मुंबई विद्यापीठ

विप्राससे(युजीएस)/आयसीसी/२०२४-२५/१९०

परिपत्रक :-

सर्व प्राचार्य/संचालक, संलग्नीत महाविद्यालये/संस्था, विद्यापीठ शैक्षणिक विभागाचे संचालक/विभाग प्रमुख यांना कळविण्यात येते की, राष्ट्रीय शैक्षणिक धोरण २०२० च्या अंमलबजावणीच्या अनुषंगाने शैक्षणिक वर्ष २०२४-२५ पासून एक्झिट पर्यायासह पदवी अभ्यासक्रमासाठी तयार करण्यात आलेला अभ्यासक्रम खालीलप्रमाणे :-

अनु. क्र.	अभ्यासक्रमांची नावे
७.४	Master of Management Studies

सदर अभ्यासक्रम मुंबई विद्यापीठाच्या www.mu.ac.in या संकेतस्थळावर NEP 2020 या टॅबवर उपलब्ध करण्यात आलेले आहेत.

मुंबई - ४०० ०३२
२७ नोव्हेंबर, २०२४

(डॉ. प्रसाद कारंडे)
कुलसचिव

प्रत माहिती व उचित कार्यवाहीकरिता रवाना :-

१. मा.कुलगुरु यांचे स्वीय सहायक, मुंबई विद्यापीठ, फोर्ट, मुंबई.
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७. उपकुलसचिव, महाविद्यालय संलग्नता आणि विकास विभाग,
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6	The Deputy Registrar, College Affiliations & Development Department (CAD), deputyregistrar.uni@gmail.com
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8	The Deputy Registrar, Executive Authorities Section (EA) eau120@fort.mu.ac.in He is requested to treat this as action taken report on the concerned resolution adopted by the Academic Council referred to the above circular.
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BOD – 3/9/2024
12 (7) of M.P.U.A. 2016
Item No. – 7.4 (N)

As Per NEP 2020

University of Mumbai

Title of the program

A- P.G. Diploma in Management } **2024-25**
B- Master of Management Studies } (Two Year)
C- Master of Management Studies (One Year) - **2027-28**

Syllabus for

Semester – Sem I & II

Ref: GR dated 16th May, 2023 for Credit Structure of PG

University of Mumbai

(As per NEP 2020)

Sr. No.	Heading	Particulars	
1	Title of program O: MP - 1 A	A	P.G. Diploma in Management
	O: MP - 1 B	B	Master of Management Studies (Two Year)
	O: MP -1 C	C	Master of Management Studies (One Year)
2	Eligibility O: MP - 2 A	A	As per the directives of the Directorate of Technical Education, Government of Maharashtra [Bachelor's degree awarded by a recognized University as per National Credit Framework (N.Cr.F) 2023 with Academic Level 5.5 & appeared for MAH-MBA/MMS CET / CMAT/ CAT as prescribed / notified by CET Cell/ARA/DTE for that particular academic year.
	O: MP - 2 B	B	As per the directives of the Directorate of Technical Education, Government of Maharashtra [Bachelor's degree awarded by a recognized University as per National Credit Framework (N.Cr.F) 2023 with Academic Level 5.5 & appeared for MAH-MBA/MMS CET / CMAT/ CAT as prescribed / notified by CET Cell/ARA/DTE for that particular academic year.

	O: MP - 2 _____C	C	As per the directives of the Directorate of Technical Education, Government of Maharashtra for that particular year [With minimum requirement being Graduate with 4 year U.G. Degree (Honours / Honours with Research) with Specialization in any discipline subject or passed equivalent Academic Level 6.0] OR Graduate with four years UG Degree program (Honours / Honours with Research) with 18 credits in Minor subject].
3	Duration of program R: MP -1 _____	A	1 Year
		B	2 Year
		C	1 Year
4	R: MP - 2 _____ Intake Capacity	As per the Approval of AICTE and the Directorate of Technical Education, Government of Maharashtra	
5	R: MP - 3 _____Scheme of Examination	NEP 40% Internal 60% External, Semester End Examination Individual Passing in Internal and External Examination	
6	Standards of Passing R: MP -4 ____	50%	
7	Credit Structure R: MP-5A _____ R: MP - 5C R: MP - 5B R: MP - 5D	Attached herewith	
8	Semesters	A	Sem. I & II
		B	Sem. I, II, III & IV
		C	Sem. I & II

9	Program Academic Level	A	6.0
		B	6.5
		C	6.5
10	Pattern	Semester	
11	Status	New	
12	To be implemented from Academic Year Progressively	A	2024-25
		B	
		C	2027-28

Sign of the BOS Chairman
Dr. Smita Shukla
Chairman
BOS in MMS

Sign of the Offg. Associate Dean
Prof. Dr. Kishori J. Bhagat
Department of Commerce and Management
University of Mumbai

Sign of the Offg. Dean
Dr. Kavita Laghate
Department of Commerce and Management
University of Mumbai

Sign of the Offg. Dean
Prof. Shivram S. Garje
Faculty of Science & Technology

मुंबई विद्यापीठ
University of Mumbai
Re-accredited with A++ Grade
(CGPA 3.65) by NAAC (3rd Cycle 2021)

As per NEP 2020

for

Master of Management Studies (MMS)
Semester I & II

2 Years full-time Masters Degree Program in Management

(Effective from the academic year 2024-25)

Name of the Program: MASTER OF MANAGEMENT STUDIES (MMS)

Nature of the Program: MMS (Master of Management Studies) is a 2 year Full-time Master's Degree course of University of Mumbai.

Eligibility Criteria: As per the directives of the Directorate of Technical Education, Government of Maharashtra

Preamble

Technological advancements, innovations, and socioeconomic shifts all become influencing factors in management education. In order to ensure that management students are able to attain necessary levels of industry relevant knowledge, skills and practical outlook, it is necessary to incorporate emerging industry practices in instructional process. The management students are also expected to benefit from short-term live projects, field projects, On-the-job training opportunities, industry internships and research projects as these can provide students an understanding of the industry environment and working methods. It is also increasingly expected to that management studies should be able to equip the management students to launch their own start-ups and to become entrepreneurs. Hence, in view of above, revision in curriculum of Masters in Management Studies becomes pertinent.

The AICTE Model Curriculum standards have been taken into account by integrating pertinent new topics into all of the program's specializations. Additionally, adherence to the National Higher Education Qualification Framework 2023 (NHEQF 2023) and National Education Policy 2020 (NEP 2020) principles, which place a strong emphasis on developing skills through projects and practical work that outlines the goals and learning outcomes for each topic also have been taken into consideration. The revised curriculum has incorporated the opportunity for multiple entry and exit based on NHEQF guidelines.

Revised curriculum places a high focus on quantitative and analytics techniques for aiding the students in comprehending corporate practical knowledge as well as the patterns and interpretation of massive amounts of data through business analytical tools.

Need for Revision and Restructuring of the MMS Curriculum:

Post Covid-19, human resource favour hybrid or remote work arrangements. A few traditional theories of organizational behaviour, HR, and recruitment are still clinging hard to the past. The new wave of fin-tech companies has been fiercely competing with banks. Automated and custom-made manufacturing is replacing the traditional manufacturing practices. Marketing has changes with strengthening of social media, influences and digital content creators, integration of AI and ML in marketing practices.

In addition, the transdisciplinary, pragmatic, and ethical concerns and issues that business leaders encounter today need to be woven as part of curriculum design and learning in the MMS program. The MMS program requires rebalancing to connect the hard and soft abilities that have become very pertinent for managers. The curriculum needs to capture following:

- Shifting aspects of enterprises and economies globally
- Technological advancement and market dynamics
- The emergence of new companies and business models
- Emphasis on experiential and application-oriented learning
- Matching stakeholders' expectations, including those under NEP 2020 and NHEQF

Program Outcomes - MMS Program:

PO1: Apply knowledge of management theories and practices to solve business problems

PO2: Foster analytical and critical thinking abilities for data-based decision-making

PO3: Ability to develop value based leadership ability

PO4: Ability to analyse and communicate global, economic, legal, and ethical aspects of business

PO5: Ability to lead themselves and others in the attainment of organizational goals contributing effectively to team environment

Structure of the Revised MMS Curriculum

The courses under the revised structure and curriculum fall under two categories **Mandatory** and **Electives** (choice for students within specializations) leading towards specialization. The electives component provide flexibility for adoption of new courses that nurture professional competencies. In addition to the above, the curriculum also provides hands on learning opportunities through OJT, Field Projects, internships and industry and society relevant research projects.

The Learning levels expected to be attained as per Bloom's Taxonomy: under curriculum are: L1: Remembering; L2: Understanding; L3: Applying; L4: Analyzing; L5: Evaluating, and; L6: Creating.

Teachers are expected to impart knowledge along-with traditional teaching through new and innovative pedagogical approaches like Field Work, Workshops, Mentoring Sessions, Assignments, Quizzes, Live Projects, Case Studies, Presentations,

Simulations, Industrial Visits, Use of statistical software and other data analysis and application tools, Inculcation of industry specific skills and training & development sessions through co-curricular activities.

The Formative Assessment and Summative Assessment to be in Ratio – 40:60. The suggested Formative Assessment pattern: Class Participation 10 Marks and remaining 30 marks based on minimum of 3 other assessment formats (Mid-term Test; Individual / Group presentations; Role-plays; Assignments; Projects; Case Study analysis; Quiz; any other innovative evaluation methodology). It must be ensured that all Course Outcomes across courses should be covered in the Formative and Summative Assessment process.

The MMS program structure is as follows:

MMS Program Structure

Year	Level	Semester	Major		RM	OJT/FP	RP	Cum. Cre.	Degree / Diploma
			Mandatory (Sub.*Cr.)	Elective (Sub.*Cr.)					
		Semester I	22 (3*4+5*2)	4 (2*2)	-	-	-	26	PG Diploma in Management after 3 year UG Degree
		Semester II	14 (2*4+3*2)	4 (2*2)	4	4	-	26	
Cumulative Credits FY			36	8	4	4	-	52	
Exit Option: PG Diploma with additional 4 credits of OJT									
		Semester III	6 (1*4+1*2)	12 (6*2)	-	8	-	26	PG Degree after 3 year UG Degree
		Semester IV	6 (1*4 + 1 Seminar *2)	12 (3*4)			8	26	
Cumulative Credits SY			12	24	-	8	8	52	
Cumulative Credits FY+SY			48	32	4	12	8	104	

FYMMS Syllabus Outline
Outline of Semester I

Semester I					
Mandatory Courses					
Sr. No.	Course Type	Course	Number of Credits	Number of 90 minutes sessions	**IA / UA***
1	Mandatory - General Management	Fundamentals of Management Theory and Practice	2	20	**IA**
2	Mandatory - Quantitative Techniques	Business Statistics	2	20	**IA**
3	Mandatory - Economics	Managerial Economics	2	20	**IA**
4	Mandatory - Finance	Financial Accounting for Business	2	20	**IA**
5	Mandatory - Human Resource	Organizational Behaviour	2	20	**IA**
6	Mandatory - Marketing	Fundamentals of Marketing	4	40	**IA**
7	Mandatory - Operations	Operations Management	4	40	**IA**
8	Mandatory - Systems	Information Technology for Business	4	40	**IA**
Elective Courses (Any Two)					

1	Elective	Managerial Communication	2	20	**IA**
2	Elective	Creativity and Design Thinking	2	20	**IA**
3	Elective	Legal and Tax Aspects of Business	2	20	**IA**
4	Elective	Bhartiya Management	2	20	**IA**

***IA – Internal Assessment; UA – University Assessment**

Outline of Semester II

Semester II					
Mandatory Subjects					
Sr. No.	Course Type	Course	Number of Credits	Number of 90 minutes sessions	**IA / UA***
1	Mandatory - General Management	Business Research Methods	4	40	**IA**
2	Mandatory - Finance	Corporate Finance	4	40	**IA**
3	Mandatory - Human Resource	Human Resource Management	4	40	**IA**
4	Mandatory - Marketing	Application of Marketing Theory and Practise	2	20	**IA**
5	Mandatory - Operations	Decision Models in Management	2	20	**IA**

6	Mandatory - Systems	Information Systems and Digital Transformation	2	20	**IA**
7	OJT / Field Project	OJT / Field Project	4	-	**IA**
Electives – Any Two					
1	Elective	Entrepreneurship Management	2	20	**IA**
2	Elective	Economic Environment and Policy	2	20	**IA**
3	Elective	Business Analytics	2	20	**IA**
4	Elective	Cost and Management Accounting	2	20	**IA**
5	Elective	Foundations of Strategy	2	20	**IA**

***IA – Internal Assessment; UA – University Assessment**

Suggested Workshops

Semester I:

1. Basic Software Tools: MS Excel & Advance Excel
2. Personality Development, Grooming & Presentation Skills Training

Semester II:

1. Advanced Software Tools: Power Bi, Tableau, R Programming, SPSS
2. Social Media Marketing

Curriculum Content (Semester I & Semester II)

SEMESTER - I

Mandatory Course 1: Fundamentals of Management Theory and Practice

Course Credits: 2

Course Outcomes:

- CO1: Understand the relationship between organization vision, mission, values and Objectives
- CO2: Apply the concepts and frameworks to business contexts
- CO3: Analyze the impacts of internal and external environment of a firm on its responses
- CO4: Evaluate issues in planning, organizing, leading and controlling functions of management
- CO5: Create a plan to address contemporary organizational issues based on the frameworks and theories covered.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Personal aspirations: vision, mission, values; Personal aspirations: vision, mission, values; Differences in Vision, mission amongst different kinds of organisation and types of environments they operate in; Models of motivation	CO1	3
2	Framework of analysing aspirations - Campbell & Yeung model; Coherence and alignment of organisation aspirations; Link between aspiration and business performance	CO1, CO2	3
3	Business environment: Operating in a Pluralistic Society, Technological and Innovative Environments	CO2, CO3	3
4	Social responsibility and Ethics: Ecological Environment, Social Responsibility of Managers, Ethics in Managing - An Integrative Approach	CO2, CO3	3

5	Planning, decision making & their impact: Types of Plans, Steps in Planning Objectives, Evolving Concepts in Management	CO1, CO2, CO3	3
6	Elements of organising: The Nature of Organizing, Entrepreneurship and Reengineering, Formal and Informal Organizations, Organizational Division: The Department, Organizational Levels and the Span of Management	CO2, CO3, CO4	3
7	Managing change: Managing Change, Organizational Conflict, Organization Development, The Learning Organization	CO2, CO3, CO4	3
8	Leadership: Ingredients of Leadership, Trait Approaches to Leadership, Charismatic Leadership Approach, Leadership Behaviour and Styles, Situational, or Contingency, Approaches to Leadership	CO2, CO3, CO4	3
9	Organization controls: The System and Process of Controlling, The Basic Control Process, Business Analytics, Critical Control Points, Standards, and Benchmarking, Control as a Feedback System, Real-Time Information and Control	CO2, CO3, CO4	3
10	Contemporary issues in management practice	CO3, CO4, CO5	3

Textbooks:

1. Essentials of Management, by Harold Koontz and Heinz Weihrich. 10th ed

Reference Books:

1. In Search of Excellence, Tom Peters
2. Made in Japan, Akio Morita
3. The Asian Miracle, Michael Schuman

4. Get Better or Get Beaten, Jack Welch
5. Principles of Management, Peter Drucker
6. People and Performance, Peter Drucker

Suggested Pedagogy -

1. Lectures and discussions
2. Case studies
3. Book presentations of recommended readings

Mandatory Course 2: Business Statistics

Course Credits: 2

Course Outcomes:

- CO1. RECALL the basic terminologies related to the concepts of Business Statistics
- CO2. UNDERSTAND statistics as a crucial tool for data analysis and making justifiable business decisions
- CO3. MAKE USE OF appropriate data to calculate statistical measures for solving business problem
- CO4. ANALYZE the data and draw inferences from statistical findings for various business solutions
- CO5. COMPARE the results of statistical tests for taking informed business decisions
- CO6. DEVELOP a statistical report for a given business situation

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Statistics Types of variables (dependent, independent, mediating, moderating, extraneous, discrete, continuous), charts and graphs	CO1	3
2	Descriptive Statistics Measure of Central Tendency, Measure of variability, Interquartile Range, and Dispersion, Measure of shapes (Kurtosis and Skewness)	CO1, CO2	3
3	Probability & Permutations & Combinations Introduction to the concept of probability and permutations and combinations, Axioms, Addition and Multiplication rule, Theories of Probability, Types of probability, Independence of events, probability tree, Bayes' Theorem	CO2	3

4	Probability Distribution Concept of Random variable, Probability distribution, Expected value and variance of random variable, conditional expectation, Binomial distribution and its business application, Poisson and its business application, Normal and its business application	CO2, CO3	3
5	Sampling and Estimation Sampling Distribution, Types of sampling, Central Limit Theorem, Estimation- Point estimation , Interval estimation	CO3, CO4	3
6	Hypothesis Testing Introduction to Hypothesis testing, Importance of significance level (confidence level), margin of error, type I error and type II error, criteria for selection of right test	CO3, CO4	3
7	Parametric Test Univariate -Z test, one sample t-test significance Bivariate - T-test (paired and independent), Pearson's correlation, simple linear regression, one way-ANOVA	CO4, CO5	3
8	Non-parametric Test Univariate - Chi-square goodness for fit for uniform distribution Bivariate - Spearman's rank correlation, mann-whitney U test, Wilcoxon sign paired rank test, Chi-square test of independence	CO4, CO5	3
9	Multivariate Analysis Overview of multiple Regression, Factor analysis, Multi- dimensional scaling and Discriminant Analysis (Theoretical Concepts only)	CO2	3
10	Practical	CO4, CO5,	3

	Students should apply the statistical hypothesis testing on assumed/ hypothesized data using statistical software's	CO6	

Text Books:

1. Ken Black, Business Statistics for Contemporary Decision making, Wiley, Latest Edition
2. Sanjiv Jaggia, Alison Kelly Business Statistics, McGraw Hill, Latest Edition
3. Richard I. Levin and David S., Rubin Statistics for Management, Pearson, Latest Edition
4. D. P. Apte, Statistics for Managers, Excel, Latest Edition
5. Gerald Keller & Hitesh Arora, Business Statistics, Cengage, Latest Edition

Reference Books:

1. Joseph Francis, Business Statistics, Cengage, Latest Edition
2. T N Srivastava and Shailaja Rego, Statistics for Management, TMH, Latest Edition
3. K. B. Akhilesh& S. B. Balasubrahmanyam, Mathematics and Statistics for Management Vikas
4. Naval Bajpai, Business Statistics, Pearson, Latest Edition
5. D. P. Apte M. S., Excel: Statistical Tools for Managers, Excel, Latest Edition
6. Qazi Zameerudin, Vijay K. Khara, S. K. Bhamri, Business Mathematics, Vikas, Latest Edition

Mandatory Course 3: Managerial Economics

Course Credits: 2

Course Outcomes:

- CO1: Remember and explain the basic concepts of Managerial Economics (L1, L2)
- CO2: Explain different concepts like consumer behaviour, Utility analysis demand, supply, production, cost and revenue, etc. (L1, L2)
- CO3: Apply the principles of Managerial Economics in business decisions for attaining objectives of the firms. (L4, L5)
- CO4: Analyze and Evaluate the competitiveness in the different market and decide on pricing and other policies. (L4, L5)

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Introduction:** Concept of Economy, Economics, Microeconomics, Macroeconomics. Nature and Scope of Managerial Economics, Managerial Economics and decision-making - The basic process of decision making; Concept of Firm, Market **Objectives of Firm:** Profit Maximization Model, Economist Theory of the Firm, Cyert and March's Behavior Theory, Marris' Growth Maximisation Model, Baumol's Static and Dynamic Models, Williamson's Managerial Discretionary Theory	CO1	3
2	**Consumer Behaviour & Utility Analysis:** Cardinal utility approach, equi-marginal utility principle, ordinal utility analysis.	CO2	2

3	**The Basics of Demand and Supply:** Determinants of Demand / Supply, Law of Demand and Supply, Individual Demand / Supply and Market Demand /Supply, Exception to Law of Demand; Determinants of Supply, Change in Demand / Supply, market mechanism and price determination, Impact of Price Ceiling & Price Floor **Demand forecasting:** Significance of demand forecasting, Various approaches to demand forecasting	CO2, CO3, CO4	4
4	**Elasticity of Demand and Supply:** The concept of elasticity of demand, Types of elasticity of demand, types of price and income elasticity of demand, factors affecting elasticity of demand. Elasticity of supply, factors determining elasticity of supply.	CO3, CO4	3
5	**Production Function:** Production function, Law of Diminishing Marginal Return (short run), Laws of Returns to scale (long run), Isoquant, Optimization analysis.	CO2, CO3, CO4	3
6	**Cost Analysis:** Types of cost, Estimation of cost function, Cost-output analysis - Short run cost curves & Long run Cost curves, traditional theory of cost, modern theory of costs, Learning Curve, Economies of Scale; Break-Even Analysis; Determination of Break-even level, Breakeven chart	CO2, CO3, CO4	3
7	**Revenue Analysis:** Revenue concept, Relation between price and revenue under perfect competition and imperfect competition.	CO2, CO3, CO4	3

8	**Market Structure 1 - Perfect and monopoly competition**: Short run equilibrium of the competitive firm, long run equilibrium of the firm and industry. **Monopoly:** Types & Sources of monopoly, Monopoly Power, monopoly equilibrium in short run, Long run monopoly equilibrium, Monopoly wisdom.	CO4,CO5	3
9	**Markets Structure 2 – Oligopoly Monopolistic Competition:** Oligopoly - Kinked demand curve, Cournot's Oligopoly model, Game Theory application in Oligopoly, Cartels Monopolistic Competition - Product differentiation, Selling cost & advertising outlay, equilibrium output and price under monopolistic competition	CO4,CO5	3
10	**Price Discrimination:** Forms of price discrimination, degree of discrimination, Dumping, economic effects of price discrimination, Other pricing strategies.	CO4,CO5	3

Text Books:

1. Managerial Economics: Theory and applications: D.M.Mithani-Himalaya Publishing House.
2. Managerial Economics- Prof.A.K.Seth and Dr.Shalini Devi-International book house pvt.ltd
3. Managerial Economics- Suma damodaran-Oxford university press.
4. Managerial Economics- principles and worldwide applications- Dominick Salvatore- Oxford university press
5. Managerial Economics- Dr.S.L.Gupta-International book house pvt.ltd

Reference Books:

1. Wilkinson, N. and Klaes M. 2018. An Introduction to Behavioral Economics (3 rd ed.)
2. Managerial Economics, Mote, Paul and Gupta, T M H, New Delhi.
3. Managerial Economics - Analysis, Problems and Cases, P.L. Mehta, Sultan Chand Sons, New Delhi.

