective: To make students understand about the growing recognition that the twin goals of cost reduction and service enhancement can be achieved through logistics and supply chain management.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: Demonstrate a clear understanding of the key concepts applied in logistics and supply chain management.
CO2: To highlight the importance of all activities of the supply chain and an understanding of concepts like inbound and outbound logistics, offshore and inshore logistics.
CO3: To develop skills for planning, designing the operational facilities of supply chain with the analytical and critical understanding

UNIT-I
Building A Strategic Frame Work to Analyse Supply Chains: Supply chain stages and decision phases process view of a supply chain. Supply chain flows. Examples of supply chains. Competitive and supply chain strategies. Expanding strategic scope. Drivers of supply chain performance. Framework for structuring drivers – Inventory, Transportation, Facilities, Information. Obstacles to achieving fit. Case discussions.

UNIT-II
Designing The Supply Chain Network: Distribution Networking – Role, Design. Supply Chain Network (SCN) – Role, Factors, Framework for Design Decisions. **Facility Location and Network Design**: Models for facility location and capacity allocation. Impact of uncertainty on SCN – discounted cash flow analysis, evaluating network designed cisions using decision using decision trees. Analytical problems.

UNIT-III
Planning and Managing Inventories in A Supply Chain: Review of inventory concepts. Trade promotions, Managing multi-echelon cycle inventory, safety inventory determination. Impact of supply uncertainty aggregation and replenishment policies on safety inventory. Optimum level of product availability; importance factors. Managerial levers to improve supply chain profitability. Sourcing, **Transportation and Pricing Products**: Role of sourcing, supplier – scoring & assessment, selection and contracts. Design collaboration. Role of transportation, Factors affecting transportation decisions. Modes of transportation and their performance characteristics.

UNIT-IV
Coordination and Technology In The Supply Chain: The role of IT supply Chain, The Supply Chain IT framework, E-CRM, Internal SCM, SRM. The role of E-business in a supply chain, The E-business framework, E-business in practice. Case discussion. **Emerging Concepts**: Reverse Logistics; Reasons, Activities, Role. RFID Systems, Bar Codes, QR Codes;**I.K.G. Punjab Technical University MBA Batch 2021 onwards**

Components, applications, implementation. Lean supply chains, Implementation of Six Sigma in Supply Chains. Emerging concepts: Role of Block chain in supply chain.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Sunil Chopra, and Peter Meindl, *Supply Chain Management: Strategy, Planning and Operation*, Pearson Education, 2001.
- Robert B. Handfield, and Ernest L. Nichols Jr., *Supply Chain Redesign: Transforming Supply Chains into Integrated Value Systems*, Pearson Education, 2002.
- Jeremy F. Shapiro, *Modeling the Supply Chain*, Thomson Learning, 2002.
- David Simchi Levi, Philip Kaminsky, and Edith Simchi Levi, *Designing and Managing the Supply Chain*, McGraw Hill, 2000.
- Dale S. Rogers, and Ronald S. Tibben Lembke, *Going Backwards: Reverse Logistics Trends and Practices*, Center for Logistics Management, 1999.

I.K.G. Punjab Technical University
MBA 954-18 Quality Toolkit for Managers

Course Objective: The course aims at giving an insight to students about a well-designed quality management system, that will help in identification of problems and help improve output quality to better meet the changing market scenario.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: Evaluate the principles of quality management and to explain how these principles can be applied within quality management systems.
CO2: To provide students with the requisite knowledge of concepts and to impart practical skills and techniques required in the area of strategies for managing technology in business
CO3: Critically appraise the organizational, communication and teamwork requirements for effective quality management
CO4: Critically analyze the strategic issues in quality management, including current issues and developments, and to devise and evaluate quality implementation plans

UNIT-I
Introduction: Definition and Need of quality, Aspects of quality, Quality characteristic, Quality specification, Quality function, Economics of quality. **Inspection:** Its objectives and types, Inspection versus Quality Control, **Statistical Quality Control:** its Tools, Advantages, limitations and Applications.

UNIT-II
Control Charts: Concept of variability, Assignable and chance causes, Concept of specifications and tolerances, Definition and objectives of control charts, Control charts for variables and attributes and related problems, Variable charts vs attribute charts, Patterns on control charts, Type–I & Type-II Errors, Process capability and its methods of determination.

UNIT-III
Acceptance Sampling: Definition, Advantages over 100% inspection, Methods of taking samples, Operating characteristics curve & its characteristics. Single, Double and Multiple, Sequential Sampling Plan & Related problems. **Quality Assurance**: Need, Principles, Essentials and Advantages of Quality Assurance System, Quality Manual, Field complaints, Quality Audit & its types, Quality Assurance Methods, Quality Control vs. Quality Assurance.