Mandatory Course 4: Financial Accounting for Business

Course Credits: 2

Course Outcomes:

- CO1: Acquire the basic knowledge on accounting concepts and conventions, Accounting Standards, components of the financial statements and notes to accounts.
- CO2: Understand and explain the components of corporate financial statements and corporate annual reports.
- CO3: Analyze the movement of Assets, Liabilities, Income and Expenses in the financial statements across the previous year and current year.
- CO4: Apply Accounting Standards, GAAP, IFRS and Concepts to the Financial Statements.
- CO5: Create Financial Statements with basic adjustments and analyse the impact of transactions and adjustments on the Income Statement, Balance Sheet and Cash Flow Statement.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Financial Accounting- Meaning and concept of accounting, Need for accounting, Users of financial statements, Forms of business organization, Accounting and the form of business organization, Branches of accounting and interrelationship – Financial Accounting, Cost and Management Accounting, and Corporate Finance, Indian Accounting Standards, GAAP and IFRS.	CO1	1
2	Accounting Cycle-The Recording Stage, The classification stage, Verification of the correctness of the ledger accounts, The summarizing stage, Restarting the cycle	CO1	1

3	Accounting concepts and conventions – with Emphasis on Dual Aspect Concept- Accounting Equation.	CO2 & CO3	1
4	Accounting process - the recording stage, Two aspects of accounting transactions, Debit and credit of a transaction Specimen / format of journal	CO4	1
5	Accounting process - the classification stage Meaning and need for classification, Specimen / format of ledger, Posting, Balancing an account, Trial Balance.	CO4	1
6	Accounting process - Financial Statements- Vertical Statements. · Part I – Balance Sheet · Part II – Statement of Profit and Loss · Notes to Accounts · Part iii- general instructions for the preparation of consolidated Financial statements	CO5	10
7	Adjustments on Inventory, Outstanding and Prepaid Income and Expenses, Depreciation and Fixed Assets schedule	CO4	3
8	Income measurement- Revenue recognition and measurement, Capital and revenue items, Deferred revenue expenditure.	CO3	2

9	Banking Financial Statements and Insurance Company Financial Statements	CO2	2
10	Cash Flow Statement	CO5	3
11	Corporate Financial Reporting – Reading of Annual Report, Governance Report, Presentation and analysis of audit reports and directors report and Analyst Presentations and Podcasts[ST1]	CO2	2
12	Presentations /Vivas/ Internal Assessments of students	CO5	3

Text Books

1. Financial Accounting: Text & Cases by Dearden and Bhattacharya Accounting: Text and Cases by Robert Anthony
2. Financial Accounting for Management by Dinesh D Harsolekar
3. Financial Accounting by R. Narayanaswamy
4. Financial Accounting by S.N Maheshwari, Suneel K Maheshwari, Sharad.K. Maheshwari
5. Introduction to Financial Accounting, 11e by by T. Horngren Charles , L. Sundern Gary, A. Elliott John , R. Philbrick Danna.

Reference Books

1. Financial Accounting –Text and Cases – Dearden and Bhattacharyya
2. Accounting & Finance for Managers – T P Ghosh
3. Financial Accounting - Reporting & Analysis – Stice and Diamond
4. Financial Accounting and Analysis by Narendra L Ahuja and Varun Dawar

Mandatory Course 5: Organizational Behavior

Course Credits: 2

Course Outcomes:

- CO1: Students shall be able to relate to others effectively and demonstrate the importance of interpersonal skills in the success of their professional and personal life. (Level 1 & 2)
- CO2: Students shall analyze and interpret how and why people behave in a certain manner and predict the impact of such behavior as individuals or teams on their individual performance, performance of their team and performance of the organization as a whole. (Level 4, 5, 6)
- CO3: Students shall be equipped to predict and manage the patterns of interpersonal relations in the organization and adapt their behavior as per the demands of the organization for the healthy work environment. (Level 6)

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Introduction to OB** ● Origin, Nature and Scope of Organizational Behavior ● Relevance to Organizational Effectiveness and Contemporary Issues.	CO1	2
2	**Personality** ● Meaning and Determinants of Personality ● Process of Personality Formation ● Personality Types ● Assessment of Personality Traits for Increasing Self Awareness	CO1	4
3	**Perception, Attitude and Value** ● Perceptual Processes, Effect of Perception on Individual Decision-Making, Attitude and Behavior. ● Sources of Value	CO2, CO3	4

	● Effect of Values on Attitudes and Behavior. ● Effects of Perception, Attitude and Values on Work Performance.		
4	**Motivation Concepts** ● Motives ● Theories of Motivation ● Their Applications for Behavioral Change.	CO1, CO2, CO3	3
5	**Group Dynamics & Teamwork** ● Work Groups, Formal and Informal Groups and Stages of Group Development. ● Concepts of Group Dynamics, Group Conflicts and Group Decision Making. ● Team Effectiveness: High Performing Teams, Team Roles, Cross Functional and Self-Directed Teams	CO2, CO3	4
6	**Organizational Design** ● Structure, Size, Technology ● Hybrid Work Structures ● Environment of Organization; ● Organizational Roles: -Concept of Roles; Role Dynamics; Role Conflicts and Stress. ● Organizational Conflicts	CO3	4
7	**Leadership** ● Concepts and Skills of Leadership ● Leadership and Managerial Roles ● Leadership Styles and Effectiveness ● Contemporary Issues in Leadership. ● Power and Politics: Sources and Uses of Power;	CO1, CO2, CO3	3

	● Politics at Workplace ● Tactics and Strategies. ● Defense Mechanism Sources, types and Strategies to cope-up		
8	**Self & Stress Management** ● What is stress? ● Eustress & Distress ● General Adaptation Syndrome ● A Stress Model- Stressors & stress outcomes ● Potential sources of stress- Environmental factors, Organizational factors, Personal factors ● Consequences of stress- Psychological, Physiological, Behavioral.	CO1, CO2	2
9	**Organizational Culture** ● Definition, Characteristics of Organizational Culture ● Strong Versus Weak Culture ● Functions of Organizational Culture	CO1, CO2, CO3	2
10	**Organization Development** ● Organizational Change and Culture Environment ● Organizational Culture and Climate ● Contemporary Issues relating to Business Situations ● Process of Change and Organizational Development	CO1, CO2, CO3	2

Text Books:

1. Understanding Organizational Behavior – Udai Pareek
2. Organizational Behavior – Stephen Robbins
3. Organizational Behavior – Fred Luthans
4. Uday Kumar Haldar, Leadership and Team Building, Oxford University Press, New Delhi, 2010.

Reference Books:

1. Organizational Behavior by Steven L McShane, Mary Ann Von Glinow & Radha Sharma
2. Organizational Behavior – L. M. Prasad (Sultan Chand)
3. Organizational Behavior – Meera Shankar – International Book House Ltd
4. Management & Organizational Behavior – Laurie Mullins – Pearson Publications

Mandatory Course 6: Fundamentals of Marketing

Course Credits: 4

Course Outcomes:

- CO1: Understand fundamental concepts of marketing management.
- CO2: Apply the frameworks and models to marketing situations.
- CO3: Analyze the marketing environment and its impact on business
- CO4: Evaluate marketing decisions and choose appropriate solutions keeping in mind organizational opportunities, competition, resources and constraints
- CO5: Create a marketing strategy applying the theories and frameworks

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Introduction to Marketing:** Concept, Understanding the Basics: Transfer Vs Transactions, Concept of Need, Want and Demand, Concept of Product and Brand, Scope of Marketing	CO1	3
2	4C framework, DMU, Product – Company Fit, Capabilities in R&D, Finance, Manufacturing; Collaborators, and Competitors; Context.	CO1, CO2	3
3	**New 4 Cs' Framework:** Co-creation, Currency, Communal Activation, Customer Conversation,	CO1, CO2	3
4	**Evolution of Marketing:** Evolution of Marketing from Production to Sustainability & Customer Orientation,	CO1, CO2	6
5	**Experience Economy:** Time as currency, theme from history, religion, politics, psychology, art and pop culture; Types of experiences – educational, entertainment, aesthetic, escapist.	CO1, CO2, CO3	3
6	**Marketing Environment:** External Environment & Internal Environment – Components and Characteristics, Need for Analyzing the Marketing Environment.	CO2, CO3, CO4	6

	Analyzing the Demographic, Economic, Sociocultural, Natural, Technological, and Political-Legal Environment (PESTLE, SWOT)		
7	**Managing Marketing Information to gain customer insights:** Market Research, Analysing and Using Marketing Information, Demand Forecasting and Market Potential Analysis	CO2, CO3, CO4	6
8	**Marketing Mix – 4P's:** **Product:** Definition, classification based on consumer buying behaviour, levels of involvement in the buying process, types of benefits; Product Mix-Definition, Product Line and Dimensions, Line Stretching Decisions	CO3, CO4	6
9	**Product Life Cycle –** Market Potential and Marketing Strategy – Resources commitment as drivers of PLC; Stages in the PLC; Diffusion of Innovation, Entry strategies at different stages of the PLC – Pioneers, follow the leader, segmenters, Me-too; New Product Development Process	CO3, CO4	6
10	**Market Segmentation** – Objectives, Need for Segmentation, Assumptions underline Segmentations, Criteria for Segmentation; Segmentation variables – Geographic, Psychographic, Demographic, Benefits; Segmentation Analysis – Data Collection, Profiling the segment, evaluating the segment, selecting target segment.	CO3, CO4	3
11	**Targeting**: Long term objectives, Segmentwise Competitor Capability Matrix – Ability to conceive and design, ability to produce, ability to market, ability finance, ability to execute.	CO3, CO4	3

12	**Positioning**: Target Customers, need for the product; Elements of the positioning statements – Target market, frame of reference, point of parity, point of difference, reason to believe your claims; Criteria for evaluating the positioning statement – Relevance, clarity, uniqueness, attainability, sustainability; Marketing Mix linkage to the positioning statement	CO3, CO4, CO5	5
13	**5A Framework –** Aware, Appeal, Ask, Act, Advocate; Omni channel.	CO3, CO4	3
14	Field Based Live Projects and Presentations by capturing insights from Markets; Capstone Case – Starbucks: Delivering Customer Value (Suggested Case)	CO3, CO4, CO5	4

Text Books:

1. Marketing Management, 15/16e by Kotler, Keller, Chernev, Sheth, Shainesh, Pearson Education
2. Fundamentals of Marketing – William Stanton et.al.
3. Essentials of Marketing - Charles W. Lamb, Jr., Joseph F. Hair, Carl McDaniel
4. Business to Business Marketing - Zimmerman

Reference Books

1. Marketing Management, 4e, Russel Winer
2. Essentials of Marketing – William Perrault Jr, Joseph Cannon et al
3. Marketing Management: Text and Cases, SIE – Kasturi Rangan, Rajiv Lal, John Quelch

Mandatory Course 7: Operations Management

Course Credits: 4

Course Outcomes:

- CO1: RECALL basic concepts of operations management and cite its evolution
- CO2: ASSOCIATE the concepts of operations management and connect with business scenarios
- CO3: APPLY basic principles of operations management in production and operation functions
- CO4: EXAMINE the problems related to operations management in day-to-day functioning
- CO5: RECOMMEND solutions to the problems related to operations management
- CO6: PROPOSE innovative solutions related to operations management.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Operations Management Meaning, evolution and importance in management, Understanding goods and services, Transformation Process and its types, OM functions, Role of Operations Manager	CO1	3
2	Process View of Operations Process Choice Decisions (Eg. Projects, Job-shop, flow-shop and continuous flow), Product-process matrix, Process Design (Task, Activity, Process and Value Chain) in manufacturing and service industry, Process map (Flow chart), Process Analysis and Improvement	CO3, CO4	3
3	Facility Location Factors affecting location decisions, Location Planning Models (Center of Gravity, Load-distance, Factor Rating)	CO3	3

4	Facility Layout Types of layout (Product, Process, Cellular Technology, Fixed Position and hybrid) Performance measures for layout design	CO2	3
5	Inventory Management I Nature of Inventory (RM, MRO, WIP, FG, GIT), Types and Function of Inventory (Seasonal, Decoupling, Cyclic, Pipeline, Safety Stock), Inventory Cost (Inventory Carrying, Cost of Ordering, Cost of Shortages)	CO2	3
6	Inventory Management II Inventory Classification (ABC, HML, XYZ, VED, FSN, SDE, GOLF and SOS), Inventory Ordering Policies (EOQ, EPQ, ROP and Quantity Discounts)	CO3	3
7	Capacity Planning Definition of Production Capacity, Measurement of Capacity, Ways of changing capacity, Economies of Scale, Analysing Capacity Planning Decisions (Make or Buy Decisions), Aggregate Planning (Level Production and Chase Demand Strategy)	CO5	3
8	Materials Requirement Planning (Master Production Schedule, Product structure, BOM, Lot Sizing Rule (Lot for lot, Fixed Order Quantity, Periodic Order Quantity)	CO4	3
9	Sequencing and Scheduling Scheduling Rules (Shortest Processing Time, Longest, Processing Time, Earliest Due Date), Gantt Chart, Johnson's Rule (N Jobs on Two machine/ Three machine)	CO4	3

10	Foundation of Quality Management Gurus - Walter Shewhart, Deming, Juran, Crosby, Ishikawa, Tagochi, Ohno and Shingo, Core elements of Quality, Continuous Improvement, Cost of Quality	CO2	3
11	Quality in Operations Management Quality Control, Statistical Quality Control, Statistical Process Control, Quality Management System (QMS), Quality Assurance, Environment Sustainability Governance, Sustainable Development Goals, PDCA Cycle (Plan Do Check Act)	CO2	3
12	Value Engineering: its aims, examples, advantages, stages, types of values (use, cost, esteem, exchange), steps of value engineering, value engineering vs value analysis Value Analysis: Meaning, Stages of Value Analysis, Merits & Limitations	CO3	3
13	Introduction to Logistics and Warehouse Management Mode of logistics, Vendor Managed Inventory (VMI), software's for warehouse management (Warehouse Management System- WMS), tools and equipment for material handling, Automating ware-houses	CO2	3
14	Operations Strategies in a Global Economy Contemporary business situation, Competitive Priorities, Elements of Operations Strategy, Operations Strategy in Services, Linking Operations with marketing	CO5	3
15	Introduction to Operations Technologies Types of manufacturing automations, Automated Production Systems, Automation Issues, Business Applications	CO2	3

16	Lean Management Introduction to lean management in manufacturing and services, Theory of Constraints (TOC), Business Applications	CO2 , CO3	3
17	Demand Forecasting Qualitative (Educated Guess, Delphi Method, Survey of Sales Force, Historical Analogy) and Quantitative methods (Moving Average, Weighted Moving Average, Exponential Smoothening), Short term, medium term and long term forecasting, forecast accuracy, Business Applications	CO4	3
18	Introduction to Supply Chain Management Information and Material Flows, Supply Chain Components (In-house and out-bound), Supply Chain Structure, Measures of Supply Chain Performance, Design of Supply Chain	CO2	3
19	Service Operations Management Nature of Services, Operations Strategies for Services, Challenges in Services	CO2	3
20	Employee Productivity Productivity and Human Behavior, Work Method Analysis, Work Measurements, Time Study, Learning Curves, Employees Health and Safety	CO2	3

Text Books:

1. Operations Management, 9e by Norman Gaither, Cengage Learning
2. Operations management, 13e by William J Stevenson, McGrawHill
3. Operations Management: Theory and Practice, 3e, B. Mahadevan, Pearson

Reference Books:

1. Production and Operations Management-S N Chary, Tata McGraw Hill
2. Production and Operations Management- Chunawalla & Patel, Himalaya Publishing
3. Operations Management for Competitive Advantage-Chase & Jacob, McGraw-Hill

Mandatory Course 8: Information Technology for Business

Course Credits: 4
Course Outcomes:

- CO1: Acquire the knowledge on information Technology, and its functional perspectives.
- CO2: Understanding the emerging trends of information technology, the Information Technology Infrastructure and its role to changing Business environment.
- CO2: Analyzing the emerging trends of information technologies and its integration to business application across the functions and verticals of the industry.
- CO4: Apply the knowledge of data management and data analytics tools to solve the business problems
- CO5: Develop and Design Various Information Technology strategies for successful digital transformation.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Information Technology in Business Overview of IT infrastructure and its role in business operations. Emerging trends and technologies in Information Technology	CO1, CO2	6
2	Big Data Management, Data Analytics and Business Intelligence Introduction to database, data mining, Data warehouse, data analytics tools and techniques and big data management. Business intelligence for decision-making and competitive advantage	CO2, CO4, CO5	8
3	Telecommunication, Wireless Technology, Cloud Computing and Virtualization	CO2, CO3	10

	Introduction to Telecommunication, the Internet and wireless Technology Cloud computing models (IaaS, PaaS, SaaS) and their business applications. Virtualization technologies and their benefits in business operations.		
4	E-Business & Digital Transformation Strategies Introduction to E-commerce & E –Business, Digital Markets and Digital Goods Understanding digital transformation and its impact on businesses. Case studies on E-Business & successful digital transformation initiatives.	CO1, CO4, CO5, CO6	8
5	IT Governance and Compliance & Ethical and social issues IT governance frameworks and their implementation. Ethical and social issues in Information Technology Compliance and regulatory issues in IT management	CO1, CO2, CO3	8
6	Privacy & Cybersecurity and Risk Management Fundamentals of Privacy Issues & cybersecurity in business environments. Risk assessment and management strategies	CO2, CO4, CO5, CO6	8
7	Business Applications of IT Business application of Information Technology across function and Verticals of the Industry Enterprise resource planning (ERP) systems and their implementation. Case studies on Business Application of Information Technology		8

8	Emerging Technologies and Innovation Exploration of emerging technologies such as Artificial Intelligence, (AI), ML, IoT, and Blockchain, Digital Payments, Mobile Computing, Social Media Innovation management and fostering a culture of innovation in IT.		4

Text Books:

1. Introduction to Information Technology: Turban , Rainer Potter
2. Management Information Systems for the Information Age (9e) by Maeve Cummings. McGraw-Hill/Irwin (2012).
3. Management Information System- Managing the Digital Firm by Laudon and Laudon.
4. Information Technology for Management by Dr Chandrahauns R Chavan & B Lal Universal Publication, Mumbai
5. Principal of Information System by Ralph M. Stair and Georg Reynold.

Reference Books:

1. Digital Business by Dr Chandrahauns Chavan , KBI International, Mumbai
2. A Management Information Systems by O'Brien, James. Tata McGraw Hill, New Delhi,
3. Introduction to Financial Technologies FINTECH, By Dr Chandrahauns Chavan & Atul Patankar , Pearson Publications
4. Elements of Systems Analysis and Design by Marvin Gore. Galgota Publications.
5. MIS a Conceptual Framework by Davis and Olson.
6. Analysis and Design of Information Systems by James Senn.
7. Information Systems Today by Jessup and Valacich. Prentice Hall India.
8. Management Information Systems by Jaiswal and Mittal. Oxford University Press.

Elective Course 1: Managerial Communication

Course Credits: 2

Course Outcomes:

- CO1: Ability to use specific and direct language when giving instructions to and encourage open dialogue and sharing of diverse perspectives to reach mutually beneficial outcomes.
- CO2: Develop competency to give and receive feedback constructively.
- CO3: Develop listening and comprehension abilities for facilitation in decision making and problem solving and personal and professional development.
- CO4: Applying effective communication skills for the expression of emotions and demonstration of empathy to create strong relationships with colleagues and clients and to foster a collaborative environment.
- CO5: Create effective digital communication such as emails and social media posts and use video conferencing and collaborative tools to maintain clear communication with remote team members.

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Fundamentals of Communication** - Introduction and Theory of Communication. - Definition, Cycle, Models, Strategies, Channels and Types. - 7 C's of Communication. - Channels. - Barriers.	CO1	3

2	**Personality Assessment** - Personality Development – - Self - discovery. - Developing a positive attitude. - Grooming. - Career Planning. - Stress Management. - Time Management.	CO1, CO2, CO3	6
3	**Listening Skills** - Hearing Vs. Listening - Process, Principles, Types, Barriers	CO1, CO2, CO3	3
4	**Reading and Comprehension Skills** - Developing Reading Skills. - Process, types and reading rate adjustment. - Tips for improving reading skills - Speed Reading - Reading Comprehension - Reading Business papers - Researching for Business - Review of a book/journal	CO1, CO2, CO3	3

5	**Developing Effective Writing Skills** - Progression of thoughts /ideas - Paragraph writing. - Mechanics and Semantics of sentences. - Writing sentences that communicate - brevity, clarity, and simplicity. - Improving the tone and style of sentences. - Structure of Essays.	CO3, CO4	3
6	**Effective Writing Skills** - Paraphrasing - Summarizing - Note –taking - Proof - reading - Editing - Comprehension - Precis Writing Types of Reports - Purpose and Scope of a Report. Fundamental Principles of Report Writing.	CO3, CO4	3
7	**Corporate Correspondence** - Resume/CV/Profile, Cover Letters, E-mails, Etiquettes, Netiquettes - Appropriate usage of AI Tools	CO3, CO4, CO5	3

8	Non-verbal Communication - Kinesics (body language), Oculesics (eye contact), Haptics (touch), proxemics (distance), Chronemics (use of time), Paralinguistics (vocalics)	CO3, CO4, CO5	3
9	Presentation Skills - Public Speaking - Audience Analysis - Delivery Techniques (Impromptu, Manuscript, Memorized, and Extemporaneous.) - Visual Aids (PPTs, infographics, Audio-Visual Presentations, etc.)	CO3, CO4, CO5	3

Text Books:

1. Asha Kaul, “Business Communication” - Eastern Economy Edition, Prentice – Hall of India Private Limited
2. Taylor & Chandra, “Communication for Business: A Practical Approach,” Pearson
3. Singh Nirmal, “Business Communication: Principles, Methods & Techniques, “Deep & Deep Publications, Delhi
4. Krishna Mohan & Meera Banerji, “Developing Communication Skills” MacMillan
5. Murphy, Hildebrandt & Thomas, “Effective Business Communication,” McGraw Hill.