UNIT-IV
Quality Systems: Description of ISO: 9000 series of standards, ISO: 9001–2000 Systems, ISO: 14000 Systems, Description of TQM, Concept of Quality Circles, JIT System, Taguchi's Concept of Quality, **Zero Defect Concept:** 6s Concept and 5S, Emerging concepts in Quality control.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- M. Mahajan, *Statistical Quality Control*, Dhanpat Rai and Company, 2010.
- Amitava Mitra, *Fundamentals of Quality Control and Improvement*, Pearson Education, 2016.

- Eugene L. Grant, and Richard S. Leavenworth, *Statistical Quality Control*, McGraw Hill, 1988.
- Armand V. Feigenbaum, *Total Quality Control*, McGraw Hill, 1991.
- Douglas C. Montgomery, *Introduction to Statistical Quality Control*, John Wiley and Sons, 2012.
- Stephen B. Vardeman, and J. Marcus Jobe, *Statistical Quality Assurance Methods for Engineers*, John Wiley and Sons, 1999.
- James R. Taylor, *Quality Control Systems*, McGraw Hill Education, 1989.

I.K.G. Punjab Technical University
MBA 955-26 Production Planning and Control

Course Outcomes: The primary objective of this course is to provide students with a comprehensive, in-depth understanding of the concept and functions of production planning and control. It aims to develop foundational knowledge in forecasting demand, planning capacity, process planning, managing shop floor activities, and integrating modern manufacturing frameworks like ERP and MRP.

Course Outcomes (COs): After completion of this course, the students shall be able to:

CO1: Understand the core functions of PPC and types of production systems in detail.
CO2: Apply qualitative and quantitative forecasting techniques to estimate future demand and plan the processes and capacity.
CO3: Understand and develop optimized industrial routing, machine loading, and scheduling sequences using mathematical dispatching rules and Gantt charts.
CO4: Implement the latest inventory control models, and configure Material Requirements Planning (MRP) systems to minimize operational costs.

UNIT-I
Introduction: Definitions – objectives of production planning and control, functions of production planning and control short range and long range planning, types of production, **Production Systems:** Characteristics of Job shop, Batch, Mass (Flow), and Continuous production systems. Concept of Aggregate Production Planning and the Master Production Scheduling(MPS).
Forecasting: Importance and types, principles of forecasting, forecasting techniques/methods- Qualitative and Quantitative methods, forecast error

Unit II
Process Planning: Product design analysis, material selection, steps in process sheet preparation, and line balancing techniques. **Facility Location and Layout**: Advanced methods of plant location- : Dimensional Analysis. Brown and Gibson's Method, Multi Plant Locational Analysis, factors affecting location, **types of layout** (Product, Process, Cellular, Fixed-position), **Capacity Planning**: Rough-cut capacity planning (RCCP) and Capacity Requirements Planning (CRP)
Work study-Concept and functions- **Method study**- basic procedure and steps– Micro motion and memo motion study **Work measurement** – Concept and Techniques– Time study – Production study –Work sampling – Synthesis from standard data – Predetermined motion time standards (PMTS)

UNIT-III
Routing – Definition – routing procedure- Route sheets – Bill of material, factors affecting routing procedure. Schedule – definition – difference with loading. Scheduling polices, techniques, standard scheduling methods- job shop, flow shop, **Dispatching**: Dispatching procedures, progress reporting, expediting (follow-up), types of follow up, and correcting schedule deviations. **Follow up** – definition – reasons for existence of functions – types of follow up

UNIT IV

Inventory management – Functions inventory- Relevant inventory cost- ABC analysis- VED Analysis- EOQ model – Inventory control systems – P- Systems and Q – Systems. Introduction to MRP and ERP, LOB (Line of balance), JIT inventory, Kanban and Lean manufacturing.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Stephen N. Chapman, *Fundamentals of Production Planning and Control*, Pearson, 2006.
- Samuel Eilon, *Elements of Production Planning and Control*, Macmillan, 1962.
- M. Mahajan, *Production Planning and Control*, Dhanpat Rai and Company, 2023.
- S. K. Mukhopadhyay, *Production Planning and Control: Text and Cases*, PHI Learning, 2015.
- Elwood S. Buffa, and Rakesh K. Sarin, *Modern Production and Operations Management*, John Wiley and Sons, 1987.
- R. Panneerselvam, *Production and Operations Management*, PHI Learning, 2006.
- S. N. Chary, *Theory and Problems in Production and Operations Management*, McGraw Hill, 2019.

I.K.G. Punjab Technical University
MBA 956-26 Inventory Management

Course Objective: The primary objective of this course is to provide students with a comprehensive, systematic understanding of the concepts and operational practices of managing inventories. It aims at familiarising students with different inventory control levels, models and techniques for effective stock management in modern business organisations.