Reference Texts & Material:

1. The 3 Pillars of Personal Effectiveness by Troels Richte
2. The 7 Habits of Highly Effective People: Powerful Lessons in Personal Change by Stephen. R. Covey
3. Doctor & Doctor, “Business Communication,” Sheth Publishers
4. Raman & Singh, “Business Communication,” Oxford University Press

5. Madhukar R.K, “Business Communication, “Vikas Publishing house
6. McKay, Davis 7 Fanning, “Communication Skills, “B. Jain Publishers Pvt. Ltd, New Delhi

Suggested Pedagogy – Lectures, Audio-Visual Aids, Case Studies, Presentations, Role-plays, Assignments – Oral and Written

Elective Course 2: Creativity & Design Thinking

Course Credits: 2

Course Outcomes:

- CO1: Demonstrate the understanding of critical theories of design, systems thinking, and design methodologies
- CO2: Demonstrate the understanding of diverse methods employed in design thinking and establish a workable design thinking framework to use in their practices
- CO3: Conceive, organize, lead and Design interdisciplinary domain while addressing social concerns with innovative approaches

Unit / Module	Content	CO Mapping	Hours Assigned
1	Creativity, innovation and design - Core concepts of creativity, design and innovation Creative people, Creative organizations, & Creativity Impact– Case Analysis & Discussions Distributed creativity How diversity and collaboration through networks support the creativity process	CO1	3
2	Design Thinking Overview: Concept of Design thinking; Importance of Design Thinking Method; Design Thinking Skills; Design Thinking Mind-set; Principles of Design Thinking; Design Think Process & Stages	CO1, CO2	3
3	General Design Thinking Practices: Listening and Empathizing Techniques; Observation. Ideation Techniques - Brainstorming, innovation heuristics, behaviour models, Unpacking; Personas; Pattern Recognition and Connecting the Dots	CO1, CO2	3
4	Visualization Techniques and Diagrams, Use of Diagrams and Maps in Design Thinking - Exercise:	CO1, CO2	6

	Create an Empathy Map; Exercise; Create an Affinity Diagram; Exercise: Create a Mind Map; Exercise: Create a Journey Map		
5	Prototype and Test Techniques; Types of Prototypes; Forms of Testing in Design Thinking	CO1, CO2	3
6	Experiments Designing and executing experiments for value creation: Empathize with the Customers and/or Users - Exercise: Engage the Customer /User; Define the Problem - Exercise: Define the Point of View; Ideate - Exercise: Develop Potential Solutions & Feedback on the Solutions; Prototype Alternate Solutions - Exercise: Create a Prototype of the Solution & Review the Prototype and Gain Feedback; Test the Solutions	CO3	6
7	Moving from ideas to impact Bring the ideas presented in this course together and show how organizations can create impact from ideas	CO1, CO2	3
8	Cautions and Pitfalls: Assumptions &, Pitfalls, Cautions in Design Thinking Workgroups – case Discussions	CO1, CO2, CO3	3

Text Books:

1. Tim Brown, Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation, Harper Collins Publishers Ltd.
2. Idris Mootee, Design Thinking for Strategic Innovation, John Wiley & Sons Inc

Reference Books:

1. Brenda Laurel, Design Research methods and perspectives MIT press
2. Terwiesch, C. & Ulrich, K.T., Innovation Tournaments: creating and identifying Exceptional Opportunities, Harvard Business Press.
3. Ulrich & Eppinger, Product Design and Development, McGraw Hill
4. Bjarki Hallgrimsson, Prototyping and model making for product design, Laurence King Publishing Ltd

Elective Course 3: Legal and Tax Aspects of Business

Course Credits: 2

Course Outcomes:

- CO1: Acquire the basic knowledge of rights and duties under various legal Acts as a responsible citizen as well as for the business.
- CO2: Understand and explain the consequences of applicability of various laws on business situations.
- CO3: Develop critical thinking through the use of law cases as a consumer for protection, as an investor as well as for data security
- CO4: Apply the various provisions of Direct and Indirect taxes for computation of Taxable Income.
- CO5: Create Income Tax computation for personal as well as for the corporate

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Business Laws:** The Indian Contract Act, The Sale of Goods Act,	CO1, CO2	6
2	**Introduction to Companies Act – Important Provisions**	CO1, CO2, CO3	6
3	**Laws related to Consumers** The Consumer Protection Act The Right to Information Act	CO1, CO2, CO3	3
4	**Finance Laws** ● Securities Contract Regulation Act ● The Negotiable Instruments Act	CO1, CO2, CO3	6

5	**Indian Income Tax Act**- ● Computation of Total Income and Determination of Tax Liability –individuals ● Computation of Total Income and Determination of Tax Liability –Corporates	CO3 CO4 CO5	6
6	**Indirect Taxes** GST Custom Act	CO2, CO3, CO4	3

Text Books:

1. Students Guide to Income Tax – Monica Singhania and Vinod Singhania
2. Students Guide to Indirect Taxes – Monica Singhania and Vinod Singhania
3. Legal Aspects of Business – Akhileshwar Pathak
4. Kucchal M. C., Business Law/Mercantile Law, Vikas Publishing House (P) Ltd.: Part II & Part IV

Reference Books

1. Aggarwal Rohini, Mercantile & Commercial Law, Taxmann
2. Kapoor Gulshan, Business Law. New Age International Pvt. Ltd Publishers
3. Maheshwari & Maheshwari, Principle of Mercantile Law, National Publishing Trust.

Elective Course 4: Bhartiya Management

Course Credits: 2

Course Outcomes:

- CO1: Understand the management lessons from ancient Indian philosophy and texts
- CO2: Applying the contexts from Indian philosophy in management discussion
- CO3: Analysing the Indian philosophical approaches to Leadership, Sarvodaya, Satyagraha and Trusteeship
- CO4: Evaluating the impact of Indian philosophical approaches in management of self and life skills
- CO5: Formulate Bhartiya Management Thought for Management Decision making, Leadership development

Unit / Module	Content	CO Mapping	Hours Assigned
1	Bharatiya Management - Tenets & Relevance: A. Tenets of Bharatiya Management : The synthesis of important dimensions of Indian Culture , Indian Philosophy & Management B. Role & Relevance of Self-Management & Social development; Swami Vivekananda's Four Yoga (Bhakti, Karma, Jnana & Raja Yoga)	CO1, CO2	5
2	Human Values Enrichment & Dimensions of Good Governance: A. Human Values Enrichment: Significance of the Theory of the Purusarthas (Dharma , Artha, Kama & Moksha) B. Good Governance approach: Bhagvad Gita's approach on Lokasamgraha & Mahatma Gandhi's emphasis on Sarvodaya.	CO1, CO2, CO3	5
3	Management Lessons from Ancient Texts: A. Management Insights from Mahabharata - Lessons of Strategic Management from Mahabharata & Bhagwat Gita B. Management Lessons from Arthashastra C. Management Lessons from Panchatantra	CO2, CO3, CO4	5

4	Leadership Lessons from Indian Philosophy: A. Philosophy of Yoga : Patanjali's Yoga approach on Astanga Marga B. Saptanga Model of Leadership: Reflections on Kautilya's Arthashastra C: Samkhya philosophy, 'Guna' concept of Indian Vedic philosophy D: Rajarshi Leadership; Indian Philosophy and Servant Leadership	CO4, CO5	5
5	A. Focus on life Skills Management & Significance of Indian scriptures B. Indian Philosophy & context of Social Responsibility & Sustainable Development. C. Trusteeship concept of Mahatma Gandhi D. Practical Application of Indian Philosophical Principles in Business - Discussion on Case Studies	CO4, CO5	5

Text Books:

1. Management by Values, by Chakraborty S K
2. Values of Ethics for Organization: Theory and Practice,by Chakraborty S. K.
3. Rajarshi Leadership, by S.K. Chakraborty & Debangshu Chakraborty

Reference Books

1. Leadership & Motivation: Cultural Comparisons, by Debangashu Chakraborty, S. K. Chakraborty
2. Spirituality in Management: Means or End?, by S.K. Chakraborty, Debangshu Chakraborty
3. Leadership and Power: Ethical Explorations, by S. K.Chakraborty, Pradip Bhattacharya
4. The Arthashastra - Kautilya (translation by L N Rangarajan), Penguin Books
5. Indian Models of Economy, Business and Management Paperback, by Kanagasabapathi P, Third Edition, Prentice Hall India Learning Private Limited
6. Economic Sutra: Ancient Indian Antecedents to Economic Thought, by Satish Y Deodhar, Penguin Portfolio

Other Suggested Reading:

1. https://ebooks.inflibnet.ac.in/mgmtp05/chapter/indian-thought-and-management/
2. https://ebooks.inflibnet.ac.in/hrmp01/chapter/246/
3. https://egyankosh.ac.in/bitstream/123456789/92306/1/Unit-9.pdf

SEMESTER - II

Mandatory Course 1: Business Research Methods

Course Credits: 4

Course Outcomes:

- CO1: Identify research problem and develop research hypothesis on the basis of review of literature and research design (Understand and apply L2, L3)
- CO2: Construct the research process which includes research flow charts and organize the various attitude & measurement scales, Questionnaire design, and various sampling techniques (Apply, L3)
- CO3: Understand the methods of data collection with application in different research designs and demonstrate knowledge for proper sampling design and data processing methods (Understand, L2, Apply L3)
- CO4: Apply modern statistical tools as univariate& bivariate analysis, Chi-square, and ANOVA to analyze and to evaluate the data applying critical thinking abilities for given research problems/questions (Apply, Analyze and Evaluate, L3, L4, L5)
- CO5: Prepare and Analyze/Evaluate various research reports maintaining ethical practices to solve business problems. (Analyze L4, Evaluate L5, Create, L6)

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Introduction to Research:** What is research, objectives of research, types of research, difference between basic and applied research, research approaches, criteria for good research, research methods vs research methodology, Social research, social research approaches. Research applications in social and business sciences, and research process.	CO1	3
2	**Research Problem, Literature review and Formulation of Research Hypotheses:** what is research problem, problem selection, necessity of	CO1	4

	defining the problem, Management Decision Problem vs Management Research Problem; Problem identification process; Components of the research problem; Objectives of literature review, Use of literature review, search for related literature, reading the literature, importance of literature review, sources of literature, literature review gaps, Types of Research hypothesis, and important terms. Writing research proposal- Contents of a research proposal.		
3	**Research Design:** Nature and Classification of Research Designs, need for research design, features of a good design, research design frame work, Induction and deduction, Dependent, independent variables. Exploratory research design, descriptive, diagnostic research design, Experimental research design.	CO1	4
4	**Sampling:** Sample design, Sampling design process, sampling and non-sampling errors, types of sampling (probability and non-probability), sample vs census, sample size decision. Determination of Sample size- Sample size for estimating population mean, Determination of sample size for estimating the population proportion	CO2, CO3	7 [3 hours session + 4 hours field work for the selected research topic]
5	**Attitude Measurement and Scaling:** quantitative and qualitative data, classification of measurement scale, goodness of measurement scale, types of scale, scale classification base, scaling techniques (comparative vs non comparative scaling techniques), and criteria for good measurement.	CO3	4

6	**Data collection and Data processing:** Data collection: Primary Data; Observation methods, survey methods, questionnaire, process of questionnaire, Types of Questionnaires, Process of Questionnaire Designing; Advantages and Disadvantages of Questionnaire Method. Pilot survey, sample questionnaire, difference between questionnaire and schedule. Interviews: types of interviews. Secondary data; classification of data(internal and external data), research authentication(Methodology check and accuracy check) Data processing: Editing Field Editing (centralized in house editing) Coding- Coding Closed ended structured Questions, Coding open ended structured Questions; Classification and Tabulation of data. Data cleaning, data adjusting. [**Use of SPSS/EXCEL/JASP in Activity Based Learning is encouraged]**	CO2, CO3	7
7	**Univariate and Bivariate Analysis of Data:** Descriptive vs inferential analysis, descriptive analysis of univariate data (Missing data, analysis of multiple responses, grouping large data), descriptive analysis of bivariate data (cross-tabulation), calculating rank order, data transformation. Microsoft EXCEL: Working in the spreadsheet, creating a worksheet **Reliability test- Cronbach alpha** [**Use of SPSS/EXCEL/JASP in Activity Based Learning is encouraged]**	CO4	7
8	**Testing of Hypothesis**: Concepts in Testing of Hypothesis – Steps in testing of hypothesis, Test	CO4	4

	Statistic for testing hypothesis about population mean; Tests concerning Means- the case of single population; Tests for Difference between two population means; Use of SPSS in testing Hypothesis. Parametric and non-parametric test Z-test, t-test, f-test, One sample test, Two independent sample test, two related samples test. [**Use of SPSS/EXCEL/JASP in Activity Based Learning is encouraged]**		
9	**Analysis of variance:** The ANOVA techniques, basic principles, one way ANOVA, Two way ANOVA,ANOCOVA, MANCOVA [**Use of SPSS/EXCEL/JASP in Activity Based Learning is encouraged]**	CO4	3
10	**Chi-Square Tests:** Chi square test for the Goodness of Fit; Chi square test for the independence of variables; Chi square test for the equality of more than two population proportions [**Use of SPSS/EXCEL/JASP in Activity Based Learning is encouraged]**	CO4	2
11	**Data analysis:** Statistical analysis, multivariate analysis, correlation analysis, regression analysis, Principal component analysis. Cluster Analysis [**Use of SPSS/EXCEL/JASP in Activity Based Learning is encouraged]**	CO4	6
12	**Research Report Writing and Ethics in research:** Need for effective documentation, types of research report, report preparation and presentation, report structure, general tips for writing research report,	CO5	6

	presentation of data, bibliography and references. Guidelines for presenting tabular data, Guidelines for visual Representations. Meaning of Research Ethics; Clients Ethical code; Researchers Ethical code; Ethical Codes related to respondents; Responsibility of ethics in research Plagiarism check and understanding consequences of unethical practices [Suggested Activity **Research paper writing; Use of Plagiarism software]**		
13.	Research Theme Based Research Papers / Presentation	CO5, CO6	6

Text Books:

1. Business Research Methods – Cooper Schindler
2. Research Methodology Methods & Techniques – C.R. Kothari
3. Statistics for Management – Richard L Levin
4. Research Methods for Business: A Skill Building Approach - Uma Sekaran, Roger Bougie

Reference Books:

1. D. K. Bhattacharya: Research Methodology (Excel)
2. P. C. Tripathy: A text book of Research Methodology in Social Science (Sultan
3. Chand)
4. Saunder: Research Methods for business students (Pearson)
5. Marketing Research –Hair, Bush, Ortinau (2nd edition Tata McGraw Hill)
6. Business Research Methods – Alan Bryman& Emma Bell – Oxford
7. Publications
8. Business Research Methods – Naval Bajpai – Pearson Publications
9. Business Research Methods- S N Murthy and U Bhojanna, Excel books
10. Research Methodology Methods & Techniques – C.R.Kothari and Gaurav Garg, New age international limited
11. Research Methodology- S.S.Vinod Chandra, S.Anand Hareendran,-Pearson
12. Research Methodology- S.S.Vinod Chandra, S.Anand Hareendran,-Pearson
13. Research Methodology-Dr.Prasant Sarangi-Taxmann Publications pvt.ltd.
14. Business Research Methods- Cooper Schindler, JK sharma-McGraw Hill

Mandatory Course 2: Corporate Finance

Course Credits: 4

Course Outcomes:

- CO1: Recall basic terminologies in relation to financial system, sources of finance, Leverages, Ratio, capital structure, investment decisions, dividends, financial planning, inventory and working capital management.
- CO2: Explain the concepts & formulas pertaining to corporate finance, financial system, functions of financial management and financial practices to understand its relevance in current scenario.
- CO3: Make use of different models, formulas and frameworks related to ratios, Leverage Analysis, Capital structure, Capital budgeting, Working Capital and Dividend models.
- CO4: Examine and analyse various corporate financial statements of companies based on ratios, capital structure, capital budgeting, working capital management and dividend policies of companies and study its implications on the profits and valuation of firms
- CO5: Evaluate financial results to take managerial decisions related to financial planning, capital investments, dividend distribution, choice of capital structure and working capital decisions.
- CO6: Create an analytical report on capital structure, working capital management and dividend policy of a public listed company.

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Corporate Finance** Objectives of Corporate Finance Role and responsibilities of the financial manager, corporate finance decisions, Functions of corporate finance, Sources of Finance - Short Term and Long Term Goals of firm-profit maximisation v/s Shareholders wealth concepts of Economic value addition .market value addition (EVA/MVA)	CO1, CO2	4

2	**Indian Financial system** - Financial Markets: Capital Market (Equity and Debt market), Money market Financial Intermediaries Financial Assets, Regulatory system	CO1, CO2	4
3	**Working Capital Management** and Short-Term Planning: Components of working capital, working capital cycle, Inventory Management, Receivables Management, Cash Management	CO3	6
4	**Financial Planning and Forecasting**, Meaning and importance of financial planning, Preparation of Pro-forma Income Statement and Balance Sheet, Computation of external financing requirements	CO3, CO4	4
5	**Banking and Financial Institutions** types: Commercial banks, Investment Banks Understanding banking Finances: Sources, Deposits, Loans, Advances, NPA, gross net, Basic overview of BASEL Norms, use of AI in Banking sector	CO2, CO3	4
6	**Leverage Analysis**: Operating, financial and total leverage, Business risk, Operating and financial Risk and other types of risks	CO2, CO3, CO4	4
7	**Capital Structure,** Cost of Capital, WACC, Determination of optimal capital structure, Decision making based on parameters PE ,ROI, EBIT and EPS/MPS approach	CO2, CO3, CO4,CO5	6
8	**Valuation Concepts:** Future values and compound interest; present values; level cash flows: perpetuities and annuities Financial needs and suggestions for various investment options	CO2, CO3, CO4, CO5	4

9	**Investment in Capital Assets**: Capital budgeting and estimating cash flows; capital budgeting techniques; multiple internal rates of return Decision making about best alternative project for investment use various evaluation techniques like NPV, IRR, PI,ARR, Modified IRR payback period etc.	CO3, CO4,CO5	8 hours
10	**Dividend policy**; Factors affecting dividend decision; theories of relevance and irrelevance of dividend policy Dividend decision models; Walter model; Gordon model; Walter model MM approach	CO3, CO4,CO5	6
11	**Ratio Analysis** : Financial performance analysis using Ratios of few companies and banks	CO3, CO4,CO5	4
12	Presentations and Assignments	CO6	03
13	Presentation and Assignment	CO6	03

Text Books:

1. Financial Management – M.Y. Khan and P.K. Jain
2. Financial Management – Prasanna Chandra
3. Financial Management – I. M. Pandey

Reference Books:

1. Principles of Corporate Finance – Myers and Brealey
2. Fundamentals of Financial Management – James Van Horne
3. Fundamentals of Financial Management by Eugene F. Brigham, Joel F. Houston (2011), South Western (Cengage Learning)

Mandatory Course 3: Human Resource Management

Course Credits: 4

Course Outcomes:

CO1: Understanding the importance of the most crucial asset of any business, i.e. Human Resource and to show how different modern concepts, techniques and practices in the management of human resources are important in the organizational set-up. (Bloom's Taxonomy Level 1 &2)

CO2: Analysing different functions of Human Resource Management which are important for the organizational effectiveness and to develop an awareness among the students about the influence of HRM on the business and its' strategies. (Bloom's Taxonomy Level 2, 3, 5 & 6)

CO3: Using the latest theoretical concepts and techniques to examine the problems with respect to the human resource in an organizational set-up and solve such problems to build and improve organizational effectiveness. (Bloom's Taxonomy Level 3, 4 & 6)

CO4: Analysing the relevance and application of ancient Indian Scriptures to HRM (Bloom's Taxonomy Level 4)

Unit / Module	Content	CO Mapping	Hours Assigned
1.	Introduction to HRM: Definition, Importance, Challenges, Models of HRM, Structure and Functions of HR department.	CO1, CO2	4
2.	HR Policies: Human Resource Planning: Importance and the process of Human Resource Planning, Succession Planning & Job Analysis.	CO2	4
3.	Talent Acquisition: Definition, Characteristics, Talent Acquisition process and methods.	CO2, CO3	6
4.	Learning and Development: Definition, Importance, Methods of Learning and Development & Evaluation.	CO2, CO3	7
5.	Performance Management System: Definition, Methods of Performance Management System,	CO2, CO3	6

	Difference between Performance Appraisal and Performance Management, Errors in Performance Appraisal, Competency Based PMS.		
6.	Compensation and Benefits: Definition, Direct & Indirect Compensation and Types of benefits.	CO2, CO3	6
7.	HR Accounting and HR Auditing – HR Capital Management	CO3	3
8.	Human Resource Information Systems	CO3	3
9.	Strategic HRM, HR Balance Scorecard & Workforce Diversity	CO3	4
10.	Trends in HRM: Definition, Importance and Applications of HR Analytics. Definition, Importance, and benefits of AI in HRM. Green HRM and Sustainability Definition, Introduction, Benefits of Green HRM and Sustainability practices, Flexible Work Strategies, International HRM	CO3	8
11.	Industrial Relations: Definition, Importance and Benefits of IR	CO1, CO2, CO3	3
12.	Introduction to Labour Laws and Statutory Employment Laws.	CO1, CO2, CO3	3
13.	Ancient Indian Scriptures and HRM	CO4	3

Text Books:

1. Human Resource Management Garry Dessler & Biju Varkkey: Pearson Publication
2. Human Resource Management: K. Aswathappa; Mac Graw Hill Publication
3. Human Resource Management P. Subba Rao

Reference Books:

1. Human Resource Management by V S P Rao
2. Personnel Management C.B. Mammoria
3. AI in HRM: Concepts and Applications by Dr. S. Ganesh and Dr. M. Anandhavalli
4. Green HRM: A Sustainable Approach to People Management by K. Aswathappa and M.S. Premavathy.
5. Analytics for HR: A Practical Approach by Somnath Baishya and Sourav Sengupta
6. Human Resource Management – A South Asian Perspective by Snell, Bohlander & Vora Fourth Edition 2011
7. Human Resource Management by P. Jyothi, D.N. Venkatesh, 2011
8. Ancient Indian Scriptures and Human Resource Management by Sneh Bhardwaj, Regal Publications, 2020

Mandatory Course 4: Application of Marketing: Theory and Practice

Course Credits: 2

Course Outcomes:

- CO1: Understand the various types of positioning, as well as the frameworks and models of Consumer Behaviour.
- CO2: Apply the concepts of consumer psychology and behaviour to business situations
- CO3: Analyze marketing decisions based on the frameworks and consistency among various elements of the marketing mix
- CO4: Evaluate marketing decisions and identify the optimal solution in a given context
- CO5: Formulate a situations audit, and draw a Marketing plan covering all concepts and theories learnt

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Positioning:** Reverse Positioning, Breakaway Positioning and Stealth positioning; **Branding:** Concept, Definition, Commodity Vs Brand, Product Vs Brand, Brand Culture and Brand Extensions. **Brand Value** – Reputation, Relationship, Experiential, Symbolic. **Brand Evaluation** - Behaviour, attitude, relationships, Brand equity.	CO1, CO2, CO3	3
2	**Customer Satisfaction and Loyalty**: Success/ Failure of Loyalty Programs, Customer Lifetime Value.	CO2	1.5
3	**Consumer Behaviour:** The framework of Consumer Behaviour – Cognitive vs. Emotional, High vs. Low Involvement, Optimising vs. Satisficing, Compensatory vs. Non-Compensatory Decisions.	CO2, CO3	3