Course Outcomes (COs) After completion of this course, the students shall be able to:

CO1: Describe the fundamental concept of inventory and its importance and understand its types and cost associated with inventory.
CO2: Understand and Apply different inventory control levels and models like Economic Order Quantity (EOQ) to solve business stock issues.
CO3: Analyze diverse inventories through selective control tools such as ABC, VED, and FSN classification systems.
CO4: Evaluate and apply advanced emerging tools like Just-In-Time (JIT) methods, lean systems and latest inventory tracking software.

Unit I
Inventory- Concept, objective and functions of inventory, Classification/Types of inventories (Raw materials, Work-in-Process, Finished goods, MRO spares). and their importance, Identification of Stores, Codification and Specification. Factors Affecting Inventory
Various Inventory Costs, Types of Control System, Nature of Lead Time and Requirement of Material Requirement Planning and Demand Forecasting

Unit II
Inventory Control Levels, Order Point, Re-order Level, Maximum and Minimum Level, Standard Order Quantity, Safety Stocks.
Inventory control models- Deterministic Models: static and dynamic, EOQ concept, Determinations of EOQ under various conditions of demand, lead time analysis.
Probabilistic Models: Continuous Review (Fixed Order Quantity/Q-System), Periodic Review (Fixed time period /P-System)

Unit III
Selective Control Techniques: Execution and application of ABC (Always Better Control), VED (Vital, Essential, Desirable), and FSN (Fast, Slow, Non-moving) Pareto analysis. Feedback inventory information system.
Inventory accounting methodologies (FIFO, LIFO, Weighted Average pricing) and material issuance procedures.

Unit IV
Warehouse & Stores Management: Responsibility of Receiving & Stores. Receiving Procedures and Control. Bar Coding. External and External Identification Systems.
Emerging Inventory Systems-Lean Frameworks: Just-In-Time (JIT) philosophy, Kanban systems, **Audits & Verification:** Physical inventory counting methods, perpetual inventory systems, cycle counting, and variance analysis.
Technology & Reclamation: Application of ERP, RFID, and automated tracking software

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- D. C. Bose, *Inventory Management*, Prentice Hall of India, 2006.
- P. Kumar, *Inventory Management*, PHI Learning, 2025.
- A. K. Chitale, and R. C. Gupta, *Materials Management: Text and Cases*, PHI Learning, 2013.
- P. Gopalakrishnan, and M. Sundaresan, *Inventory Management: Text and Cases*, Macmillan, 1977.
- R. J. Tersine, *Principles of Inventory and Materials Management*, Prentice Hall, 1994.
- J. F. Magee, *Production Planning and Inventory Control*, McGraw Hill, 1958.
- Elwood S. Buffa, and William H. Taubert, *Production Inventory Systems: Planning and Control*, Richard D. Irwin, 1968

I.K.G. Punjab Technical University
MBA 963-26 Analytics for Competitive Advantage

Course Objective: This course aims to provide a comprehensive understanding of business analytics and its role in creating competitive advantage. It focuses on developing the ability to formulate data-driven strategies and apply analytical techniques for effective decision-making. The course also emphasizes data management, visualization, and organizational aspects of analytics implementation. Additionally, it builds awareness of ethical, governance, and emerging trends in analytics.

Course Outcomes: After completing this course, students shall be able to:

CO1 Gain basic understanding of the underlying concepts and building blocks related to business analytics and how to derive competitive advantage for organizations in various industries/ domains leveraging business analytics (including banking, retail, HR, etc.).
CO2 Gain good understanding of identifying strategic data needs, developing data and business analytics strategy, understanding different types of data including big data, how to leverage data for making better business decisions, how to effectively communicate insights from data; Creating data competencies and data infrastructure; Ensuring data governance.
CO3 Gain understanding of the practical aspects via case studies.

Unit I
Introduction to Business Analytics: Concept, evolution, scope and role of business analytics in organizations. **Data-Driven World and Big Data:** Meaning, characteristics and growth of big data, role of Internet of Things (IoT), data as a strategic asset. **Analytics and Competitive Advantage:** Role of analytics in transforming businesses and creating competitive advantage. **Business Analytics Models and Use Cases:** Overview and deployment of analytics models, industry applications in banking, retail, HR, etc. **Customer Analytics:** Understanding customer data, 360-degree customer view and personalization. **Data-Driven Decision Making:** Framing business problems, evidence-based management and improving operational efficiency through analytics.

Unit II
Business Analytics Strategy: Linking analytics with business strategy, identifying and prioritizing use cases, developing analytics strategy. **Value of Business Analytics:** Tangible and intangible benefits, development and evaluation of business cases. **Organizational Challenges and Process Integration:** Challenges in implementing analytics, business process optimization, role of KPIs across functions. **Building Data Competencies:** Skills required for analytics professionals, team structures, analytics competency centers, organizational culture. **Communication of Analytics Insights:** Communicating value, stakeholder engagement, and change management strategies.