4	**Consumer Decision-Making Process**: Pre-Purchase – Purchase – Post Purchase; Return Policy, Warranty, Impact of Social Media; Psychology in Consumer Behaviour – Consumer Benefits Ladder, Prospect theory, Thales' Endowment effect.	CO2, CO3, CO4	1.5
5	Ehrenberg's Law of Buying Frequency, Double Jeopardy Effect, Consumer Purchase as a Journey, Consumer and Product Metrics.	CO2, CO3, CO4	1.5
6	**Pricing Policy**: Types of Pricing, Willingness to Pay; Steps in Pricing, Price Elasticity of Demand, List and Transaction Prices;	CO2, CO3	1.5
7	**Price band** – Reason for the Band, Category Expandability and Promotion, Constructing a Price Band through Price Differentials and Threshold Price, Pricing Strategies and Tactics, Promotion and Price bands	CO2, CO3, CO4	3
8	**Business to Business Marketing**: Definition, Types of Products, Differences from Consumer Marketing; Nested Hierarchy Segmentation, Role of Decision-Making Units in Buying Decisions.	CO2, CO3	3
9	**B2B Purchases**: Influence of Types of Purchases, Stages in the Buying Process; Types of Benefits – Combination of Economic, Tangible, Non-Economic and Intangible Benefits.	CO2, CO3	1.5
10	**Promotion and Marketing Communication:** Role of Promotion in Pricing, Initiating Price Changes and Response to Competitor Changes; Role of Incentives, Setting Communication Objectives and Drafting Communication Messages; Deciding on Communication Media	CO2, CO3	1.5
11	**Integrated Marketing**: Advertising in Print, Online, Radio, Social Media Platforms etc.; Managing Events and Public Relations; role of AI in marketing communications	CO3, CO4	1.5

12	**Personal Selling**: Designing the Sales Force, Managing the Sales Force, Evaluating the Sales Force; Direct Marketing	CO2 , CO3	3
13	**Distribution Decisions** – Logistics & Channel Decisions, Designing and Managing Distribution Channels (Retail, E-commerce, etc.)	CO2, CO3	3
14	Field Based Live Projects and Presentations by capturing insights from Markets, and Cases	CO3, CO4, CO5	1.5

Text Books:

1. Marketing Management, 15/16e by Kotler, Keller, Chernev, Sheth, Shainesh, Pearson Education
2. Marketing: Theory, Evidence, Practice: Byron Sharp, Oxford University Press.
3. Industrial Marketing, Robert R. Reeder, Briety & Betty H. Reeder, Prentice Hall India

Reference Books

1. Why we Buy? The Science of Shopping – Paco Underhill
2. How Brands Become Icons – The Principles of Cultural Branding – Douglas Holt
3. How Customers Think – Essential Insights into the minds of the Market – Gerald Zaltman
4. Marketing Metaphoria: What Deep Metaphors Reveal About the Minds of Consumers – Gerald Zaltman
5. Marketing as Strategy: Understanding CEO's agenda for Driving growth and Innovation – Nirmalya Kumar

Mandatory Course 5: Decision Models in Management

Course Credits: 2

Course Outcomes:

- CO1: RELATE basic concepts of operations research
- CO2: TRANSLATE the concepts of operations research and connect with business scenarios
- CO3: APPLY optimization techniques for decision making in business
- CO4: EVALUATE various scenarios of management and business using decision models
- CO5: PRIORITIZE solutions to the business problems related to operations research
- CO6: FORMULATE innovative solutions related to decision models

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Operations Research Definition of OR, Features of OR, OR-Quantitative Approach to Decision-making, Methodology of Operations Research, Application of Operations Research	CO1, CO2	3
2	Linear Programing: Formulation and Graphical Solutions Structure and assumptions of LP model, Application areas of LP, Guidelines for LP model formulation Two variable LP model, Graphical LP model (maximization and minimization), Duality and Sensitivity Analysis	CO3, CO4	3
3	Assignment Problem (AP1): Mathematical Model of Assignment Problem, Enumeration Method, Transportation Method	CO3, CO4	3
4	Assignment Problem (AP2): Simplex Method and Interpretation (Maximization and Minimization (two phase and Big M), Hungarian Method (Steps and numerical)	CO3	3

5	Transportation Problem (TP1): Methods for finding initial solution: Vogel's Approximation Method (VAM), Northwest Corner Method, Least cost methods (LCM), Application areas of TP	CO3, CO4	3
6	Transportation problem (TP2): Optimal Solution: The Stepping Stone Method, Modified Distribution (MODI) Method and special cases	CO3, CO4	3
7	Game Theory Introduction to Game Theory, 2 person zero sum game, Pure Strategies (Games with Saddle points), Limitation and Application of Game Theory, Rule of dominance	CO2, CO3, CO4	3
8	Decision Theory Introduction, Steps in decision making process,types of decision environment (Under certainty, under risk, under uncertainty) , Decision making under uncertainty (optimism (maximax or minimin), pessimism (maximin or minimax), equal probabilities (laplace), coefficient of optimism (hurwicz), regret (savage)), Decision tree	CO4, CO5	3
9	Queuing Theory Introduction, structure of queuing system (arrival process, service system, speed of service, queue structure (FIFO, LIFO, Service in Random order, Priority Service), Queuing models (deterministic and probabilistic model theory)	CO1, CO2	3
10	Sequencing Problem Sequencing Techniques using Johnsons' Rule (processing n jobs through 2 machine, 3 machines and m machines)	CO4, CO5	3

Text Books:

1. Operation Research – An introduction- Hamdy Taha, Prentice Hall of India
2. Quantitative Techniques in Management –N. D. Vohra, Tata McGraw Hill
3. Operations Research Theory and Applications- J. K. Sharma, Macmillan Business books

Reference Books:

1. Principles of Operations Research –Wagner, Prentice Hall of India
2. Operations Research- Hilier, Liberman, Tata McGraw Hill
3. An introduction to Management Science – Anderson Sweeney Williams, Cengage Learning

Mandatory Course 6: Information Systems and Digital Transformation

Course Credits: 2
Course Outcomes:

Course Outcome

- CO1: Acquire the basic knowledge on information systems, Organisations, Management and its related components
- CO2: Understanding the significance of information systems, Global Information Systems Infrastructure and its role to Business.
- CO2: Analyzing the business systems and need of information, emerging trends within functional information systems for marketing, financial, human resource, operations and for various verticals of the industry and its integration to business.
- CO4: Develop the information system strategies to solve the business problems for competitive advantage and derive value to the business.
- CO5: Create & Design Information systems models for successful digital transformation.

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Information Systems, Management, Organization:** Overview of information systems, management and organizations their components. Information & Types of Information systems and its value dimension Role of IS in supporting business processes and decision-making.	CO1, CO2, CO3	3
2	**Building MIS across the Functions, Sectors & Enterprise Resource Planning:** Marketing Information Systems, Manufacturing Information Systems,	CO2, CO4, CO5	6

	Human Resource Information Systems, Financial Information Systems, Supply chain Management Information System, Customer Relation Management Information System Information systems required across the functions, sectors and their Modules, MIS reporting and integrations. Enterprise Resource Planning & Integration of enterprise systems Case studies on successful integration of Information systems to Business		
3	**Digital Firms, Platforms and Business Models & Digital Transformation:** Insights on Digital Firm, Digital Platform & Business models, Drivers, their integration and impact Strategies for developing and managing digital business Building and Managing Global Information Systems & Global Business Case studies on successful digital Transformations	CO2, CO4, CO5, CO6	9
4	**Developing & Managing Information System Projects:** Information System Development &Building: Information System development Process and Models Managing software projects within budget, scope, and timeline constraints. Cost Benefit Analysis. Case studies on successful implementation of Information Systems Projects	CO4, CO5, CO6	6
5	**Information Systems Strategy , Planning & Implementations:**	CO4, CO5, CO6	3

	Strategic alignment of IS with business goals and objectives. Virtual organization & strategies Developing IS strategies for competitive advantage. Case studies on successful IS strategies and implementations.		
6	**Ethical & Social, Privacy issues in Information Systems** Ethical and social considerations in the use of information systems. Social & Privacy issues and regulations affecting digital business. Sensitize students to the need for information security, Concepts such as confidentiality, Integrity and Availability. Case Studies on Social and Digital Ethics, Privacy & Security Issues of IS.	CO2, CO5, CO6	3

Text Books:

1. Management Information Systems for the Information Age (9e) by Maeve Cummings. McGraw-Hill/Irwin (2012).
2. Management Information System- Managing the Digital Firm by Laudon and Laudon.
3. Principal of Information System by Ralph M. Stair and Georg Reynold.
4. Digital Business by Dr Chandrahauns Chavan , KBI International , Mumbai

Reference Books:

1. A Management Information Systems by O'Brien, James. Tata McGraw Hill, New Delhi,
2. Introduction to Financial Technologies FINTECH, By Dr Chandrahauns Chavan & Atul Patankar , Pearson Publications
3. Elements of Systems Analysis and Design by Marvin Gore. Galgota Publications.
4. MIS a Conceptual Framework by Davis and Olson
5. Analysis and Design of Information Systems by James Senn.
6. Information Systems Today by Jessup and Valacich. Prentice Hall India.
7. Management Information Systems, Jaiswal and Mittal. Oxford University Press.

Mandatory Course 7: OJT / Field Project

Course Credits: 4
Course Outcomes:

- CO1: Apply concepts learned in classrooms to real-world work environments, enhancing their understanding and skills.
- CO2: show insights into the challenges, opportunities, and culture of different workplaces, preparing them for future employment.
- CO3: Use and appreciate the use of emerging technologies and their applications, enhancing their technological literacy and adaptability.
- CO4: Display problem-solving abilities in making informed decisions in complex scenarios through practical situations.
- CO5: Build ability to work in teams and collaborate to achieve common goals in diverse work environments through collaborative projects.

On-the-job training course / Field Projects offer students the chance to develop essential skills that employers highly value. These include communication skills, problem- solving abilities, teamwork, and adaptability. By working in a professional environment, students gain valuable experience that enhances their employability. They also learn to navigate professional environments, manage responsibilities, and overcome challenges. This experiential learning fosters independence, confidence, and self-awareness, which are essential for success in both career and life. Furthermore, students get a first-hand look at various industries and career paths. This exposure allows them to explore different fields, understand industry trends, and identify areas of interest. OJT / Field Projects provide the students opportunities to practice skills and apply their knowledge under the most realistic conditions possible, which are the actual job conditions. The OJT work conducted in direct connect with industry should be minimum of 60-80 hours during the Semester.

- The OJT Guidelines applicable of University of Mumbai will apply for OJT component.
- The field project will be completed and assessment will be undertaken as per the Project Assessment guidelines in the syllabus.

An OJT course in general sets out to achieve objectives such as:

1. Align classroom learnings with workplace outcomes.

2. Provide students with real-world work experience and align their expectations with job demands.
3. Combine physical and digital learning modes in industry settings, blended with mentorship.
4. Foster research skills, including knowledge discovery, analytical tools, methodologies, and ethical conduct.
5. Introduce students to emerging technologies and their applications in various fields.
6. Strengthen students' entrepreneurial skills and encourage job creation.
7. Facilitate problem-solving, decision-making, teamwork, and collaboration.
8. Foster social awareness and philanthropic values among students.
9. Encourage collaboration between Higher Education Institutes (HEIs), industry, and academia for internships and research opportunities.
10. Instill professional principles, ethics, values, and integrity to meet employment market demands and social needs.

Elective Course 1: Entrepreneurship Management

Course Credits: 2

Course Outcomes:

- CO1: REMEMBER Concepts of Entrepreneur, Entrepreneurship, and Enterprise
- CO2: UNDERSTAND the frameworks and key concepts in entrepreneurship management.
- CO3: APPLY the model of the entrepreneurial process for new venture development
- CO4: ANALYSE the entrepreneurial environment, legal framework, and expansion strategies.
- CO5: EVALUATE various types of entrepreneurship (social, opportunity, techno, intra & women) and suitable routes to start a business
- CO6: CREATE a business plan/model based on the innovative ideas and concepts of entrepreneurship.

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Entrepreneurial Perspective:** Definition and Evolution of the Concept of Entrepreneurship; Definition and Concept of Entrepreneur, Concept of Enterprise; Entrepreneurship - Functions, Needs and Importance; Entrepreneurial Traits, Characteristics and Skills; Role of entrepreneurship in economic Development; Introduction to various forms of business organization (sole proprietorship, partnership, corporations, Limited Liability Company); Introduction of Start-up and types of Start-ups, Start-up Ecosystem in India	CO1, CO2	3
2	**Types of Entrepreneurs and Entrepreneurship:** Innovators, Creators, Market makers, Expanders and scalers, Intrapreneurship, Social Entrepreneurship, Woman Entrepreneurship, Technopreneurship, Rural Entrepreneurship; Entrepreneurs, Managers and Intrapreneurs: Similarities and Differences.	CO1, CO2, CO3	3

	Entrepreneurial Pathways: Understanding New Venture Life-Cycle - Pre-Seed, Early Stage, Launch; **Business Life Cycle**: Start-up, Launch, Growth, Maturity, Harvest, Re-Birth, Exit; **Frameworks to Inform Your Entrepreneurial Path -** Introduction to Business Model Canvas, Lean Model Canvas, Design Thinking Process		
3	**Identifying Entrepreneurial Opportunity:** Analysis of Business Opportunities in both the Domestic and Global Economies, including the Analysis of PEST Factors; Entrepreneurial Opportunity; Joseph Schumpeter's Theories & Key Drivers of Opportunity; Researching Potential Business Opportunities,	CO1, CO2, CO3	3
4	**Drivers of Entrepreneurship:** Creativity, Innovation and Invention; Tools for Creativity and Innovation **Idea Generation & Evaluation:** Sources of business ideas, Find & Assess ideas, Data for ideation, Identify the problem, Problem – Solution Fit, Ideation to Prototyping Process.	CO2, CO3, CO4	3
5	**Feasibility Analysis** Product/Service Feasibility Analysis; Industry & **Competitive Analysis:** SWOT, Three Circles (Company, Competitors, Customers); Financial Feasibility Analysis.	CO3, CO4	3
6	**The Enterprise Launching:** Entrepreneurial Process; Product/ Project Identification; **Developing a Business Plan**: Meaning and Purpose of a business plan, Contents of a business plan, Guidelines for writing a Business Plan, Prerequisites from the perspective of an investor, (Creating Pitch Deck)	CO3, CO4, CO5, CO6	3

7	**Product/ Market Fit:** Concept, Importance for start-ups. Minimum Viable Product, **Business Financing:** Various Sources of Funding to Start-ups including venture capital finance and private equity Managing early growth of the business; New venture expansion - strategies and issues.	CO3, CO4, CO5, CO6	3
8	Legal framework for starting a business in India Quick start routes to establish a business (franchising, ancillarisation, and acquisitions); Support Organisations for an entrepreneur and their role; The Make in India and Digital India Campaigns – For Entrepreneurship support; Other Start-up Ecosystem in India	CO3, CO4	3
9	Learning by Doing: Activity – Create a Business Model Canvas / Business Plan based on an Idea (Ideation till Pitch deck) and Presentations	CO6	6

Text Books:

- Vasant Desai, “The Dynamics of Entrepreneurial Development and Management”, Himalaya Publishing House, Sixth Edition, 2011

Reference Books:

- Robert D Hisrich, Mathew J Manimala, “Entrepreneurship”, McGraw Hill Education (I) Pvt. Ltd., New Delhi, Ninth Edition - 2015
- Poornima M. Charantimath, “Entrepreneurship Development and Small Business Enterprises” Pearson, Ninth Impression - 2023
- Literature Published by Support Institutions, viz i) SIDBI, ii) MSSIDC iii) NSIC

Elective Course 2: Economic Environment and Policy

Course Credits: 2

Course Outcomes:

- CO1: Understand and relate to the business environment prevailing in India and in the world and Identifying how the economy is affected by internal and external factor. (L1, L2)
- CO2: Describe the economic environmental factors impacting business & analyse their impact on businesses. (L2, L3, L4)
- CO3: Analyze the impact of changes in macroeconomic aggregates on economy. (L3, L4)
- CO4: Evaluate various macroeconomic policy tools and how they can be used to manage macroeconomic issues. (L4, L5)
- CO5: Evaluate the macroeconomic variables related to international markets and evaluate impact of international financial institutions on global economy (Evaluate, L5)

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Business environment** - definition, nature and scope, distinction between internal and external environment of business, Micro and Macro external environment, Limitations of environmental analysis. Impact of macroeconomic environment on businesses (case studies) Macroeconomics: The origin of macroeconomics from Classical, Keynesian, to Monetarists (in brief) Rational Expectation Theory	CO1,CO2, CO3	3
2	**Understanding the functioning of an economy** (Circular flow of income), Consumption Function and Investment Function	CO2,CO3	6

	Growth and development. Interconnectivity between macroeconomic variables & Business Cycles National Income Accounting: Measuring the Aggregate Economy. Concepts- GDP, NDP, GNP, GVA. Real vs. Nominal GDP, Deflator **Brief discussion on background & Industrial policy -** 1991 - LPG model (Liberalization, Privatization and Globalization) Discussion on evolving Economic Environment - Atmanirbhar Bharat (Make in India, Digital India, Start-up policy, Redefining MSMEs, Infrastructure thrust; Niti Aayog; Inclusive Growth - Jan-Dhan & Aadhar; Amritkaal-Viksit Bharat		
3	**Money**: Concept of Money, of Money in India – M1, M2, M3, L1, L2, L3, Money supply & Demand for money, velocity of money, credit creation process and changing banking scenario **Inflation:** the concepts of headline inflation, core inflation, food inflation. Demand pull, cost push inflation, types of inflation, causes of inflation, effects of inflation, stagflation and India, The threat of inflation.	CO3	6
4	**Central Banking and Monetary Policy**: Role of central bank, methods of credit control, Instruments of credit control, objectives of monetary policy, Inflation & monetary policy: Monetary measures to control inflation - Role of MPC (Reading of Review of Monetary Policy)	CO3, CO4	3

5	**Fiscal policy & Union Budget: Introduction to Fiscal Policy -** Public expenditure, Public Taxation & Public Debt, Role of fiscal policy in developing country. Discussion on Union Budget: Budget Format, Sources of Funds, Use of Funds, Types of deficit in Budget, Financing of Fiscal Deficit, debt financing.	CO3 , CO4	3
6	**Balance of Payments & External Sector**: Structure of BOP, Disequilibrium, Methods to correct disequilibrium Exchange Rate system, Capital Account Convertibility, Impossible Trinity Role of IMF in International Monetary System	CO3 , CO5	6
7	Case studies and Presentations	CO4, CO5	3

Text Books:

1. Indian Economy – Performance and Policies – Uma Kapila 24th Edition
2. Indian Economy - Nitin Singhania

Reference Books:

1. Business Environment and Public Policy by R A Buchholz
2. Economic Survey by Ministry of Finance, Government of India - Different issues
3. World Development Report by the World Bank - different issues

4. Macroeconomics-theory and policy-Dr.H.L.Ahuja-S.Chand and company ltd.

5. Macroeconomics-Olivier Blanchard-Pearson

6. Macroeconomics-Rudiger dornbusch-Tata McGrawHill

7. Principles of Macroeconomics- Karl Ecase, Ray c flair- Pearson

8. Macroeconomics-understanding Economic outcomes- Steven Mark Cohn-Jaico

Elective Course 3: Business Analytics

Course Credits: 2

Course Outcomes:

- CO1: RELATE the basic terminologies related to the concepts of Business Analytics
- CO2: UNDERSTAND use of various tools of Business Analytics for making justifiable business decisions
- CO3: CHOOSE appropriate technique for data mining for providing appropriate business solutions
- CO4: ANALYZE the available data and recommend appropriate analytical techniques
- CO5: COMPARE and visualize the results for fact-based decision-making
- CO6: CONSTRUCT appropriate predictive models based on available information

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Analytics Meaning, application areas of business analytics, techniques of analytics.	CO1, CO2	3
2	Statistics for Business Analytics Central tendencies and dispersion, central, limit theorem, sampling distribution, hypothesis testing, simple linear regression, categorical data analysis, analysis of variance (ANOVA), non-parametric tests.	CO2, CO3	3
3	Advanced Excel Proficiency (Practical) Describing Numeric Data, Pivot Table Analysis, Linear Regression, Comparing Two Sample Variances, Comparing Two Sample Means, Pair T Test, One Way ANOVA, Two Way ANOVA,	CO3, CO4	3

	Generating Random Numbers, Rank and Percentile, Histogram Procedure, Exponential Smoothing and Moving Average, Sampling,Covariance and Correlation, Goal Seek and Solver.		
4	Understanding R Using R Studio, working with data in R, R procedures.	CO1, CO2	3
5	Data Mining using Decision Tree Introduction to decision trees, model design and data audit, demo of decision tree development, algorithm behind decision tree and other decision tree.	CO2, CO3	3
6	Data Mining using clustering in R Understanding cluster analysis using R, clustering as strategy, hierarchical clustering, non-hierarchical clustering - K means clustering, variants of hierarchical clustering, different distance and linkage functions.	CO3, CO4	3
7	Time Series Forecasting Time series vs causal models moving averages, exponential smoothing, trend, seasonality, cyclicity causal modelling using linear regression forecast accuracy.	CO3, CO4	3

8	Predictive Modelling – Logistic Regression using R Data import and sanity check, development and validation, important categorical variable selection, important numeric variable selection, indicator variable creation, stepwise regression, dealing with multicollinearity, logistic regression score and probability, KS calculation, coefficient stability check,iterate for final model.	CO3, CO4	3
9	Overview of Big Data and Hadoop Big data and Hadoop and concept, application, cloud computing, generators of big-data.	CO3	3
10	Data Analysis & Visualization Credit risk analytics, fraud risk analytics, financial services marketing analytics, Data Visualization using Power BI and tableau tools	CO4	3

Elective Course 4: Cost and Management Accounting

Course Credits: 2

Course Outcomes:

- CO1: Understand the cost accounting concepts, elements and classification of cost and overheads and develop the application skill in drafting a cost sheet.
- CO2: Understand the need for material control, control of idle time of labour, methods of calculation of labour turnover and classification of overheads.
- CO3: Analyze the importance of Standard Costing and the effect upon cost effectiveness
- CO4: Use the different costing systems in practical scenario.
- CO5: Create control system through budgets and evaluate business decision making scenarios with CVP analysis.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Cost and Management Accounting, Concept of Cost, Role of Cost in decision making analysis, classification of cost, Cost Accounting Standards, Preparation of Cost Sheet, Methods and Techniques of Costing. Management Accounting: Evolution, Meaning, Objectives and Scope, Tools and Techniques of Management Accounting, Relationship of Cost Accounting, Financial Accounting, Management Accounting and Financial Management, Role of Management Accountant in Decision Making. Elements of cost - Materials, Labour and Overheads, Allocation and Apportionment of overheads	CO1	1
2	Introduction to different costing techniques; Methods of costing – with special reference to job costing, process costing, services costing	CO1, CO2, CO3	2

3	Responsibility Accounting and Transfer Pricing	CO1, CO2, CO3, CO4	4
4	Activity Based Costing & Activity Based Management	CO1, CO2, CO3, CO4	4
5	Target Costing, Lifecycle Costing, Environmental Costing	CO1, CO2, CO3, CO4	4
6	Standard Costing and Variance Analysis	CO1, CO2, CO3, CO4	3
7	Budgeting - Budget Concept, Fixed and Flexible Budgets, Preparation and Monitoring of Various types of Budgets, Budgetary Control System: Advantages, Limitations and Installation, Zero Base Budgeting	CO4, CO5, CO6	6
8	Marginal Costing – Meaning, Limitations and Applications, Difference between Marginal Costing and Absorption Costing, Breakeven Analysis, Cost-Volume Profit Analysis, Margin of Safety and P/V Ratio	CO4, CO5, CO6	6

Text Books

1. Cost Accounting - A Managerial Emphasis, Horngren, Datar, Rajan 15th ed. Pearson
2. Accounting - Text and Cases, Anthony, Hawkings, Merchant 13th ed. McGraw Hill
3. Cost Accounting for Managerial Emphasis – Horngren, Datar, Foster 2
4. Management Accounting – Robert Kaplan, Anthony A. Atkinson 3
5. Cost and Management Accounting – Ravi. M. Kishore

Reference Books

1. Management Accounting for profit control – I. W. Keller, W. L. Ferrara
2. Accounting & Finance for Managers – T P Ghosh
3. Management Accounting – Paresh Shah – Oxford Publications
4. Cost Accounting – Jawaharlal and Seema Srivastava
5. Management and Cost Accounting – Colin Drury

Elective Course 5: Foundations of Strategy

Course Credits: 2

Course Outcomes:

- Co1: To understand the underlying principles and frameworks in strategy
- CO2; To apply the conceptual frameworks to business situations
- CO3: To analyse business problems, and generate alternative solutions
- CO4: To critique different solutions to a problem, and arrive at an optimal solution keeping in view the business objectives and resources
- CO5: To use the theories learnt in the course and create a strategic plan

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Introduction to Strategy** ● Definition and importance of strategy **Elements of Strategy** ● Objectives ● Culture ● Costs ● Capabilities **The 4 Ps of Strategy**	CO1, CO2, CO3 .	3
2	**Corporate and SBU Strategies** ● Four levers: Scope, Assets, Design, Scale ● Three positioning outcomes: Value proposition, bargaining power, cost structure	CO2, CO3, CO4	3
3	**Structural Analysis of Industries** ● Porter's Five Forces Model	CO2, CO3, CO4	3
4-5	**Analysing the Firm** ● Value Chain Analysis, Activities as the building blocs of Competitive advantage	CO2, CO3, CO4	3
6	**Strategic Positioning of the Firm** ● Porter's Generic strategies: Cost leadership, differentiation, focus	CO4, CO5	3

7	**Resource-Based View of the Firm** ● Resource-Based View (RBV) ● VRIS framework ● Core competencies	CO2, CO3, CO4, CO5	3
8	**Business Models** ● Osterwalder and Pigneur Business Model Canvas	CO4, CO5	3
9	**Business Ecosystems and Firm Networks**	CO3, CO4, CO5	3
10	**Blue Ocean Strategy**	CO4, CO5	3

Text Books:

1. Strategic Management: A Competitive Advantage Approach, Concepts and Cases, by Fred R. David and Forest R. David: (Indian edition)
2. Crafting & Executing Strategy: The Quest for Competitive Advantage: Concepts and Cases, 23rd Edition, By Arthur Thompson, Margaret Peteraf, John Gamble and A. Strickland
3. Competitive Advantage: Creating and Sustaining Superior Performance, Michael E. Porter
4. Competitive Strategy: Techniques for Analyzing Industries and Competitors" by Michael E. Porter
5. Resource-based theory: Creating and Sustaining Competitive Advantage, By Jay B. Barney, Delwyn N. Clark · 2007

Reference Books & Readings

1. Competing on Analytics: The New Science of Winning, by Thomas H. Davenport and Jeanne G. Harris: This book explores how organizations can gain a competitive advantage through data-driven decision-making and analytics.
2. The Art of Strategy: A Game Theorist's Guide to Success in Business and Life, by Avinash K. Dixit and Barry J. Nalebuff: Dixit and Nalebuff apply game theory principles

to business strategy, offering practical insights into decision-making, negotiation, and competition

3. The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail, by Clayton M. Christensen: Christensen discusses disruptive innovation and its impact on established companies, offering insights into how organizations can navigate disruptive change.
4. Blue Ocean Strategy, Expanded Edition, by Renee A. Mauborgne and W. Chan Kim
5. Predators and Prey: A New Ecology of Competition, James F. Moore
6. All the Right Moves: A Guide to Crafting Breakthrough Strategy, Constantinos Markides

Indian case studies that can be used to illustrate various strategic management concepts:

1 Tata Group:
   a. Tata's Acquisition of Jaguar Land Rover: Illustrates corporate-level strategy, international expansion, and the challenges of integrating acquired companies.
   b. Tata Nano: Explores product positioning, targeting, and the challenges of innovation in emerging markets.

2 Infosys:
   a. Infosys' Global Delivery Model: Demonstrates the use of business-level strategy (cost leadership) and the role of technology in achieving competitive advantage.
   b. Infosys' Acquisition Strategy: Discusses growth strategies and the challenges of integrating acquisitions in the IT services industry.

3 Reliance Industries:
   a. Reliance Jio: Examines disruptive innovation, market entry strategies, and competition in the telecommunications sector.
   b. Reliance Retail: Analyzes diversification strategies and the role of retail in Reliance's overall business portfolio.

4 Flipkart:
   a. Flipkart vs. Amazon in India: Explores competitive dynamics, pricing strategies, and customer acquisition in the e-commerce industry.
   b. Flipkart's Big Billion Days: Discusses promotional strategies, supply chain management, and the challenges of managing large-scale sales events.

5 Mahindra & Mahindra:

a. Mahindra's Farm Equipment Sector: Illustrates market segmentation, targeting, and the development of niche markets in the agricultural machinery industry.
b. Mahindra's Entry into Electric Vehicles: Examines diversification into new markets and the adoption of sustainable business practices.

6 Patanjali Ayurved:

a. Patanjali's Disruption in FMCG Sector: Discusses the strategies employed by Patanjali to challenge established players in the fast-moving consumer goods sector.
b. Patanjali's Distribution Strategy: Analyzes the company's distribution network and its role in achieving rapid growth.

7 Amul:

a. Amul's Cooperative Model: Examines Amul's cooperative structure and its role in achieving market leadership in the dairy industry.
b. Amul's Marketing Strategy: Discusses Amul's branding and promotional strategies, as well as its focus on product quality and affordability.

8 Indian Premier League (IPL):

a. IPL's Business Model: Explores the strategic decisions behind the creation and expansion of the IPL, including revenue streams, team ownership, and marketing strategies.
b. IPL's Expansion into New Markets: Discusses the challenges and opportunities of expanding the IPL brand internationally.

9 Zomato Gold, R Srinivasan, IIM Bangalore

a. The network economy
b. Issues in network business models

International case studies offer valuable insights into global business practices and can be instrumental in teaching the fundamentals of strategy.

1 Apple Inc.:

a. Apple's Innovation Strategy: Explores Apple's product innovation, differentiation strategy, and ecosystem approach.
b. Apple's Supply Chain Management: Analyzes Apple's supply chain strategy and its role in maintaining competitiveness.

2. Toyota:
    a. Toyota's Lean Production System: Examines Toyota's production system and its emphasis on efficiency, quality, and continuous improvement.
    b. Toyota's Global Expansion: Discusses Toyota's internationalization strategy and challenges faced in different markets.
3. IKEA:
    a. IKEA's Cost Leadership Strategy: Illustrates IKEA's low-cost business model, flat-pack furniture concept, and global expansion strategy.
    b. IKEA's Sustainability Initiatives: Explores IKEA's sustainability efforts and their integration into the company's overall strategy.
4. Samsung:
    a. Samsung's Diversification Strategy: Analyzes Samsung's diversification into various product categories, including consumer electronics, semiconductors, and appliances.
    b. Samsung's Branding and Marketing Strategy: Examines Samsung's branding strategy, product positioning, and marketing campaigns.
5. Amazon:
    a. Amazon's Customer-Centric Approach: Explores Amazon's customer-focused strategy, including its emphasis on convenience, selection, and service.
    b. Amazon's Expansion into Cloud Computing: Discusses Amazon's strategic move into cloud computing with Amazon Web Services (AWS) and its impact on the company's growth.
6. Nestlé:
    a. Nestlé's Growth Strategies: Analyzes Nestlé's growth through acquisitions, diversification into new markets, and innovation in product categories.
    b. Nestlé's Corporate Social Responsibility (CSR) Initiatives: Explores Nestlé's CSR initiatives and their alignment with the company's overall strategy.
7. McDonald's:
    a. McDonald's Global Expansion: Examines McDonald's internationalization strategy, including its adaptation to local markets and cultural differences.
    b. McDonald's Digital Transformation: Discusses McDonald's digital initiatives, such as mobile ordering, delivery services, and loyalty programs.

8 Tesla, Inc.:

a. Tesla's Disruptive Innovation: Illustrates Tesla's disruptive innovation in the automotive industry, focusing on electric vehicles and autonomous driving technology.
b. Tesla's Market Entry Strategies: Analyzes Tesla's market entry strategies in different regions and the challenges of scaling production.

9 Netflix:

a. Netflix's Content Strategy: Explores Netflix's content acquisition and production strategy, including original content creation and global licensing deals.
b. Netflix's Subscription Model: Discusses Netflix's subscription-based business model, pricing strategy, and customer retention efforts.

10 Unilever:

a. Unilever's Sustainable Living Plan: Examines Unilever's sustainability strategy and its integration into the company's brands and operations.
b. Unilever's Portfolio Management: Analyzes Unilever's brand portfolio strategy, including acquisitions, divestitures, and brand extensions.

11 Matching DELL by Jan Rivkin

12 Asahi Breweries - Japanese Beer industry

MMS Program - Guidelines under 10-point grading system

- The MMS degree program shall be of two years duration consisting of Four (04) Semesters.
- The semester examinations for the Master of Management Studies will be held at the end of every semester i.e at the end of Semester I, Semester II, Semester III and Semester IV.
- The Semester I examination will be held in the Second half of the academic year in which the learner was admitted (i.e November/December)
- Semester II examination will be held in the first half of the calendar year (April/May)
- The Semester III examination will be held in the Second half of the academic year (i.e November/December)
- Semester IV examination will be held in the first half of the calendar year (April/May) respectively.

Examination / Assessment and Grading:

(I) Mode of Assessment of Theory courses:

- Semester wise performance assessment of every registered learner is to be carried out through various modes of examinations. These include Internal Assessment and End Semester Examination.
- Internal Assessment includes class tests, home assignments based on live problems, course projects & presentations either in a group or individually, any other innovative assessment methods.
- The weightage of Internal Assessment and End Semester Examination is 40 and 60 percentage respectively.
- The Relative weightage for Internal Assessment is typically 40 percent and will be evaluated by the faculty as per his/her Teaching Learning Plan submitted at the beginning of the academic year.
- The end semester examination will be held at the end of the semester planned by the Institute and the relative weightage for this would be 60 percent.
- The end semester examination will normally be of 2 hours duration and will cover the full syllabus of the course. The end semester examination is mandatory.

- The grade for theory courses can be awarded only after successful completion of both Internal Assessment and End Semester Examination of the respective course.

(II) Mode of Evaluation of Projects

- If the performance of a student is to be evaluated through a Project work for any course, then End Term Examination (written) may not be suitable method of evaluation. The project evaluation to be done as per the following guidelines keeping the ratio of Internal and External Viva Examination and presentation in ratio of 50:50
- The learner (individual / Group) to be given a Project (Problem or a situation) for which he needs to Prepare the solution. This Project is to be graded, at the end of the respective semester.
- The projects are supervised or guided, and need regular interaction (at least once a week) with the mentor/guide.
- Learner has to submit a project report and defend it in front of a panel of examiners. Panel of examiners for Project evaluation will be appointed by Head of Department/Institute.
- The project report will not be accepted if learner does not complete the project successfully and submit report on or before the deadline given for the project submission.
- The grade for Project can be awarded only after successful completion of Term Work and Oral Presentation / viva-voce as per the schedule.

(III) Mode of Evaluation of OJT

- If the performance of a student is to be evaluated through an On-the-Job training, then End Term Examination (written) may not be suitable method of evaluation. The project evaluation to be done as per the following guidelines keeping the ratio of Internal and External Viva Examination and presentation in ratio of 50:50
- The learner will work on on-the-job project which will be supervised or guided through regular interaction (at least once a week) with the mentor/guide.
- Learner will submit a OJT project report and defend it in front of a panel of examiners. Panel of examiners for Project evaluation will be appointed by Head of Department/Institute.
- The project report will not be accepted if learner does not complete the project successfully and submit report on or before the deadline given for the project submission.
- The grade for Project can be awarded only after successful completion of Term Work and Oral Presentation / viva-voce as per the schedule.

(IV) Grading of Performance

The program will have 10 point grading system. The illustrative Grade Table is as follow

Table 1: Grade Allocation under 10 point grading scale in CBSGS

Range of percentage of Marks	Letter Grade	Grade Point	Performance	SGPA / CGPA Range
80 and above	O	10	Outstanding	9.51 – 10
75-79.99	A+	9	Excellent	8.51 – 9.50
70-74.99	A	8	Very Good	7.51 – 8.50
65-69.99	B+	7	Good	6.51 – 7.50
60-64.99	B	6	Fair	5.51 – 6.50
55-59.99	C	5	Average	4.51 – 5.50
50-54.99	P	4	Pass	4.0 – 4.50
Below 50	F	0	Fail	< 4
Absent	AB	0	Fail	

A learner who remains absent in any form of evaluation/examination, letter grade allocated to him/her should be AB and corresponding grade point is zero. He / She should reappear for the said evaluation/examination in due course.

(V) SGPA/ CGPA Calculation

Semester Grade Point Average (SGPA):

- The performance of a learner in a semester is indicated by a number called Semester Grade Point Average (SGPA).
- The SGPA is the weighted average of the grade points obtained in all the courses by the learner during the Semester. For example, if a learner passes five courses (Theory/Projects etc.) in a semester with credits C1, C2, C3, C4 and C5 and learners grade points in these courses are G1, G2, G3, G4 and G5 respectively, then learners' SGPA is equal to:

  SGPA = C1G1 + C2G2 + C3G3 + C4G4 + C5G5 / C1 + C2 + C3 + C4 + C5

  The SGPA is calculated to two decimal places. The SGPA for any semester will take into consideration the "F or AB" grade awarded in that semester. For example if a learner has failed in Course 4, the SGPA will then be computed as:

  SGPA= C1G1 + C2G2 + C3G3 + C4*ZERO + C5G5 / C1 + C2 + C3 + C4 + C5

Cumulative Grade Point Average (CGPA):

- An up-to-date assessment of the overall performance of a learner from the time s/he entered the University of Mumbai is obtained by calculating a number called the Cumulative Grade Point Average (CGPA), in a manner similar to the calculation of SGPA.
- The CGPA therefore considers all the courses mentioned in the curriculum/syllabus manual, towards the minimum requirement of the degree learner have enrolled for.
- The CGPA will be calculated for the completed academic year/s as follows:
  - Semester I & II
  - Semester I,II,III & IV
- The CGPA will reflect the failed status in case of F grade(s), till the course(s) is/are passed. When the course(s) is/are passed by obtaining a pass grade on subsequent examination(s) the CGPA will only reflect the new grade and not the fail grades earned earlier.

Illustration of Computation of SGPA and CGPA:

Computation of SGPA and CGPA:

- The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e
  SGPA (Si) = Σ(Ci x Gi) / ΣCi
  where Ci is the number of credits of the ith course and
  Gi is the grade point scored by the student in the ith course.

- The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a program, i.e.
  CGPA = Σ(Ci x Si) / Σ Ci
  where Si is the SGPA of the ith semester and
  Ci is the total number of credits in that semester.

- The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts. A Successful learner who has passed in all the courses of each Semesters i.e Semester I, Semester II, Semester III and Semester IV shall be awarded grades as shown in the table given below:

  Grade Table: Grade Allocation under 10-point grading scale in CBSGS.

Range of percentage of Marks	Letter Grade	Grade Point	Performance	SGPA / CGPA Range
80 and above	O	10	Outstanding	9.51 – 10
75-79.99	A+	9	Excellent	8.51 – 9.50
70-74.99	A	8	Very Good	7.51 – 8.50
65-69.99	B+	7	Good	6.51 – 7.50
60-64.99	B	6	Fair	5.51 – 6.50
55-59.99	C	5	Average	4.51 – 5.50
50-54.99	P	4	Pass	4.0 – 4.50
Below 50	F	0	Fail	< 4
Absent	AB	0	Fail	

Semester I

Subject	Marks	Grade	Grade Point (Gi)	Credits (Ci)	CI*Gi	SGPA
Sub - 1	95	O	10	4	40	SGPA = 108/16 = 6.75
Sub - 2	59	C	5	4	20	
Sub - 3	59	C	5	4	20	
Sub -4	58	B+	7	4	28	
Credits Earned				16	108	
Remarks					Grade: B+	Range 65-69.99

Semester II

Subject	Marks	Grade	Grade Point (Gi)	Credits (Ci)	CI*Gi	SGPA
Sub - 1	60	B	6	4	24	SGPA = 120/16 = 7.50
Sub - 2	65	B+	7	4	28	
Sub - 3	5966	B+	7	4	28	
Sub -4	80	O	10	4	40	
Credits Earned				16	120	
Remarks: Successful					Grade: B+	Range 65-69.99

Calculation of CGPA (Semester I & II)

Semester	SGPA (Si)	Credits (Ci)	Si*Ci	CGPA	
I	6.75	16	108	CGPA = 228/36 = 6.33	Grade: B
II	7.5	16	120		
Total Credits Earned		36	228		Range 5.51 – 6.50

Semester III

Subject	Marks	Grade	Grade Point (Gi)	Credits (Ci)	CI*Gi	SGPA
Sub - 1	62	B	10	4	24	SGPA = 128/16 = 8.00
Sub - 2	68	B+	5	4	28	
Sub - 3	85	O	5	4	40	
Sub -4	78	A+	6	4	36	
Credits Earned:				16	128	
Remarks: Successful					Grade: A	Range 70-74..99

Semester IV

Subject	Marks	Grade	Grade Point (Gi)	Credits (Ci)	CI*Gi	SGPA
Sub - 1	89	O	10	4	40	SGPA = 96/12 = 8.00
Sub - 2	63	B	6	4	24	
Sub - 3	72	A	8	4	32	
Credits Earned				12	96	
Remarks: Successful					Grade: A	Range 70-74.99

Calculation of CGPA (Semester I, II, III & IV)

Semester	SGPA (Si)	Credits (Ci)	Si*Ci	CGPA	
I	6.75	16	108	CGPA = 452/60 = 7.53	Grade: A
II	7.5	16	120		
III	8	16	128		
IV	8	12	96		
Total Credits Earned		60	452		Range 70-74.99

(VI) Standard of Passing & ATKT:

1. A learner in order to pass has to obtain minimum 50% marks in aggregate consisting of minimum 50% marks in each set of the examinations separately i.e. internal examination and external examination, as per the standard of passing.
2. Learner(s), who does not obtain minimum 50% marks in subject(s)/paper(s)/course(s) either in the internal assessment or in the external examination or both, shall be declared as “Fail” as per the standard of passing of examination.
3. A learner failing in not more than two subjects/papers/courses in the Semester I exam shall be allowed to keep terms in Semester II of the MMS program.
4. A learner who has failed in more than two subjects/papers/courses in the Semester-I exam, shall not be permitted to proceed to Semester II of his/her first year MMS program. Learner will, however, be eligible to re – appear for the subjects in which learner has failed in the first semester by re – registering himself/herself in the supplementary examination to be conducted by the institute.
5. A learner who has passed in both the semester examinations conducted by the institute i.e.: Semester I and Semester II examinations shall be eligible for admission into Semester III of the MMS program.
6. A learner for being eligible for admission to Semester III must have passed both the Semester I and Semester II examinations.
7. A learner failing in not more than two subjects/papers/courses in the Semester III examination shall be allowed to keep terms in Semester IV of the MMS program.
8. A learner, who has failed in more than two subjects/papers/courses in Semester III, shall not be permitted to proceed to Semester IV of his/her second year MMS program. Learner will, however, be eligible to re – appear in the subjects in which he /she has failed in the third semester by re – registering himself/herself in the supplementary examination to be conducted by the institute/university or both.
9. A learner who has passed in all of the semester examinations of MMS i.e Semester I, Semester II, Semester III, Semester IV examinations shall not be allowed to re – register himself/herself for improvement of his/her semester examination results.
10. A learner who has not appeared in the internal examinations conducted by the institute for due to hospitalization shall as a special case be permitted to appear in those subject(s)/course(s)/paper(s) in the supplementary examination conducted by the institute after learner furnishes a valid medical certificate certified by the rank of

a civil surgeon or superintendent of Government hospital to the satisfaction of the Principal/Director of the institute.

Semester I Examination:

1. A learner will be declared to have passed the Semester I examination if learner has secured minimum 50% marks in aggregate consisting of minimum 50% marks in each of the examinations separately i.e Internal Examination & Semester End Examination as per the standard of passing.
2. For a course of 100 marks, the learners shall obtain minimum of 50% marks i.e 20 out of 40 in the Internal Assessment and i.e 30 out of 60 in the Semester End examination separately.
3. For a course of 50 marks, the learners shall obtain minimum of 50% marks i.e 10 out of 20 in the Internal Assessment and 15 out of 30 in the Semester End examination separately.
4. A learner who has failed in the semester examination but has obtained Grade E (50% Marks) in some subject(s)/paper(s)/course(s) shall at his option be granted exemption from appearing in those subject(s)/paper(s)/course(s) in the subsequent examinations to be conducted by the institute.