Unit III
Data Sourcing and Management: Types and sources of data, data collection, storage and access, internal and external data. **Big Data Infrastructure:** Data warehousing, cloud computing and handling structured and unstructured data. **Data Analysis and Processing:** Data, information and knowledge, data quality, bias and interpretation. **Analytics Techniques:** Descriptive, predictive and prescriptive analytics, data mining and exploratory analysis. **Advanced Analytics:** Text, speech and image analytics, machine learning, artificial intelligence, and cognitive computing. **Data Visualization and Storytelling:** Dashboards, infographics and effective communication of insights through visualization.

Unit IV

Execution of Analytics Initiatives: Developing execution plans, resource allocation; delivering analytics projects. **Performance Measurement:** Measurement frameworks, metrics for evaluating analytics outcomes. **Data Governance and Ethics:** Data privacy, security, legal issues and ethical challenges in analytics and AI. **Risk Management:** Cybersecurity, data ownership and managing data-related risks. **Data-Driven Culture:** Building and sustaining analytics culture, aligning analytics with business goals. **Future Trends in Analytics:** Emerging trends in AI and big data, innovation opportunities; continuous improvement and evolving data strategies.

Note: Relevant case studies related to the topics should be discussed.

Suggested readings:

- Frank J. Ohlhorst, *Big Data Analytics: Turning Big Data into Big Money*, Wiley, 2013.
- Evan Stubbs, *The Value of Business Analytics: Identifying the Path to Profitability*, Wiley, 2011.
- Bernard Marr, *Data Strategy: How to Profit from a World of Big Data, Analytics and the Internet of Things*, Kogan Page, 2017.
- Gert H. N. Laursen, and Jesper Thorlund, *Business Analytics for Managers: Taking Business Intelligence Beyond Reporting*, Wiley, 2013.
- Bernard Marr, *Big Data: Using Smart Big Data, Analytics and Metrics to Make Better Decisions and Improve Performance*, Wiley, 2015.
- Bernard Marr, *Big Data in Practice: How 45 Successful Companies Used Big Data Analytics to Deliver Extraordinary Results*, Wiley, 2016.

I.K.G. Punjab Technical University

MBA 964-18 Business Forecasting

Course Objective: The objective of this paper is to acquaint the students with Forecasting Process, Exploratory Data and Regression Analysis. Students should learn Time Series Forecasting Models.

Course Outcomes: Upon completion of this course, students will be able to:

CO1: Understand the importance of forecasting in making accurate decisions in economic and business environments
CO2: Understand the basics in regression analysis, time series analysis and their applications in forecasting
CO3: Understand how to handle the trend, seasonal and cyclical issues in forecasting analysis.
CO4: Construct forecasting reports to higher level management for vital decision-making process.
CO5: Use the software packages for developing forecasting models.
CO6: Be prepared for more advanced study of economic and business forecasting

Unit I
Introduction to Forecasting & Demand Analysis: An Overview; Significance of Demand Analysis and Forecasting, Determinants of Demand, Elasticity of Demand, Revenue and Profit of a Firm Estimation of Demand, Forecasting Demand, Selecting a Forecasting Technique, Purpose of Forecast, Type of Users

Unit II
Marketing Research Techniques, Consumer Surveys, Consumer Clinics and Focus Groups Market Experiments in Test Stores, Statistical Estimations, Variable Identification, Time Series and Cross-Sectional Data Collection, Specification of the Model, Estimation of the Parameters, Interpretation of Regression Statistics, Time Series Regression; Forecasting with Regression Model: Unconditional Forecasting, Forecasting with Serially Correlated Errors, Conditional Forecasting

Unit III
Time Series Analysis, Smoothing and Extrapolation of Time Series, Simple Extrapolation Models, Smoothing and Seasonal Adjustment; Properties of Stochastic Time Series: Characterizing Time Series: The Autocorrelation Function, Stationarity, Random Walk, Co- integrated Time Series; Linear Time Series: Moving Average Models, Autoregressive Models, Mixed Autoregressive and Moving Average Models, Homogeneous Non-Stationary Processes: ARIMA Models, Box- Jenkins Methodology, Specification of ARIMA Models, SARIMA, ARMAX Model
Forecasting with Time Series Models: Computing a Forecast, The Forecast Error, Properties of ARIMA Forecasts, Causality, Exogeneity, VAR, Impulse Response Functions, Volatility Measurement, Modeling and Forecasting: The ARCH Process, The GARCH Process

Unit IV
Qualitative Forecasting Techniques, Survey and Opinion Polling Techniques, Exponential Smoothing and Other Advanced Techniques, Barometric Techniques, Leading, Lagging and Coincident Economic Indicators, Diffusion and Composite

Indexes, Accuracy of Forecast, Short Run Forecast, Long Term Forecast, Use of Software Packages for Forecasting.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Francis X. Diebold, *Elements of Forecasting*, South Western Cengage Learning, 2007.
- J. Holton Wilson, Barry Keating, *Business Forecasting with ForecastX™*, McGraw Hill, 2007.
- Michael K. Evans, *Practical Business Forecasting*, Blackwell Publishing, 2003.
- George E. P. Box, Gwilym M. Jenkins, Gregory C. Reinsel, *Time Series Analysis: Forecasting and Control*, Pearson Education, 2009.
- John E. Hanke, Dean W. Wichern, *Business Forecasting*, Pearson Prentice Hall, 2005.
- Spyros Makridakis, Steven C. Wheelwright, Rob J. Hyndman, *Forecasting: Methods and Applications*, John Wiley and Sons, 1998.

I.K.G. Punjab Technical University
MBA 965-26 Financial Analytics

Course Objective: This course aims to develop an understanding of analytical techniques used in financial decision-making. It focuses on financial data analysis, risk modeling, predictive techniques, and portfolio optimization. The course also emphasizes the application of analytics tools for interpreting financial data and supporting strategic investment decisions.

Course Outcomes: After completing this course, students shall be able to:

CO1: Analyze and preprocess financial data using appropriate statistical and exploratory techniques.
CO2: Apply risk analytics methods such as volatility modeling and Value at Risk for financial decision-making.
CO3: Develop predictive models for credit risk, fraud detection, and financial forecasting.
CO4: Evaluate and optimize portfolios using modern portfolio theory and effectively communicate financial insights.

Unit I
Introduction to Financial Analytics: Role of analytics in finance, evolution of data-driven finance, types of financial data (market, fundamental, and alternative data).
Financial Data Wrangling and Cleaning: Handling missing values, outliers, invalid entries, and formatting time series data; data preprocessing techniques in financial datasets. **Exploratory Data Analysis (EDA):** Univariate and multivariate analysis, time series exploration, and visual diagnostics for financial data.
Time Series Basics: Components of time series, decomposition, stationarity, ACF and PACF, and introduction to ARMA/ARIMA models and smoothing techniques.

Unit II
Volatility Modeling: Measurement of financial volatility using ARCH/GARCH models, volatility clustering, and rolling standard deviation.
Statistical Distributions and Risk Measurement: Normal, log-normal, and t-distributions; Value at Risk (VaR) estimation, confidence intervals, and tail risk analysis.
Hypothesis Testing in Finance: Testing mean returns, comparing portfolio and fund performance, interpretation of p-values and t-tests in investment decisions.
Monte Carlo Simulation: Simulation of asset price paths and applications in risk analysis and option pricing.

Unit III
Regression Models in Finance: Linear regression, factor models, interpretation of coefficients, and forecasting financial variables such as returns and cash flows.
Credit Risk Analytics: Logistic regression for credit scoring, evaluation using ROC curves and confusion matrix.
Fraud Detection and Anomaly Detection: Application of Benford's Law, identification of financial fraud, and anomaly detection techniques.
Clustering in Finance: K-means clustering for customer segmentation, portfolio behavior analysis, and pattern recognition.

Unit IV
Portfolio Analytics: Measurement of portfolio returns, risk (standard deviation), and performance metrics such as Sharpe ratio and benchmarking.

Portfolio Optimization: Markowitz mean-variance framework, efficient frontier, risk-return trade-off, and introduction to optimization techniques.

Stress Testing and Backtesting: Use of historical data for stress testing, scenario analysis, and evaluation of investment strategies.

Visualization and Reporting: Designing dashboards, visualization of financial metrics, trend analysis, and communication of insights for decision-making.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Ruey S. Tsay, *Analysis of Financial Time Series*, Wiley, 2010.
- P. Mohanty, *Financial Analytics*, McGraw Hill Education, 2023.
- Gareth James, and Daniela Witten, Trevor Hastie, Robert Tibshirani, *An Introduction to Statistical Learning*, Springer, 2022.
- Michael J. Bennett, and Dirk L. Hugen, *Financial Analytics with R: Building a Laptop Laboratory for Data Science*, Cambridge University Press, 2016.
- Frank J. Fabozzi, Sergio M. Focardi, Svetlozar T. Rachev, and Bala G. Arshanapalli, *The Basics of Financial Econometrics: Tools, Concepts, and Asset Management Applications*, Wiley, 2014.
- John C. Hull, *Options, Futures, and Other Derivatives*, Pearson, 2018.
- Wes McKinney, *Python for Data Analysis*, O'Reilly Media, 2017.
- Foster Provost, and Tom Fawcett, *Data Science for Business*, O'Reilly Media, 2013.