Semester II Examination:

1. A learner who has passed in all the paper(s)/subject(s)/course(s) of his semester I examination shall proceed to semester II of the MMS program.
2. A learner failing in two or less than two subjects/papers/courses in Semester I examination shall be allowed to keep terms into Semester II of the MMS program. Learner will however be required to pass in those respective subjects/papers/courses (two or less) in the supplementary examinations, to be held by the institute. Such supplementary examination for Semester I shall be held before first week of April, as per the schedule of the individual institution.
3. A learner who has failed in more than two subjects/papers/courses in Semester I, shall not be permitted to proceed to Semester II of the course. Learner will, however be eligible to re – appear in the subjects in which learner has failed, in the supplementary examination of Semester I to be conducted by the institute. Such supplementary examination of Semester I can be held as per the institute's schedule before April of the academic year.

4. A learner will be declared to have passed the Semester II examination if learner has secured minimum 50% marks in aggregate consisting of minimum 50% marks in each of the examinations separately i.e Internal Examination & Semester End Examination as per the standard of passing.
5. For a course of 100 marks i.e (60+40), the learners shall obtain minimum of 50% marks in the Internal Assessment i.e 20 out of 40 marks and 30 out of 60 marks in the Semester End examination.
6. For a course of 50 marks i.e (30+20), the learners shall obtain minimum of 50% marks in the Internal Assessment i.e 10 out of 20 marks and 15 out of 30 marks in the Semester End examination.
7. A learner who has failed in the semester examination but has obtained Grade E (50% Marks) in some subject(s)/paper(s)/course(s) shall at his option be granted exemption from appearing in those subject(s)/paper(s)/course(s) in the subsequent examinations to be conducted by the institute.

Semester III Examination:

1. A learner for being eligible for admission to Semester III must have passed both the Semester I and Semester II examinations
2. A learner failing in two or less than two subjects in Semester I or Semester II or both (Semester I and Semester II taken together), shall be required to re appear in the supplementary examination and pass. Such supplementary examinations can be held for Semester I and for Semester II, as per individual institution's schedule before April/May or commencement of Semester III and upon passing of which, the learner will become eligible to enroll for the Semester III MMS Program.
3. A learner who has failed in more than two subjects/papers/courses in Semester II or Semester I and Semester II taken together, shall not be permitted to proceed to Semester III of the course. Learner will, however be eligible to re – appear in the subjects in which learner has failed, in the supplementary examination of Semester I and/or Semester II to be conducted by the institute. Such supplementary examinations can be held as per the institute's schedule before April/May for Ist Semester and before November/December for IInd Semester of the academic year.
4. A learner will be declared to have passed the Semester III examination if learner has secured minimum 50% marks in aggregate consisting of minimum 50%

marks in each of the examinations separately i.e Internal Examination & Semester End Examination as per the standard of passing.

5. For a course of 100 marks i.e (60+40), the learners shall obtain minimum of 50% marks in the Internal Assessment i.e 20 out of 40 marks and 30 out of 60 marks in the Semester End examination.
6. For a course of 50 marks i.e (30+20), the learners shall obtain minimum of 50% marks in the Internal Assessment i.e 10 out of 20 marks and 15 out of 30 marks in the Semester End examination.
7. A learner who has failed in the semester examination but has obtained Grade E (50% Marks) in some subject(s)/paper(s)/course(s) shall be granted exemption from appearing in those subject(s)/paper(s)/course(s) in the subsequent examinations to be conducted by the institute/university.

Semester IV Examination:

1. A learner who has passed in all the paper(s)/subject(s)/course(s) of his semester III examination shall proceed to semester IV of the MMS program.
2. A learner failing in not more than two subjects/papers/courses in his/her Semester III examination shall be allowed to keep terms in Semester IV. Such learner will be required to pass in those respective subject(s)/paper(s)/course(s) (two or less) of semester III in the supplementary examinations of Semester III conducted to be by the Institute/ University.
3. A learner, who has failed in more than two subjects/papers/courses in Semester III, shall not be permitted to proceed to Semester IV of the course. Learner will however be eligible to re – appear in those subjects in which he /she has failed by re – registering himself/herself in the supplementary examinations to be conducted by the institute/university.
4. A learner failing in any subject(s) /paper(s) /course(s) in his/her Semester IV examination and shall be required to re appear in the supplementary examinations conducted by the institute/university to pass in those subjects/papers/courses.
5. A learner will be declared to have passed the Semester IV examination if learner has secured minimum 50% marks in aggregate consisting of minimum 50% marks in each of the examinations separately i.e Internal Examination & Semester End Examination as per the standard of passing.

6. For a course of 100 marks i.e (60+40), the learners shall obtain minimum of 50% marks in the Internal examination i.e 20 out of 40 marks and 30 out of 60 marks in the Semester End examination separately as per the standard of passing.
7. For a course of 50 marks i.e (30+20), the learners shall obtain minimum of 50% marks in the Internal examination i.e 10 out of 20 marks and 15 out of 30 marks in the Semester End examination separately.
8. A learner who has failed in the semester examination but has obtained Grade E (50% Marks) in some subject(s)/paper(s)/course(s) shall be granted exemption from appearing in those subject(s)/paper(s)/course(s) in the subsequent examinations to be conducted by the institute/university.
9. To facilitate the convenience of students, who are employed on completion of their IVth Semester, but have failed in their Semester III and/or Semester IV University examinations, the University shall hold such examinations twice a year in the subjects/papers/courses that are assessed by the university. I.e. Semester III university examination shall be held in May along with Semester IV examination and Semester IV university examination shall be held in November/December along with Semester III examination.
10. A learner shall be declared to have passed his MMS degree course if learner has secured minimum 50% marks in aggregate consisting of minimum 50% marks in Internal examination & 50% marks in External examination separately in Semester I, Semester II, Semester III and Semester IV examinations as per the standard of passing.
11. A learner who has passed in all the semester examinations of MMS degree shall not be allowed to reregister himself/herself for improvement of his/her earlier semester results.
12. A Successful learner who has passed in all the courses of each Semesters i.e Semester I, Semester II, Semester III and Semester IV shall be awarded grades as shown in the table given below:

Heads of Passing:

- Internal Assessment (IA) and End Semester Examination (ESE) should be two separate heads for passing. E.g. 40 marks (IA), 60 marks (ESE). Passing standard will be 50% in each individually, i.e 20 marks in (IA) and 30 marks in ESE.

Promotion of Learner and Award of Grades:

- A learner will be declared PASS and be eligible for Grade in M.M.S. course (Post Graduate Program) if a learner secures at least 50% marks separately in each head of passing as mentioned above.
- At the end of each Semester the Grade card which states the performance of the learner in that Semester, is prepared and issued to the leaner. The Grade Card will contain the courses undertaken by the learner, credits of each course, Grade obtained by the learner and SGPA / CGPA in the format given by the University.

Carry Forward of Marks:

In case of a learner who does not fulfill criteria mentioned in section above and fails in the Internal Assessment and/or End Semester Examination in one or more courses:

- A learner who PASSES in the Internal Assessment but FAILS in the End Semester Examination of the course shall reappear for the End Semester Examination of that course. However his/her marks of the Internal Assessment shall be carried over and learner shall be entitled for grade obtained by him/her on passing.
- A learner who PASSES in the End Semester Examination but FAILS in the Internal Assessment of the course shall reappear for the Internal Assessment of that course. However, his/her marks of the End Semester Examination shall be carried over and learner shall be entitled for grade obtained by him/her on passing.

Re-examination of Internal Assessment and End Semester Examination

- Re-examination for Internal Assessment and End Semester Examination should be completed, as per the schedule planned by the respective institutes, before the commencement of next semester theory examination.
- Example: A learner who is supposed to reappear for Internal Assessment or End Semester Examination in semester-I course will appear for the re-examination before commencement of End Semester Examination of semester -II. However, if a learner has to appear for the re- examination for a subject in semester II then the examination should be conducted and the result should declared by the

institute before the examination forms for the semester III are sent to the University.

- Re-examination of Internal Assessment will be based on single examination having same marks as of original assessment. A learner who supposed to reappear for Internal Assessment will be given course project/ assignment problems/ test/ tutorials etc., by the concerned teacher. A learner will do the submission of the assigned work in the predefined period. Records should be maintained properly for all the re-examinations as well as Internal Assessments.

Rules for Standard of Passing and Allowed to Keep Terms (ATKT):

- A learner in order to pass has to obtain minimum 50% marks in aggregate consisting of minimum 50% marks in each set of the examinations separately i.e. internal examination and external examination, as per the standard of passing.
- Learner, who does not obtain minimum 50% marks in subject(s)/paper(s)/course(s) either in the internal assessment or in the external examination or both, shall be declared as “Fail” as per the standard of passing of examination.
- A learner failing in not more than two subjects/papers/courses in the Semester I exam shall be allowed to keep terms in Semester II of the MMS program.
- A learner who has failed in more than two subjects/papers/courses in the Semester I exam, shall not be permitted to proceed to Semester II of his/her first year MMS program. He/ She will, however, be eligible to re – appear for the subjects in which he /she has failed in the first semester by re – registering himself/herself in the supplementary examination to be conducted by the institute.
- To move to semester III a learner should not be failing in more than two subjects/papers/courses in the Semester I & II exam combined together.
- A learner failing in not more than two subjects/papers/courses in the Semester III examination shall be allowed to keep terms in Semester IV of the MMS program.
- A learner, who has failed in more than two subjects/papers/courses in Semester III, shall not be permitted to proceed to Semester IV of his/her second year MMS program. Learner will, however, be eligible to re – appear in the subjects in which he /she has failed in the third semester by re – registering himself/herself in the supplementary examination to be conducted by the institute/university or both.

- A learner who has passed in all of the semester examinations of MMS i.e Semester I, Semester II, Semester III, Semester IV examinations shall not be allowed to re – register himself/herself for improvement of his/her semester examination results.
- A learner who has not appeared in the internal examinations conducted by the institute for due to hospitalization shall as a special case be permitted to appear in those subject(s)/course(s)/paper(s) in the supplementary examination conducted by the institute after learner furnishes a valid medical certificate certified by the rank of a civil surgeon or superintendent of Government hospital to the satisfaction of the Principal/Director of the institute.

Suggested Question Paper Format

(i) Question Paper of 60 Marks (4 Credit Course) – 2 Hours Written Examination

● Total Questions – 6 Questions ● Question 1 - Compulsory (20 Marks) ● Option to Attempt Any 4 Questions from Question 2 to Question 6 (Each Question 10 Marks)

Q1: Case Study	20 Marks
Q2 to Q 6 ● Covering important of topics / concepts across syllabus ● Mix of theoretical and quantitative questions based on requirement of the subject content. ● COs to be mentioned against each question in Question paper	Each Question 10 Marks

(ii) Question Paper of 30 Marks (2 Credit Course) - 1 Hour Written Examination

● Total Questions – 4 Questions ● Question 1 - Compulsory (10 Marks) ● Option to Attempt any 2 Questions from Question 2 to Question 4 (Each Question 10 Marks)

Q1: Case Study	10 Marks
Q2 to Q 4 ● Covering important of topics / concepts across syllabus ● Mix of theoretical and quantitative questions based on requirement of the subject content. ● COs to be mentioned against each question in Question paper	Each Question 10 Marks

Appendix B

Justification for
Master of Management Studies

1.	Necessity for starting the course:	The MMS program is an existing program. The change in curriculum is required as per the NEP 2020 guidelines implementation requirements
2.	Whether the UGC has recommended the course:	The program is under the UGC list
3.	Whether all the courses have commenced from the academic year 2023-24	The Program is an existing program. The change is course structure is as per NEP 2020 is applicable from 2024-25
4.	The courses started by the University are self-financed, whether adequate number of eligible permanent faculties are available?:	Adequate number of eligible permanent faculties are available at institutes and the institutions are covered under annual AICTE / DTE review
5.	To give details regarding the duration of the Course and is it possible to compress the course?:	The duration of the course is 2 years. Under the existing guidelines of technical Education, it is not possible to compress the program
6.	The intake capacity of each course and no. of admissions given in the current academic year:	The intake of institutions is dependent on Approval of AICTE, DTE and University
7.	Opportunities of Employability / Employment available after undertaking these courses:	The program is a professional program focused on creating Employability

Sign of the BOS Chairman
Dr. Smita Shukla
Chairman
BOS in MMS

Sign of the
Offg. Associate Dean
Prof. Dr. Kishori J. Bhagat
Department of Commerce and Management
University of Mumbai

Sign of the
Offg. Dean
Dr. Kavita Laghate
Department of Commerce and Management
University of Mumbai

Sign of the
Offg. Dean
Prof. Shivram S. Garje
Faculty of Science & Technology

Table of Contents

MMS Program Structure

Year	Level	Semester	Major		RM	OJT/FP	RP	Cum. Cre.	Degree / Diploma
			Mandatory (Sub.*Cr.)	Elective (Sub.*Cr.)					
First	6.0	Semester I	22 (3*4+5*2)	4 (2*2)	-	-	-	26	PG Diploma in Management after 3 year UG Degree
		Semester II	14 (2*4+3*2)	4 (2*2)	4	4	-	26	
Cumulative Credits FY			36	8	4	4	-	52	
Exit Option: PG Diploma with additional 4 credits of OJT									
Second	6.5	Semester III	8 (1*4+2*2) 1 Core UA (4 Credit) 1 Core IA (2 Credit) 1 Core Speci. (2 Credit)	10 (5*2) Electives	-	8	-	26	PG Degree after 3 year UG Degree
		Semester IV	10 (2*4 + 1 Seminar *2) 1 Core UA (4 Credit) 1 Core IA (4 Credit)	8 (2*4) Electives			8 1 Research Project	26	

Cumulative Credits SY			18	18	-	8	8	52	
Cumulative Credits FY+SY			54	26	4	12	8	104	

SYMMS Syllabus Outline

Outline of Semester III

Semester III					
Core Mandatory Courses					
Sr. No.	Course Type	Course	Number of Credits	Number of 90 minutes sessions	**IA / UA***
1	Mandatory - General Management	Corporate Strategy	4	40	**UA**
2	Mandatory - General Management	Project Management	2	20	**IA**
OJT/ Summer Internship					
3	Summer Internship	Summer Internship	8	-	**IA**

***IA – Internal Assessment; UA – University Assessment**

Semester III - Finance Specialization Outline

Finance Specialization					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
Mandatory					

1	Mandatory	Financial Markets and Institutions	2	20	**UA**
Electives (Any 5 including Open Elective)					
1	Elective	Corporate Valuation	2	20	**IA**
2	Elective	Financial Modelling	2	20	**IA**
3	Elective	Derivatives and Risk Management	2	20	**IA**
4	Elective	Security Analysis & Portfolio Management	2	20	**IA**
5	Elective	Global Financial Management and Markets	2	20	**IA**
6	Elective	Commercial Banking	2	20	**IA**
7	Elective	Mutual Funds and Insurance	2	20	**IA**
8	Elective	Emerging Technologies in Finance and Block-chain	2	20	**IA**
9	Elective	Corporate Restructuring and Mergers and Acquisition	2	20	**IA**
10	Elective	Direct and Indirect Taxes	2	20	**IA**

***IA – Internal Assessment; UA – University Assessment**

Semester III - Human Resource Specialization Outline

Elective Courses - HR Specialization (Any 5)					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
Mandatory					
1	Mandatory	Competency-based HRM & Performance Management System	2	20	**UA**
Electives (Any 5 including Open Elective)					

1	Elective	Artificial Intelligence (AI) in Human Resource Management	2	20	**IA**
2	Elective	Compensation and Benefits	2	20	**IA**
3	Elective	Employer Branding and Employee Value Proposition	2	20	**IA**
4	Elective	HR Analytics	2	20	**IA**
5	Elective	HR Planning and Application of Technology in HR	2	20	**IA**
6	Elective	Learning and Development	2	20	**IA**
7	Elective	Global HRM	2	20	**IA**
8	Elective	Organization Theory, Structure and Design	2	20	**IA**

***IA – Internal Assessment; UA – University Assessment**

Semester III - Marketing Specialization Outline

Semester III Courses - Marketing Specialization					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
Mandatory					
1	Mandatory	Marketing Strategy	2	20	**UA**
Electives (Any 5 including Open Elective)					
1	Elective	Consumer Buying Behaviour	2	20	**IA**
2	Elective	Sales Management	2	20	**IA**

3	Elective	Product Management	2	20	**IA**
4	Elective	Brand Management	2	20	**IA**
5	Elective	Digital Marketing	2	20	**IA**
6	Elective	Marketing Analytics	2	20	**IA**
7	Elective	Retail Management	2	20	**IA**
8	Elective	Rural Marketing	2	20	**IA**
9	Elective	Tourism Marketing	2	20	**IA**

***IA – Internal Assessment; UA – University Assessment**

Semester III - Operations Specialization Outline

Semester III Courses - Operations Specialization					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
Mandatory					
1	Mandatory - Specialization (Operations)	Supply Chain Management	2	20	**UA**
Electives (Any 5 including Open Elective)					
1	Elective	Logistics Management	2	20	**IA**
2	Elective	Warehouse Management	2	20	**IA**
3	Elective	Business Process Management for Risk & Performance Management	2	20	**IA**
4	Elective	Global Supply Chain Management	2	20	**IA**
5	Elective	Service Operations Management	2	20	**IA**
6	Elective	Operations Analytics	2	20	**IA**

7	Elective	Manufacturing Resource Planning & Control	2	20	**IA**
8	Elective	Production Planning & Control	2	20	**IA**
9	Elective	Purchase and Materials Management	2	20	**IA**

***IA – Internal Assessment; UA – University Assessment**

Semester III - System & Digital Business Specialization Outline

Semester III Courses - Marketing Specialization					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
Mandatory					
1	Mandatory	Strategic Information Technology & Resource Management	2	20	**UA**
Electives (Any 5 including Open Elective)					
1	Elective	Digital Business	2	20	**IA**
2	Elective	Software Project Management	2	20	**IA**
3	Elective	Enterprise Systems for Business	2	20	**IA**
4	Elective	Big Data, Business Analytics & FinTech	2	20	**IA**
5	Elective	Advanced Database & Data Warehousing	2	20	**IA**

6	Elective	Knowledge Management	2	20	**IA**
7	Elective	Business Applications of Networking & Telecommunication	2	20	**IA**
8	Elective	Data Mining & Business Intelligence	2	20	**IA**
9	Elective	Block chain Technology for Business	2	20	**IA**

***IA – Internal Assessment; UA – University Assessment**

Semester III - Open Electives (Across Specializations) - Basket Outline

Open Electives (Across Specializations)					
1	Open Elective	Marketing of Financial Products and Services	2	20	**IA**
2	Open Elective	Climate Risk and Sustainable Finance	2	20	**IA**
3	Open Elective	Acquiring and Managing Talent	2	20	**IA**
4	Open Elective	Labour, Social Security and Welfare Law	2	20	**IA**
4	Open Elective	Services Management	2	20	**IA**
6	Open Elective	Events Management	2	20	**IA**
7	Open Elective	Quality Management	2	20	**IA**
8	Open Elective	Predictive Analytics	2	20	**IA**

9	Open Elective	Artificial Intelligence & Machine Learning (AI/ML) for Business	2	20	**IA**
10	Open Elective	Digital Innovation	2	20	**IA**
11	Open Elective	Enterprise Risk Management Course [Approved under OE Basket] *(https://mu.ac.in/wp-content/uploads/2025/04/IRMs-Global-Level-1-Enterprise-Risk-Management-2-Credits-Open-Elective-Course-ERM-A.C.-9.8.pdf)*	2	20	**Virtual** ***(By IRM)*** **[https://www.giceduedu.co.in/irm-mumbai-university-global-enterprise-risk-management-2-credit-course.php]**
12	Open Elective	Swayam Course	2	20	***Through Swayam Process***

Selection of Open Elective Course - Guidelines

- *Students can opt for maximum 5 Elective Courses in Semester III*
- *Either all Five opted Elective courses can be from the 'Selected Specialization' Group (Finance/ Human Resource/ Marketing/Operations/Systems)*

  OR

  Minimum Four Elective courses can be from the 'Selected Specialization' Group (Finance/ Human Resource/ Marketing/Operations/Systems) and One can be from Open Elective Basket

- *In case 'SWAYAM' Course is opted as an open Elective, then the concerned Institute/College will ensure that the students should complete the selected 'Swayam' course and appear for the Swayam examination within the stipulated semester deadlines. The marks so-obtained would be recorded as the 'Swayam' course score.*

Outline of Semester IV

Semester IV - Mandatory Courses

Semester IV					
Mandatory Subjects					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
1	Mandatory - General Management	International Business	4	40	**UA**
2	Mandatory - General Management	Business Ethics and Corporate Governance	4	40	**IA**
Seminar					
3	Mandatory	Seminar Paper	2	-	**IA**
Research Project					
1	Mandatory	Research Project	8	-	**IA**

***IA – Internal Assessment; UA – University Assessment**

Semester IV - Finance Specialization Outline

Elective Courses - Finance Specialization (Any 2)					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
1	Elective	Financial Market Regulations	4	40	**IA**
2	Elective	Behavioural Finance	4	40	**IA**
3	Elective	Investment Banking and Alternate Investment Funds	4	40	**IA**
4	Elective	Fixed Income Securities	4	40	**IA**
5	Elective	Wealth Management	4	40	**IA**

***IA – Internal Assessment; UA – University Assessment**

Semester IV - Human Resource Specialization Outline

Elective Courses - HR Specialization (Any 2)					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
1	Elective	Human Resource Capital, Accounting and Audit	4	40	**IA**
2	Elective	Industrial Relations and Alternate Dispute Resolution	4	40	**IA**
3	Elective	OD and Change Management	4	40	**IA**
4	Elective	Strategic Human Resource Management	4	40	**IA**

***IA – Internal Assessment; UA – University Assessment**

Semester IV - Marketing Specialization Outline

Elective Courses - Marketing Specialization (Any 2)					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
1	Elective	Global Marketing	4	40	**IA**
2	Elective	Technology Strategy	4	40	**IA**
3	Elective	Business to Business Marketing	4	40	**IA**
4	Elective	Social Marketing	4	40	**IA**

***IA – Internal Assessment; UA – University Assessment**

Semester IV - Operations Specialization Outline

Elective Courses - Operations Specialization (Any 2)					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
1	Elective	Operations Strategies	4	40	**IA**
2	Elective	Operations Applications and Cases	4	40	**IA**
3	Elective	Lean Management	4	40	**IA**
4	Elective	Demand Forecasting and Inventory Management	4	40	**IA**
5	Elective	Productivity Enhancement in Operations Management	4	40	**IA**

***IA – Internal Assessment; UA – University Assessment**

Semester IV - System & Digital Business Specialization Outline

Elective Courses - Marketing Specialization (Any 2)					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
1	Elective	Information System Security and Audit	4	40	**IA**
2	Elective	IT Governance, Compliance and Cyber Laws	4	40	**IA**
3	Elective	T Consulting & Managing for Business	4	40	**IA**
4	Elective	System Applications and Negotiations -Case Study	4	40	**IA**

5	Elective	IoT, Cloud Computing, and Virtualization for Business	4	40	**IA**

***IA – Internal Assessment; UA – University Assessment**

MMS – SEMESTER-III
(Detailed Syllabus)

Mandatory Core Course: Corporate Strategy

Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1: Understand how corporate strategy influences business decisions and firm performance.