I.K.G. Punjab Technical University
MBA 966-26 HR Analytics

Course Objective: The course aims to develop an understanding of how data and analytics can be used to improve HR decision-making. It aims to introduce key HR metrics, analytical tools and techniques used in workforce analysis, hence enabling students to link HR practices with organizational performance using evidence-based approaches. The course will promote analytical thinking in solving real-world HR problems and build skills in interpreting HR data for strategic planning and policy formulation.

Course Outcomes (COs): After completion of the course, the students shall be able to:

CO1: Understand the concept and significance of HR Analytics in modern organizations.
CO2: Apply basic statistical and analytical techniques to HR data for decision-making.
CO3: Analyze key HR functions (recruitment, training, performance, retention) using data-driven approaches.
CO4: Interpret HR metrics and dashboards to derive meaningful business insights.
CO5: Evaluate the impact of HR policies and practices on organizational performance.
CO6: Develop simple HR analytics models/reports to address real-world HR issues.

Unit I
HR Analytics- an Overview: Introduction to HR analytics, Evolution of HR analytics, The data-driven HR Culture, Need for HR Analytics in modern HR practices, Types of analytics in HR- descriptive, predictive and prescriptive; **Aligning HR to Business through HR Analytics**, Steps for Alignment of HR Analytics with Business Goals and Strategies.

Unit II
HR Decision Making and HR Analytics, Steps to implement HR Analytics, HRIS for decision making.
HR Analytics Framework: People Capability Maturity Model, LAMP framework, HCM 21 framework, Talent analytics maturity model, HR scorecards and workforce scorecards.

Unit III
Analytics in Various HRM Functions and Processes: Analytics in Manpower Planning, Recruitment and Staffing Analytics, Training and Development Analytics, Analytics in Performance Management, Analytics in Absenteeism, Turnover. Employee Engagement and Satisfaction metrics, Diversity, equity, and inclusion (DEI) metrics, HR cost benefit metrics. Effective HR Dashboards and KPIs.

Unit IV
Data and HR Analytics: HR Data and Data Quality. HR Data Collection. Big Data for Human resources. Data Collection, Transformation and visualization of Data.
HR analytics for future, Ethical issues in HR analytics, AI and HR, Driving insights out of HR analytics.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- D. K. Bhattacharya, *HR Analytics: Understanding Theories and Applications*, Wiley, 2023.
- R. S. Yadav, and S. Maheshwari, *HR Analytics: Connecting Data and Theory*, Wiley, 2020.
- P. Banerjee, J. Pandey, and M. Gupta, *Practical Applications of HR Analytics: A Step by Step Guide*, SAGE Publications, 2023.
- Martin R. Edwards, and Kirsten Edwards, *Predictive HR Analytics: Mastering the HR Metric*, Kogan Page, 2019.
- N. Guenole, Jonathan Ferrar, and Sheri Feinzig, *The Power of People: Learn How Successful Organizations Use Workforce Analytics to Improve Business Performance*, Pearson, 2017.
- R. Soundararajan, and K. Singh, *Winning on HR Analytics: Leveraging Data for Competitive Advantage*, SAGE Publications, 2016.

I.K.G. Punjab Technical University

MBA 973-26 Social Media, Content and Influencer Marketing

Course Objectives: The course aims to provide advanced understanding of social media platforms, content marketing and influencer ecosystems. The course also focuses on strategic social media communication, digital storytelling, online brand communities and customer engagement practices for businesses.

Course Outcomes: After successfully completing this course, students will be able to:

CO1: Evaluate the role of social media and content marketing in integrated digital communication.
CO2: Develop strategic social media campaigns for customer engagement and brand promotion.
CO3: Design digital content and influencer marketing strategies for different industries and audiences.
CO4: Analyze social media analytics and online reputation management techniques.
CO5: Assess emerging social media trends and technologies for digital communication effectiveness.
CO6: Create social media content plans and influencer collaboration strategies for businesses and brands.

UNIT-I

Introduction and evolution of social media marketing; social media ecosystem and communication models; role of social networking platforms in digital business; digital communities and customer engagement process; integrated social media marketing framework; customer participation and user generated content; advantages and challenges of social media marketing; social media ethics and online communication standards.

UNIT-II

Strategic marketing through Facebook, Instagram, LinkedIn, YouTube and X (Twitter); content planning and content calendars; sponsored advertisements and paid promotional campaigns; audience targeting and segmentation; social listening and online reputation management; social media engagement metrics; customer interaction and relationship management; campaign planning and execution strategies; social media budgeting and scheduling tools.

UNIT-III

Content strategy and digital storytelling; blogs, vlogs and podcasts as content tools; infographic and video content creation; YouTube optimization and video marketing strategies; influencer marketing ecosystem and creator economy; influencer identification and collaboration models; live streaming, webinars and online events; community management and customer engagement through content-driven strategies.