CO2: Apply strategic frameworks to real-world corporate strategy decisions.

CO3: Analyse the benefits and challenges of different corporate strategies, including M&A, vertical integration, and diversification.

CO3: Evaluate synergies, economies of scope, and resource allocation across Strategic Business Units (SBUs).

CO5: Develop critiques about strategy execution, organizational structure, and managing interdependencies.

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Introduction- definition, scope; Value Chain, Resources Based view concepts; Business Models and value creation; Narrow v/s Broad scope of business	CO1, CO2	6
2	The scope of the firm – where to compete? Horizontal, vertical and geographic scope; value creation in a multi-business firm	CO2, CO3	6
3	Synergy and the Better-off tests – economies of scope, cost v/s revenue synergies	CO3	5
4	Asset Specificity and Corporate Strategy – deployment and fungibility of assets; relationship-specific investments	CO3	5
5	Ownership Test- Mergers & Acquisitions – backward and forward integration; post-acquisition integration strategies; value destruction in M&A	CO2, CO4	5

6	Alliances and Joint ventures – pooling complementary assets and resources, co-creating value with other firms	CO3, CO4	5
7	Corporate Strategy and the External Environment – stages of industry development; institutional voids and internal capital markets	CO4, CO5	5
8	Value Capture and Competitive Advantage – Organization capabilities for value capture	CO4, CO5	3
9	Organization Structure and Processes – resources allocation and decision making; balancing autonomy and collaboration	CO4, CO5	5
10	Managing Interdependencies amongst SBU's – shared resources for Competitive Advantage; incentive structures and execution challenges	CO5	5
11	Corporate Boundaries and Open Innovation – ecosystem-based strategies, digital technologies and AI -role in corporate strategy	CO5	5
12	Failure of Corporate Strategies – flaws in strategic logic; misplaced motives for diversification	CO2, CO5	5

Textbooks:

1. Collis, D. J., & Montgomery, C. A. – *Corporate Strategy: Resources and the Scope of the Firm*
2. Porter, M. E. – *Competitive Strategy*
3. Goold, M., Campbell, A., & Alexander, M. – *Corporate-Level Strategy*
4. Christensen, C. M. – The Innovator's Dilemma
5. Khanna, T. & Palepu, K. – Winning in Emerging Markets
6. Prahalad, C. K., & Hamel, G. – Competing for the Future

Reference Books:

1. Henry Chesbrough. Open Innovation. 2003
2. C.K. Prahalad, Gary Hamel. The Core Competence of the Corporation. 1990
3. Christopher Bartlett, Sumantra Ghoshal. Managing across Borders

Mandatory Core Course: Project Management

Course Credits: 2; Course Duration: 30 Hours

Course Outcomes:

CO1 (Remember): Define fundamental project management concepts, terminologies, and frameworks

CO2 (Understand): Explain the project lifecycle, key processes, and roles of stakeholders in project initiation, planning, execution, monitoring, and closure

CO3 (Apply): Demonstrate project management techniques such as Work Breakdown Structure (WBS), Critical Path Method (CPM), Earned Value Management (EVM), and Risk Assessment in real-world scenarios

CO4 (Analyse): Analyze project constraints (scope, time, cost, quality, risk, and resources) and recommend optimization strategies for successful project execution

CO5 (Evaluate): Evaluate project success using performance metrics and AI-driven project management tools, and develop innovative project management strategies for industry applications

CO6 (Create): Create innovative project management strategies, frameworks, and execution plans for successful project delivery

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Introduction to Project Management: Definition, Evolution, Project Lifecycle, Stakeholders, PMBOK Overview	CO1	3
2	Project Initiation & Planning: Project Charter, Scope Definition, Work Breakdown Structure (WBS)	CO1, CO2	3
3	Project Scheduling & Time Management: Critical Path Method (CPM), PERT, Gantt Charts, Scheduling Tools	CO3, CO4, CO5	3

4	Agile Project Management: Agile vs. Traditional PM, Scrum, Kanban, Lean Principles	CO2, CO3	3
5	Cost Estimation & Budgeting: Earned Value Management (EVM), Budget Forecasting, Cost Control	CO3, CO4, CO5	3
6	Risk Management: Risk Identification, Risk Assessment, Mitigation Strategies	CO1, CO2	3
7	Quality Management in Projects: Quality Planning, Six Sigma, TQM, AI in Quality Control	CO2, CO3	3
8	Leadership, Communication & Stakeholder Management: Leadership Styles, Team Management, AI in Communication	CO1, CO2	3
9	Project Monitoring, Controlling & Change Management: Performance Tracking, Change Control, AI for Monitoring	CO1, CO2	3
10	Case Studies & Project Closure: Real-World Project Execution, Industry Best Practices, Project Closure (Lessons Learned, Final Reports, Post-Implementation Review)	CO4, CO5	3

Textbooks:

1. Highsmith, J. (2009). Agile project management: Creating innovative products (2nd ed.). Addison-Wesley
2. Hillson, D. (2016). Risk management in projects (3rd ed.). Routledge.
3. Kerzner, H. (2017). Project management: A systems approach to planning, scheduling, and controlling (12th ed.). Wiley
4. Larson, E. W., & Gray, C. F. (2020). Project management: The managerial process (8th ed.). McGraw-Hill Education
5. Portny, S. E. (2022). Project management for dummies (5th ed.). Wiley.

6. Verzuh, E. (2021). The fast forward MBA in project management (6th ed.). Wiley.

Reference Books:

1. PMBOK Guide (Project Management Body of Knowledge) – PMI
2. Nagarajan, K. (2004). Project management. New Age International.
3. Chitkara, K. K. (2014). Construction project management (3rd ed.). McGraw Hill Education India Pvt Ltd.

Mandatory - Summer Internship

Credits: 8; Duration: 2 Months

Course Outcomes:

CO1 (Remembering): Recall key organizational structures, functions, and industry practices observed during the internship.

CO2 (Understanding): Explain how academic concepts relate to tasks performed in the workplace.

CO3 (Applying): Apply domain-specific knowledge and skills to execute assigned professional responsibilities effectively.

CO4 (Analyzing): Analyze the workflow or project management approach used in the organization to identify strengths and gaps.

CO5 (Evaluating): Evaluate the effectiveness of organizational strategies and reflect on individual contributions and learnings.

CO6 (Creating): Develop a structured internship report or project proposal based on insights gained during the internship.

Evaluation Criteria:

50% Internal Assessment based on Summer Internship Report

50% External Assessment based on Viva-voce Process

Semester III - Finance

Finance Specialization					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
Mandatory					
1	Mandatory	Financial Markets and Institutions	2	20	**UA**
Electives (Any 5)					
1	Elective	Corporate Valuation	2	20	**IA**
2	Elective	Financial Modelling	2	20	**IA**
3	Elective	Derivatives and Risk Management	2	20	**IA**
4	Elective	Security Analysis & Portfolio Management	2	20	**IA**
5	Elective	Global Financial Management and Markets	2	20	**IA**
6	Elective	Commercial Banking	2	20	**IA**
7	Elective	Mutual Funds and Insurance	2	20	**IA**
8	Elective	Emerging Technologies in Finance and Block-chain	2	20	**IA**
9	Elective	Corporate Restructuring and Mergers and Acquisition	2	20	**IA**
10	Elective	Direct and Indirect Taxes	2	20	**IA**

Finance Group - Mandatory Course: Financial Markets and Institutions

Credits: 2; Hours: 30

Course Outcomes:

Upon successful completion of this course, students should be able:
CO1 (Understand): Explain the structure and functioning of the Indian financial system, including the role of regulatory bodies like SEBI, RBI, IRDAI, and PFRDA.

CO2 (Analyze): Differentiate between various financial intermediaries and assess their roles in mobilizing savings and allocating capital.

CO3 (Apply): Apply knowledge of primary and secondary markets to analyze financial instruments and processes such as IPOs, mutual funds, and insurance products.

CO4 (Evaluate): Evaluate the characteristics and pricing of fixed income securities, and assess risk-return trade-offs in mutual fund and insurance products.

CO5 (Apply & Analyze): Demonstrate an understanding of derivative instruments and their application in speculation, hedging, and arbitrage across financial markets.

Unit/ Module	Content	CO Mapping	Hours Assigned
1	The Financial System of India: Overview of Financial Markets in India; Financial Market Intermediaries; Financial Market Instruments; OTC and Exchange Markets; Introduction of Capital Markets (Equity, Debt markets) and Money market, Role of SEBI in Capital Market; RBI's monetary policy and role in Indian Financial System, IRDAI, PFRDA.	CO1	3
2	Financial Intermediaries: Commercial banks, investment / merchant bank, mutual funds, pension funds, insurance companies, NBFCs, Hire-purchase and leasing companies, Asset Reconstruction Companies, Primary Dealers	CO2	3
3	Primary Market and Secondary Market: IPO: Process of going public (Initial Public Offer), underwriting efforts to ensure price stability, stock offering, organized exchanges, Depositories, Clearing Houses, Role of	CO1, CO2	6

	Speculators /Hedgers, Order placing types market Limit stop loss orders, Circuit breakers Globalization of Indian stock market. Other Types of Issues: Right issues, Bonus Issue; share split, Buy back of shares, Private placement, preferential allotment.		
4	Financial Services: Classification of financial services including Banking Services, Factoring , Forfaiting, New financial products and services including financial technology based services, CBDC, etc., challenges facing the financial service sector	CO2,C03	6
5	Fixed Income Securities, Mutual Fund and Insurance: Bond characteristics, bond types, coupon types, Basic computation of different yields and bond price, relationship between yield and price, floaters and inverse floaters, zero coupon yield curve. Basics of Mutual Funds, types of Mutual Funds; NAV; Basics of Insurance; Types of Insurance Products.	CO2,CO3,CO4	6
6	Derivatives: Financial market activities – speculation, hedging and arbitrage in: Stock Markets; Forex Market; Commodity Markets; Interest Rates and Basics of Derivative Products-Forwards, futures, options and swaps	CO3,CO4,CO5	6

Text Books:

1. Indian Financial System, Markets, Institutions & Services 6th Edition,75 years of policy reforms, Government securities markets, banking sector, corporate bond market, insurance sector & mutual funds, Bharati V. Pathak, Pearson
2. Financial Markets and Institutions, by Frederic S. Mishkin, Stanley Eakins, Pearson
3. L M Bhole and Jitendra Mahakud, Financial Markets & Institutions.

Reference Books

1. Fabozzi, The Handbook of Fixed Income Securities.
2. Anthony Saunders, Financial Markets and Institutions.
3. Meir Kohn, Financial Institutions & Markets.
4. Gordon and Natrajan, Financial Markets and services
5. Jeff Madura, Financial Institutions and Markets
6. Bhole and Mahakud, Financial Institutions and Markets

Elective Course 1: Corporate Valuation

Credits: 2; Duration: 30 hours

Course Outcomes:

Upon successful completion of this course, students should be able to:

CO1 (Remembering & Understanding) - Describe the fundamental concepts of value and valuation, including the objectives, scope, and key principles that guide business valuation practices.

CO2 (Understanding & Applying) - Explain and apply basic valuation techniques, including the selection of appropriate valuation approaches such as fair market value and relevant adjustments.

CO3 (Applying & Analyzing) - Demonstrate the use of Dividend Discount Models (DDM) such as the zero growth, constant growth, and multi-stage models in equity valuation.

CO4 (Analyzing & Evaluating) - Analyze corporate value using income and asset-based approaches, including DCF models, adjusted present value models, and economic profit models, while assessing their applicability and limitations.

CO5 (Evaluating & Creating) - Evaluate valuation in special contexts, such as brand valuation, startup valuation, and valuation of distressed firms, with appropriate method selection.

CO6 (Creating) - Develop and deliver professional valuation reports and presentations, synthesizing theoretical and practical insights acquired through assignments.

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Valuation Basics: What is Value? An understanding of 'Value', The nature and scope of Valuation, Objectives of Valuation, Importance of Business Valuation, Misconceptions about Valuation. Principles and Techniques of Valuation: Elements of Business Valuation, Conceptual Overview, Valuation Approaches, Choice of Approach, Fair Market Value, Adjustments for Valuation Purposes	CO1	2
2	Equity Valuation: Dividend Discount Models: Zero growth model, Constant growth model Two stage model, H model, Three stage model	CO2, CO3	6

3	Corporate Valuation (Asset and Income Approach) 3.1 Asset Approach Determining Book Value, Adjusting Book Value, Factors in Asset Valuation 3.2 Income Approach: Analysing historical performance-Estimating the cost of Capital- Forecasting Performance-Estimating the continuing value-Calculating and interpreting the results-Other DCF models: Equity DCF Model: Dividend discount model, free cash flow to Equity (FCFE) model-Adjusted present value model-Economic profit model-Applicability and Limitations of DCF analysis	CO4	10
3	Relative Valuation: Definition and description of Relative Valuation, Steps in Relative Valuation, Market Value, Market Multiples, Wide application of Relative Valuation Advantages and Limitations of Relative Valuation, when to use Relative Valuation, Relative valuation approaches, Trading multiples and their determinants, Transaction multiples and takeover premiums	CO4	4
4	Special cases of valuation- a. Brand valuation b. Valuation of start-ups c. Valuation of distressed firms	CO5	4
5	Assignment and Presentation	CO6	4

Textbooks:

1. Corporate Valuation & Value Creation, Prasanna Chandra. McGraw-Hill Education
2. Damodaran on Valuation: Security Analysis for Investment and Corporate Finance" – Aswath Damodaran, Wiley

Reference Books:

1. Financial Times Guide to Corporate Valuation – David Frykman & Jakob Tolleryd, FT publishing
2. Corporate Valuation: An Easy Guide to Measuring Value- Jakob Tolleryd, David Frykman, Prentice Hall.
3. Equity Asset Valuation: Jerald E. Pinto, Elaine Henry, Thomas R. Robinson, John D. Stowe. CFA Institute

Elective Course 2: Financial Modeling

Credits: 2; Duration: 30 Hours

Course Outcomes:

Upon successful completion of this course, students should be able to:

CO1 (Understanding & Applying) - Demonstrate proficiency in Excel functions and tools including formatting, formulas, charts, pivot tables, and scenario analysis essential for building financial models.

CO2 (Understanding & Applying) - Explain and utilize the Visual Basic Environment (VBE) to record and apply basic macros for automating financial modeling tasks.

CO3 (Analyzing & Applying)
Apply financial modeling techniques to credit appraisal scenarios, including personal and housing loans and credit scoring, using practical datasets.

CO4 (Creating & Evaluating) - Design, build, and validate structured financial models, incorporating defined inputs, outputs, users, and protecting and documenting the models for long-term use.

CO5 (Creating & Evaluating) - Construct and analyze financial models for working capital and project finance, including financial statements, key ratios, repayment schedules, sensitivity analysis, and comprehensive reporting.

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Introduction to Financial Modeling, Introduction to financial modes - static vs dynamic models, need and applications; **Excel Proficiency** Formatting of excel sheets, use of excel formulae function, data filter and sort, charts and graphs, table formula and scenario building, lookups, pivot tables.	CO1	3
2	Visual Basic Environment (VBE): Understanding the basics of macros, recording of macros.	CO2	2
3	Combining the Tools and Theory into the model: Define and structure the problem, define the input and output variables of the model, decide users of the model, understand the financial and mathematical aspects of the model, design the model, create the Spread sheet, test the model,	CO4	3

	protect the model, document the model, maintain the model.		
4	Credit Appraisal Techniques through Modeling Application of Modeling for: housing loan assessment; personal loan assessment; Credit Scoring Models (CIBIL) credit assessment.	CO3	4
5	Working Capital Assessment Model Projected Profit and Loss Statement, Balance Sheet, Cash Flow Statement, Key Ratios (including Current ratio & Interest Coverage), Sensitivity Analysis, Assessment of MPBF.	CO5	7
6	Project Finance Modeling Projected Profit and Loss Statement, Balance Sheet, Cash Flow Statement, Repayment Schedule, Key Ratios (Including ICR and DSCR), Break-even & Payback Period, Risk Assessment (Technical, Financial & Operational), sensitivity analysis	CO5	8
7	Report writing Report writing for project funding and working capital, Retail Loans.	CO5	3

Text Books:

1. C. Sengupta, Financial Modeling using Excel and VBA
2. Alastair L. Day, Mastering Financial Modeling in Microsoft Excel
3. Simon Beninga, Financial Modeling

Reference Books:

1. Alistair L. Day, Mastering Risk Modeling
2. Dr. Manu Sharma, Mergers and Acquisitions and Corporate Valuation- An Excel Based Approach
3. John D. Finnerty , Project Financing- Asset based financial Engineering
4. Daniele Stein Fairhust, Financial Modeling in Excel
5. Alastair L. Day, Mastering Financial Modelling in Microsoft® Excel
6. R.K. GUPTA & HIMANSHU GUPTA, Credit Appraisal & Analysis of Financial Statement: A Handbook for Bankers and Finance Managers
7. R.K. GUPTA & HIMANSHU GUPTA, Working Capital Management & Finance : A Handbook for Bankers and Finance Manager

Elective Course 3: Derivatives & Risk Management

Credits: 2, Duration: 30 Hours

Course Outcomes:

Upon successful completion of this course, students should be able to:

CO1 (Understanding) - Explain the fundamentals of derivatives, including forwards, futures, and options, along with their role in financial markets and risk management.

CO2 (Applying) - Apply valuation techniques for futures and forwards, including cost-of-carry models and currency derivatives, to determine fair pricing and arbitrage opportunities.

CO3 (Analyzing) - Analyze the mechanics and payoff structures of various options, including synthetic positions and arbitrage strategies like conversions and box spreads.

CO4 (Evaluating) - Evaluate option pricing models, including the Binomial and Black-Scholes models, and interpret the impact of key parameters using option Greeks.

CO5 (Creating) - Design and implement hedging, spread, and combination strategies using derivatives in different market conditions.

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Introduction to Derivatives and its application· Basics of Risk Management & properties of / Futures / Forwards (Equity & Commodity) Pricing & Valuation of Futures/Forwards. Equity Arbitrage (Cost of carry Model), Risk Management using Futures · Basis Risk · Introduction to Currencies Forward and Futures and its uses	CO1, CO2	9
2	Mechanics & Properties of Options: Option Terminology, Various types, Boundary Conditions for options and payoff from various options.	CO1, CO3	3
3	Put-call parity: Its applications and interpretation, Synthetic options using put-call parity. Option Arbitrage: Conversions, Reversals, Box Spread.	CO3, CO4	3
4	Option pricing models:	CO3, CO4	6

	Binomial Models (only European) (one period & two period) Black Scholes Model (Equity and Currencies)		
5	Option sensitivities: Sensitivity to the - Underlying - Volatility - Strike price - Interest rate - Time to expiration. Option Sensitivities pricing and uses (Use of Greeks- Delta Gamma, Theta, Vega, Rho)	CO4, CO5	3
6	Option Strategies using Various Market Dynamics: (Use of Excel is recommended in this module) Hedging Strategies (Call hedge, put hedge, Covered Put and call) Spread Strategies (Bull Bear Spread, Butterfly, Condor and Calendar) Combination Strategies (Straddle, Strangle, Strip and Strap)	CO5	6

Textbooks:

1. Options, Future & other Derivatives – by John. C Hull and Shankarshan Basu, Pearson Education India
2. Derivatives and Risk Management by Rajiv Shrivastav, OUP India
3. Derivatives and Risk Management by R Madhumati Pearson Education India.
4. Derivatives and Risk Management by Dhanesh Kumar Khatri (PHI Publication)
5. NISM-Series-VIII: Equity Derivatives Certification Examination
6. National Stock Exchange of India Ltd: NCFM- Options Trading Strategies Module

Reference Books:

1. Applied Derivatives – Richard. J. Rendleman. J R
2. Option Volatility & Pricing – Sheldon Naten Berg
3. The New Options Market – Max Ansbacher

Elective Course 4: Security Analysis and Portfolio Management

Credits: 2; Duration: 30 hours

Course Outcomes:

Upon successful completion of this course, students should be able to:
CO1 (Understanding) - Explain the fundamental concepts of investment, including its objectives, types, and how it differs from speculation and gambling.

CO2 (Applying & Analyzing) - Analyze risk and return characteristics of different securities, including the use of statistical tools, volatility measures, and capital market theories such as CAPM.

CO3 (Evaluating) - Evaluate investment opportunities through fundamental equity research, applying company, industry, and economic analysis, including the Fama-French Three-Factor Model.

CO4 (Applying & Creating) - Apply indexing, benchmarking, and investment decision theories to track indices and make informed asset allocation decisions.

CO5 (Creating & Evaluating) - Construct and evaluate portfolios using modern and post-modern portfolio theories, including factor models, arbitrage pricing theory, and portfolio performance measurement.

Unit/ Module	Topics	CO Mapping	Duration
1	Introduction to Investment & Securities- Meaning, Nature, Objectives and Process. Difference Between Investment and Speculation, Investment and Gambling. Various Investment Avenues / Alternatives.	CO1	2
2	Securities- Risk and Return Analysis-Types of Securities, Probability v/s absolute Loss in risk management, volatility in prices, statistical tools for risk calculation, Systematic, unsystematic risk	CO2	3
3	Efficient Market Hypothesis-Random Walk theory, Significance, usage	CO2	3
4	Equity research and Valuation-Sources of Financial Information, Economic Analysis Company analysis ,Industry analysis, and valuation of equity shares, Fama-French Three-Factor Model	CO3	4
5	Indexing and Benchmarking-creation of Index, adjusting for corporate adjustments in the Index, tracking an index.	CO4	3
6	Technical Analysis-Dow theory, types of charts. Japanese candle stick pattern, chart patterns, technical indicators.	CO2	3

7	Capital market theories-Capital asset pricing model, portfolio risk and return	CO2,CO3	3
8	Factor models and arbitrage pricing theory-factor based valuation model, risk free arbitrage	CO5	3
9	Investment decision theory-Timing, buy, sell, short, hold ,allocation.	CO4	2
10	Portfolio theory-Construction and analysis, portfolio optimization, portfolio management strategies, portfolio performance measurement, Post Modern Portfolio Theory	CO5	2
11	Case Studies and Presentation	CO5	2

Textbooks,

1. Prasanna Chandra, Security Analysis and Portfolio Management
2. Donald Fische and Ronald Jordan, Security Analysis and Portfolio Management.
3. Dr. Sudesh Kumar & Dr.Ravi Sidhu, Security Analysis and Portfolio Management.
4. "Best Practices for Equity Research Analysts: Essentials for Buy-Side and Sell-Side Analysts" by James J. Valentine
5. "Security Analysis" by Benjamin Graham and David Dodd - Whittlesey House, McGraw-Hill Book Company
6. The Intelligent Asset Allocator: How to Build Your Portfolio to Maximize Returns and Minimize Risk by William J. Bernstein:

Reference Books

1. Steven Achelis, Technical Analysis
2. John Murphy, Technical Analysis of Financial Markets
3. "The Intelligent Investor" by Benjamin Graham

Elective Course 5: Global Financial Management & Markets

Credits: 2; Duration: 30 Hours

Course Outcomes:

Upon successful completion of this course, students should be able to:

CO1 (Understanding) - Explain the evolution of international monetary systems, including the gold standard, Bretton Woods, and modern currency systems, and assess their impact on global financial flows.