UNIT-IV

Social media analytics and dashboard interpretation; engagement metrics and ROI measurement; AI tools for content generation and campaign management; social commerce and live commerce; reels and short-video marketing strategies; immersive marketing and metaverse-based communication; augmented reality filters and interactive content; ethical concerns in influencer marketing; case studies in social media and influencer marketing campaigns.

Note: Students should prepare social media campaign reports, influencer collaboration plans and content calendars as part of continuous assessment.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings

- Tracy L. Tuten, and Michael R. Solomon, *Social Media Marketing*, SAGE Publications, 2018.
- Dan Zarrella, *The Social Media Marketing Book*, O'Reilly Media, 2010.
- Seema Gupta, *Digital Marketing*, McGraw Hill Education, 2026.
- Dave Chaffey, Fiona Ellis Chadwick, *Digital Marketing*, Pearson Education, 2022.
- Philip Kotler, Hermawan Kartajaya, Iwan Setiawan, *Marketing 5.0: Technology for Humanity*, Wiley, 2021.
- Ann Handley, *Everybody Writes: Your New and Improved Go To Guide to Creating Ridiculously Good Content*, Wiley, 2014.

I.K.G. Punjab Technical University

MBA 974-26 Digital Analytics, AI and Marketing Automation

Course Objectives: The course aims to provide advanced knowledge regarding digital analytics, artificial intelligence and marketing automation systems. The course also focuses on data-driven decision-making, customer insights, predictive analytics and emerging analytical technologies used in digital business environments.

Course Outcomes: After successfully completing this course, students will be able to:

CO1: Analyze digital marketing performance using web analytics and dashboard tools.
CO2: Apply data-driven decision-making techniques in digital marketing campaigns.
CO3: Evaluate customer analytics, CRM and marketing automation systems.
CO4: Assess the role of artificial intelligence, predictive analytics and big data in marketing strategy.
CO5: Develop analytical reports and strategic recommendations based on digital marketing data.
CO6: Examine emerging technologies and ethical issues associated with digital analytics and AI
applications.

UNIT-I
Meaning and scope of digital analytics; role of analytics in digital marketing decision-making; web analytics concepts and applications; Google Analytics and dashboard interpretation; website traffic analysis and customer behaviour tracking; digital marketing metrics including CTR, CPC, CPA, CPM, conversion rate and ROI; customer acquisition and retention metrics; campaign analytics and performance reporting systems.

UNIT-II
Customer relationship management (CRM) systems and applications; customer lifecycle management; customer segmentation and personalization strategies; predictive customer analysis; email automation and marketing automation systems; chatbot applications and conversational marketing; customer engagement analytics; retention and loyalty measurement; CRM integration with digital marketing platforms.

UNIT-III
Artificial intelligence applications in marketing; machine learning and predictive analytics; recommendation systems and personalization engines; sentiment analysis and consumer opinion mining; big data applications in digital business; data visualization and dashboard reporting tools; AI driven campaign management; ethical and privacy concerns in AI-based marketing systems.

UNIT-IV
Blockchain applications in marketing and digital trust systems; voice commerce and conversational marketing; augmented reality (AR) and virtual reality (VR) applications; smart devices and Internet of Things (IoT) marketing; predictive marketing and future consumer trends; digital governance and privacy regulations; industry case studies and future directions in analytics and marketing automation.

Note: Practical exposure to Google Analytics, CRM dashboards, marketing automation tools and AI-based analytical applications should be provided wherever possible.

Relevant Case Studies should be discussed in class.

Suggested Readings

- Kevin Hartman, *Digital Marketing Analytics*, Pearson Education, 2020.
- Dave Chaffey, and Fiona Ellis Chadwick, *Digital Marketing*, Pearson Education, 2022.
- Simon Kingsnorth, *Digital Marketing Strategy*, Kogan Page, 2025.
- Philip Kotler, and Hermawan Kartajaya, Iwan Setiawan, *Marketing 5.0: Technology for Humanity*, Wiley, 2021.
- Seema Gupta, *Digital Marketing*, McGraw Hill Education, 2017.
- Bernard Marr, *Artificial Intelligence in Practice*, Wiley, 2019.

I.K.G. Punjab Technical University

MBA 975-26 Branding and Reputation Management

Course Objective: To equip students with the strategic frameworks and digital tools necessary to build, maintain, and protect a brand's identity and authority in a hyper-connected online ecosystem.

Course Outcomes: After studying this course, the students should be able to:

CO1: Define and develop a consistent **Brand Identity** and voice tailored for digital platforms.
CO2: Implement strategies to monitor and manage **Online Reputation (ORM)** and consumer sentiment.
CO3: Execute **Brand Storytelling** techniques across social media and content marketing channels.
CO4: Formulate **Crisis Management** plans to mitigate digital PR threats and negative feedback

Unit 1

Digital Brand Architecture Foundations: Difference between traditional and digital branding. **Identity:** Defining Brand DNA, USP, and Value Propositions. **Visual & Verbal:** Crafting logos, color palettes, and a consistent digital "tone of voice. "**Positioning:** Creating a niche in the digital marketplace and competitor benchmarking.

Unit 2

Online Reputation Management (ORM)- Monitoring: Using tools like Google Alerts, Mentions, and Brandwatch. **Review Management:** Strategies for handling Google Business Profile, Yelp, and social media reviews. **SEO for Reputation:** Pushing positive content to Page 1 and managing "Search Engine Reputation Management" (SERM). **Ethics:** Managing transparency and authenticity in brand communications.

Unit 3

Strategic Brand Engagement & Advocacy- Storytelling: Using "The Hero's Journey" and narrative frameworks in digital campaigns **Influencer Relations:** Aligning brand values with digital creators. **Community Building:** Turning customers into brand advocates through social proof and user-generated content (UGC). **Employer Branding:** Managing the brand's image on LinkedIn and Glassdoor.

Unit 4

Crisis Communication & Brand Recovery-Early Warning Systems: Identifying "Digital Fires" before they go viral. **The Response Framework:** Speed vs. Accuracy; the 5S Strategy (Speed, Sincerity, Social, Strategy, Solution).

Case Studies: Analysis of famous brand fails and successful recoveries (e.g., KFC, United Airlines, Starbucks). **Post-Crisis Audit:** Rebuilding trust and measuring brand sentiment recovery.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings:

- Alina Wheeler, *Designing Brand Identity*, Wiley, 2017.
- Al Ries, and Laura Ries, *The 22 Immutable Laws of Branding*, Harper Business, 1998.

- John Michael Morgan, *Brand Against the Machine*, Wiley, 2012.
- Lori Randall Stradtman, *Online Reputation Management for Dummies*, Wiley, 2012.

I.K.G. Punjab Technical University

MBA 976-26 Email and Mobile Marketing

Course Objective: This course aims to provide students with a structured understanding of email and mobile marketing concepts, strategies, and tools used in digital marketing environments. It enables learners to design, implement, and manage integrated campaigns using mobile and email platforms for effective customer engagement, brand building, and performance-driven marketing.

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

CO1: Demonstrate understanding of fundamental concepts of email and mobile marketing.
CO2: Apply tools and techniques for designing email and mobile marketing campaigns.
CO3: Develop integrated marketing strategies using email and mobile channels.
CO4: Design effective content for email campaigns, newsletters, and mobile advertising.
CO5: Analyze campaign performance using digital analytics tools.
CO6: Evaluate legal, ethical, and regulatory frameworks in email and mobile marketing.

UNIT I:
Introduction to Email and Mobile Marketing: Concept and scope of digital marketing, fundamentals of email marketing and mobile marketing, evolution and significance of email marketing, email marketing basics, overview of mobile devices and their marketing applications, classification of mobile devices, advantages and limitations of email marketing, objectives of email marketing, and introduction to Email Service Providers (ESPs).

UNIT II:
Campaign Tools, Techniques and Strategy: Mobile marketing communication channels including SMS, MMS, mobile applications, mobile websites, QR codes, augmented reality, and interactive voice response systems. Email marketing strategy formulation, principles of effective email content development, subject line optimization, email automation systems, campaign design principles, email marketing guidelines, and best practices in email communication.

UNIT III:
Platforms, Advertising and Campaign Execution: Mobile advertising models, mobile search marketing, programmatic advertising, mobile incentive systems, loyalty program design, and customer engagement strategies. Email marketing platforms including MailChimp architecture, account setup, subscriber list management, integration of web forms, data import processes, classification of email campaigns, newsletter design, and campaign execution methodologies.

UNIT IV:
Advanced Concepts, Analytics and Applications: Integration of mobile marketing with social media platforms, mobile content marketing strategies, mobile advertising on social platforms, location-based marketing systems, beacon technology applications, responsive web design principles, conversion optimization techniques, email and mobile marketing analytics, marketing automation systems, campaign performance measurement, regulatory compliance frameworks, and practical application using digital marketing tools.

Note: Relevant Case Studies should be discussed in class.

Suggested Readings

- Dave Chaffey, Fiona Ellis Chadwick, *Digital Marketing: Strategy, Implementation and Practice*, Pearson Education, 2023.
- Simon Kingsnorth, *Digital Marketing Strategy: An Integrated Approach to Online Marketing*, Kogan Page, 2025.
- Philip Kotler, Hermawan Kartajaya, and Iwan Setiawan, *Marketing 5.0: Technology for Humanity*, Wiley, 2021.
- Damian Ryan, *Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation*, Kogan Page, 2016.
- Dave Chaffey, and P. R. Smith, *Digital Marketing Excellence*, Routledge, 2017.
- S. Kumar, and S. Kaur, *Digital Marketing*, Taxmann Publications, 2023.