CO2 (Understanding & Analyzing) - Analyze the structure and impact of the Balance of Payments (BoP), foreign investment types (FDI, FPI), and India's position in global financial markets, including GIFT City and INR internationalization.

CO3 (Applying & Analyzing) - Apply concepts of exchange rate mechanisms, including spot, forward, and cross rates, and evaluate parity theories (PPP, IRP) to interpret currency fluctuations and arbitrage opportunities.

CO4 (Analyzing & Evaluating) - Evaluate instruments and participants in international financial markets, such as Eurocurrency, foreign bonds, GDRs/ADRs/IDRs, and assess their risk-return profiles.

CO5 (Applying & Creating) - Develop risk management strategies using currency derivatives, including forwards, futures, options, and swaps to hedge against international financial exposures and geopolitical risks.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Fundamentals of International Finance: International Monetary Systems - Classical Gold Standard, Bretton Wood System, SDRs and Smithsonian agreements, Fixed and Floating Rate Systems, European Monetary System; Determinants of demand for and supply of currency, exchange rate and factors affecting exchange rate Balance of Payment - current account, capital account and reserve account, Deficit in Balance of Payment and its impact Foreign direct investments and foreign portfolio investments, participatory notes, Off-shore banking, tax havens	CO1, CO2,	06
2	India and Global Financial Markets - International Finance Centres, GIFT City:	CO2	03

	Constituents and Benefits, Internationalization of INR, De-dollarization		
3	Foreign Exchange Markets – Methods and Applications: Exchange rate quotations, direct and indirect rates, cross currency rates, vehicle currency, spreads and calculation of cross rates, settlements – cash, tom, spot and forward, arbitrage, speculation; Purchasing power parity, Interest rate parity and, covered interest rate parity and arbitrage; Calculation of forward rates through use of forward schedules, annualized forward margin, Calculation of swap points.	CO 3 CO 4	06
4	International Currency Markets: Eurocurrency Markets - Origin and reasons for growth of Eurocurrency markets, their characteristics and components, Euro currency deposits, loans, bonds and notes International Debt Markets - International bond markets, types of foreign bonds, FCCBs, ECBs, Risks in international bonds. International Equity Markets: - Mechanisms and systems - Global depository receipts, American Depository Receipts; Indian Depositary Receipts, Fungibility	CO 3 CO 4	03
6	Currency Forward and Futures: Currency Forward and Currency futures terminologies, pricing currency futures, Using Forward and Futures for hedging, speculation and arbitrage, Non deliverable Forwards (NDFs)	CO 4 CO 5	03
7	Currency Options and Swaps: Introduction, option terminologies, options pay-offs, hedging and speculation with currency options, Vanilla options, Exotic options;	CO 4 CO 5	03

	Swaps - Interest Rate Swaps and currency swap.		
9	Risk & Exposure Management: Concept of Risk in International Finance, Management of risks including Geopolitical Risks in international trade / business operations - Case Discussion including discussion on Country Risk Analysis	CO 4 CO 5	06

Textbooks:

1. Apte P.G. & Sanjeevan Kapshe (2022). International Financial Management (8th Edition). Mcgraw Hill education
2. Shapiro A.C. & Hanouna Paul (2019). Multinational Financial Management (11th Edition., Wiley

Reference Books:

1. Madura J. (2021). International Financial Management (14th Edition) Cengage Learnings
2. Levy M.D. (2018). International Finance (6th Edition). Routledge

Elective Course 6: Commercial Banking & Operations

Credits: 2; Duration: 30 hours

Course Outcomes:

Upon successful completion of this course, students should be able to:

CO1 (Understanding) - Explain the structure and functions of the Indian banking system, the role of commercial banks in the economy, and the importance of financial inclusion and rural banking.

CO2 (Applying & Analyzing) - Analyze the regulatory framework for commercial banks, including RBI guidelines, the Banking Regulation Act, AML/KYC norms, and Basel III implementation in India.

CO3 (Applying & Evaluating) - Evaluate the range of banking products, services, and technology-driven innovations, including digital banking, payment systems, treasury operations, forex markets, and emerging fintech trends.

CO4 (Applying & Creating) - Apply principles of credit management and loan processing, including risk assessment, credit scoring, NPA management, and customer relationship practices in real-world banking scenarios.

CO5 (Evaluating & Creating) - Assess and develop risk management strategies in banking, incorporating internal controls, audit mechanisms, cybersecurity, stress testing, and sustainable finance initiatives.

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Introduction to Commercial Banking: Definition, functions, and role of commercial banks in the economy. Types of banks: Public sector, private sector, foreign banks, and regional rural banks. Structure of the Indian banking system. Overview of the Reserve Bank of India (RBI) and its role in banking regulation.	CO1,CO2	2 Hours
2	Regulatory Framework for Commercial Bank - Banking Regulation Act, 1949. RBI guidelines for capital adequacy, liquidity, and asset classification. Basel III norms and their implementation in India.	CO2,CO3	2 Hours

	Anti-money laundering (AML) and Know Your Customer (KYC) norms.		
3	Module 3: Banking Products and Services Deposit products: Savings accounts, current accounts, fixed deposits, and recurring deposits. Loan products: Personal loans, home loans, vehicle loans, and business loans. Credit cards, debit cards, and prepaid instruments. Payment and settlement systems: NEFT, RTGS, IMPS, and UPI.	CO2, CO3	2 Hours
4	Credit Management and Loan Processing Principles of lending and credit appraisal. Loan documentation and security creation. Credit risk assessment and credit scoring models. Non-performing assets (NPAs) and their management.	CO3, CO4	3 Hours
5	Risk Management in Banking Types of risks in banking: Credit risk, market risk, operational risk, and liquidity risk. Risk mitigation techniques and tools. Role of internal and external audits in risk management. Stress testing and scenario analysis.	CO3, CO4	2 hours
6	Technology in Banking Core banking solutions (CBS) and their importance. Digital banking: Internet banking, mobile banking, and digital wallets. Block chain, artificial intelligence, and machine learning in banking. Cybersecurity challenges and solutions in banking.	CO3,CO4	3 Hours

7	Customer Relationship Management (CRM) in Banking Importance of CRM in banking. Tools and techniques for effective customer engagement. Cross-selling and up-selling strategies. Handling customer grievances and dispute resolution.	CO3	3 Hours
8	Treasury and Forex Operations Functions of the treasury department in a bank. Forex operations: Spot transactions, forward contracts, and currency swaps. Managing foreign exchange risk. RBI guidelines on forex operations.	CO3, CO4,CO5	3 Hours
9	Emerging Trends in Banking. Fintech innovations and their impact on traditional banking. Open banking and API-based services. Green banking and sustainable finance. Role of commercial banks in financial inclusion	CO3, CO4	3 Hours
10	Financial Inclusion and Rural Banking Importance of financial inclusion in India. Role of regional rural banks (RRBs) and cooperative banks. Government schemes for financial inclusion (e.g., PMJDY). Challenges and opportunities in rural banking.	CO3,CO4	3 Hours
11	International Banking Operations Overview of international banking. Correspondent banking and trade finance. Foreign currency loans and international payment systems. Regulatory challenges in international banking.	CO3, CO4	2 Hours

12	Case studies on successful and failed banking operations. Role-playing exercises for loan processing and customer interaction. Analysis of real-world banking scenarios and problem-solving. Guest lectures by industry experts on contemporary banking issues.	CO4 CO5	2 Hours

Textbooks:

1. Commercial Bank Management, by Singh & Dutta
2. Digital Banking, ByIIB, Publisher -Taxmann Publications Pvt. Ltd.

Reference Books:

1. Indian Financial System, M. Y. Khan, McGraw Hill Education, 11th Edition
2. Banking Theory and Practice – K.C. Shekhar & Lekshmy Shekhar, S. Chand Publishing, 23rd Revised Edition
3. Principles and Practices of Banking – Indian Institute of Banking and Finance, Macmillan Publishers India, 3rd Edition
4. Commercial Banking in India – Nitin Bhasin, New Century Publications

Elective Course 7: Mutual Funds and Insurance

Credits: 2; Duration: 30 Hours

Course Outcomes:

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

CO1 (Understanding) - Explain the concept, classification, and structure of mutual funds and insurance in India, including their evolution, key stakeholders (AMCs, IRDAI, SEBI), and how they compare with other investment avenues like stocks and bonds.(Linked to Modules 1, 2, 5)

CO2 (Applying) - Apply knowledge of the regulatory framework governing mutual funds and insurance, including SEBI guidelines, AMFI code of conduct, IRDAI rules, and tax implications under Section 80C, 80D, and 10(10D) of the Income Tax Act. (Linked to Modules 2, 5, 7)

CO3 (Analyzing) - Analyze mutual fund performance and insurance products using metrics such as NAV, Total Expense Ratio, SIP vs. lump sum investment strategies, credit risk measures, and various policy features of term, ULIP, and endowment plans. (Linked to Modules 3, 4, 6, 7)

CO4 (Evaluating) - Evaluate risk-return trade-offs in mutual fund schemes and insurance portfolios, considering general and specific risk factors, credit risk provisions, asset-liability management, and financial ratios of insurance companies. (Linked to Modules 4, 6, 7)

CO5 (Creating) - Design appropriate investment and insurance solutions tailored to diverse financial goals by proposing innovative digital insurance models, SIP strategies, and product comparisons aligned with investor needs and regulatory guidelines. (Linked to Modules 3,7,8)

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Concept and Role of a Mutual Fund: Concept of a Mutual fund, Classification of Mutual Funds, Growth of the mutual fund industry in India, Comparing mutual funds with other investment options (Stocks, Bonds, ETFs)	CO1	3
2	Legal Structure of Mutual Funds in India: Structure of Mutual Funds in India, Key Constituents of a Mutual Fund, Organization Structure of Asset Management Company, Role and Support function of Service Providers, Role and Function of AMFI Legal and Regulatory Framework:	CO1 CO2	3

	Role of Regulators in India, Role of Securities and Exchange Board of India, Due Diligence Process by AMCs for Distributors of Mutual Funds, Investor Grievance Redress Mechanism, AMFI Code of Conduct for Intermediaries, evaluating taxation aspects: LTCG, STCG, ELSS tax benefits, Benchmarking mutual funds against indices like NIFTY 50, SENSEX		
3	Net Asset Value, Total Expense Ratio and Pricing of Units: Computation of Net Assets of Mutual Fund Scheme and NAV analysing the mutual fund, developing a SIP vs Lump Sum investment strategy for various financial needs, Concept of Entry and Exit Load and its impact on NAV, NAV, Total expense ratio and pricing of units for the Segregated Portfolio Taxation: Applicability of taxes in respect of mutual funds, Capital Gains, Dividend income, Stamp Duty on Mutual Fund Units, setting-off of Capital Gains and Losses under Income Tax Act, Securities Transaction Tax, Tax benefit under Section 80C of the Income Tax Act, Tax Deducted at Source, Applicability of GST	CO3, CO4, CO5	6
4	Risk, Return and Performance of Funds: General and Specific Risk Factors, Factors that affect mutual fund performance, Drivers of Returns and Risk in a Scheme, Measures of Returns, SEBI Norms regarding Representation of Returns by Mutual Funds in India, Risks in fund investing with a focus on investors, Measures of Risk, Certain Provisions with respect to Credit risk	CO3, CO4,	3
5	Life Insurance: Meaning, The Evolution and Growth of Life Insurance, Basic Principles of Insurance, Life Insurance Organizations in India, Competition and Regulation of Life Insurance, Current Legal Environment, Insurance Act 1938 as amended, Identifying different types of insurance: Life, Health, Motor, Fire, Marine, Liability, Market analysis: LIC, GIC, Private insurance players in India, An Overview, Insurance Sector Reforms: The Insurance Regulatory Development Authority (IRDA) Act and Guidelines for Insurance Brokers	CO1, CO2	3

6	Settlement of Claims: Claim procedure, TPAs, Claim forms, Investigation / Assessment, Essential Claim Documents, Settlement Limitation, Arbitration, Loss Minimization and Salvage. Financial Aspects of Insurance Companies: Financial objective of an insurance Company, Responsibilities off insurance manager, Performance measurement of insurance company, ALM, Ratio analysis of insurance company, Risk and Return trade off, valuation of assets and liabilities, technical provision. Risk Margin Reinsurance: Hedging, Role of Re-insurers, Techniques of reinsurance, Issues and challenges of Indian reinsurance, Investment by insurance company.	CO3, CO4	6
7	Risk aversion and demand for Insurance: By individuals, By corporations, Insurability of risk-contractual provisions, Legal doctrine, Loss control, Risk Retention and reduction decisions, Exchange Control Regulations as applicable to General Insurance, IRDA directions for protections of policy holders, Consumer Protection Act 1986, Arbitration, conciliation Act 1996 vigilance set up Insurance Ombudsman, evaluating taxation on insurance policies (80C, 80D, 10(10D)), Comparing term insurance, ULIPs, and endowment plans for different investment needs	CO2, CO3, CO4, CO5	3
8	Developing an innovative digital insurance product (Micro insurance, Insur-ech), Proposing AI-driven risk assessment models for better underwriting	CO5	3

Textbooks:

1. The Fundamentals of Insurance: Theories, Principles and practices by Hargovind Dayal
2. Digital Insurance: Business Innovation in the Post-Crisis Era" by Bernardo Nicoletti
3. Indian Mutual Funds Handbook: A guide for Industry Professionals and intelligent Investors by Mr.Sundar Sankaran
4. Business insurance, by Agarwal , O.P, Himalaya Publication
5. Principles and practices of insurance, by Periasamy , P. Himalaya Publication

6. The Complete Guide to Managing a Portfolio of Mutual Funds by Mr.Rutherford Ronald K.
7. Mutual Funds in India: Vehicle for Fixed Income Investments by Mr.Sen, Joydeep

Reference Books:

1. Common Sense on Mutual Funds" by John C. Bogle
2. NISM Series V A: Mutual Fund Distributors Certification by NISM Taxmann Publications
3. IRDAI publications and guidelines
4. Principles of Risk Management and Insurance" by George E. Rejda
5. Mutual Funds-Ladder To Wealth Creation by Mr.Vivek K Negi

Elective Course 8: Emerging Technologies in Finance and Blockchain

Credits:2; Duration:30 Hours

Course Outcomes:

Upon successful completion of this course, students should be able to:

CO1 (Understanding & Applying) - Explain and apply the core concepts of emerging technologies such as Artificial Intelligence (AI), Machine Learning (ML), Big Data, Robotic Process Automation (RPA), and Cloud Computing in banking and financial services. (Linked to Module 1)

CO2 (Understanding & Analyzing) - Describe the structure, types, and technical foundations of Blockchain technology, including cryptographic techniques, smart contracts, and the distinction between public, private, and consortium blockchains. (Linked to Module 2)

CO3 (Applying & Evaluating) - Analyze the applications of blockchain and cryptocurrencies in finance, including decentralized finance (DeFi), NFTs, tokenization, trade finance, and cross-border transactions. (Linked to Module 3)

CO4 (Evaluating & Understanding) - Evaluate regulatory frameworks, cybersecurity concerns, and ethical issues associated with the use of digital assets, AI, and blockchain technologies, including developments in CBDCs and Web3 innovations. (Linked to Module 4)

CO5 (Creating & Applying) - Develop insights into real-world financial innovations through case studies and practical applications of blockchain, AI, and ML in risk management, fraud detection, and financial operations. (Linked to Practical Applications / Case Studies Module)

Unit/ Module	**Content**	**CO Mapping**	**Hours assigned**
1	Introduction to Emerging Technologies in Finance - Evolution of Financial Technologies (FinTech), Applications of Artificial Intelligence (AI), Machine Learning (ML), and Big Data in Finance, Robotic Process Automation (RPA) in Banking & Financial Services, Internet of Things (IoT) and Cloud Computing in Financial Services, Open Banking APIs and Embedded Finance **Use Cases of FinTech Startups** (e.g., Cred, Paytm, Upstox) to demonstrate real-life applications.	CO1	6 Hours

2	Fundamentals of Blockchain Technology, Concept, Characteristics, and Key Components of Blockchain, Types of Blockchains: Public, Private, and Consortium, Smart Contracts: Features and Use Cases, Cryptographic Techniques and Hashing in Blockchain, Limitations of Blockchain (e.g., scalability, energy use)	CO2	6 Hours
3	Blockchain Applications in Finance, Cryptocurrencies: Bitcoin, Ethereum, and Beyond, Decentralized Finance (DeFi) and Peer-to-Peer Lending, Tokenization of Assets and Non-Fungible Tokens (NFTs), Blockchain in Trade Finance, Cross-Border Payments, and Supply Chain, Stablecoins and their role in CBDCs. *Suggested - Mock tokenization exercise (students create dummy NFTs or use platforms like OpenSea testnets).*	CO3	6 Hours
4	Regulatory and Ethical Considerations, Legal and Regulatory Framework for Blockchain and Digital Assets - **India-specific regulatory landscape** (e.g., RBI's stance on digital assets, DPDP Act 2023); **Comparative global regulatory practices** (EU's MiCA, US SEC/FinCEN updates) Data Security, Privacy, and Cybersecurity Challenges, Ethical Implications of AI and Blockchain in Finance -: fairness in credit scoring, algorithmic bias, explainability. Future Trends: Central Bank Digital Currencies (CBDCs) and Web3	CO4	6 Hours
5	Case Studies and Practical Applications - Successful Implementations of Blockchain in Banking & Financial Services; Hands-on Experience with Blockchain Transactions (e.g., Ethereum, Hyperledger), Use Cases of	CO5	6 Hours

	AI & ML in Risk Management and Fraud Detection, Discussion on Emerging Trends and Innovations in Financial Technology. *[Suggestion - mini-capstone projects where students prototype a financial solution (e.g., P2P lending DApp, fraud detection model using Python) OR Use Sandbox environments from fintech labs or platforms like Razorpay, Kaleido, or Azure Blockchain Workbench etc.]*		

Text Books:

1. Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction, by Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller & Steven Goldfeder, Publisher: Princeton University Press
2. Fintech: The New DNA of Financial Services, by Pranay Gupta & T. Mandy Tham, World Scientific

Reference Books:

1. Fintech Law in a Nutshell, by Chris Brummer, West Academic Publishing
2. Blockchain Babel: The Crypto-Craze and the Challenge to Business, by Igor Pejic, Kogan Page

Elective Course 9: Corporate Restructuring and Mergers and Acquisitions

Credits: 2; Duration 30 hours

Course Outcomes:

Upon successful completion of this course, students should be able to:

CO1 (Understanding) - Explain the concept, types, and strategic relevance of corporate restructuring, including mergers, acquisitions, divestments, joint ventures, and strategic alliances, along with their operational and financial implications. (Linked to Module 1)

CO2 (Understanding & Applying) - Analyze the motives, classification, and legal framework of mergers and acquisitions, including SEBI regulations, takeover tactics, and scheme of arrangement as per the Companies Act. (Linked to Module 2)

CO3 (Applying & Evaluating) - Evaluate methods of financing mergers and the valuation of target firms, treating mergers as capital budgeting decisions and assessing due diligence procedures and their risks. (Linked to Modules 3 & 4)

CO4 (Analyzing & Evaluating) - Assess post-merger integration challenges and growth strategies, including human resource integration, synergy realization, and performance evaluation tools in a merged entity. (Linked to Module 5)

CO5 (Creating) - Develop and present case-based restructuring strategies, demonstrating the ability to apply theoretical concepts to practical scenarios through assignments and presentations. (Linked to Module 6)

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Corporate Restructuring Basics: Meaning, operational and financial restructuring, forms such as Mergers and Acquisitions, divestments (Divestiture, Spin-Off, Carve-Out), joint ventures, strategic alliances) need and barriers to restructuring, Distinction between operational vs financial restructuring, with real company examples; Overview of value creation vs value destruction in restructuring Global trends in restructuring and their impact on Indian markets *(Suggested Caselets on Vodafone–Idea merger, Tata Group restructuring)*	CO1	6

2	Mergers and Acquisitions: Types of mergers (horizontal, vertical, conglomerate) with example; Distinction between mergers and acquisitions, classification, and motives behind mergers and acquisitions, merger process, identification of targets, takeover and defence tactics scheme of arrangement, company law and SEBI's Takeover Code, and Companies Act sections on Schemes of Arrangements ; Cross-border M&A and RBI's FDI regulations in M&A context Suggested Case Study discussion: Analyze Zee-Sony Merger or HDFC-HDFC Bank Merger	CO2	4
3	Methods of financing mergers – Synergy valuation and impact on combined firm value; cash offer, share exchange ratio – mergers as a capital budgeting decision ; Valuation - DCF, Comparable Company Analysis (CCA), Precedent Transaction Method (PTM); Leveraged Buyouts (LBOs) as a financing tool for acquisition	CO3	8
4	Due Diligence: Concept, Need and steps in due diligence. Types of due diligence and reasons for failure of due diligence - Legal, financial, tax, HR, and ESG due diligence Due diligence red flags in failed acquisitions through discussion using due diligence checklist templates and cases where due diligence failure led to value loss (e.g., Jet-Etihad)	CO3	4
5	Post-Merger Issues: Concept of Integration in mergers, tools for integration, Post merger growth strategies. Human factors in integration; Performance tracking: Key metrics (ROIC, synergies realized)	CO4	4
6	Class Presentations - Case-based restructuring strategies, demonstrating the ability to apply theoretical concepts to practical scenarios OR simulated restructuring case (including valuation, legal compliance, and integration plan) [*Suggestion: Pitchbook creation and mock boardroom presentations]*	CO5	4

Textbooks

1. Godbole, P. (2013). Mergers, Acquisitions and Corporate Restructuring, Vikas Publishing House, New Delhi

2. Rajinder S Aurora, Kavita Shetty, Sharad R. Kale– Mergers & Acquisitions –Oxford University Press, New Delhi

Reference Books

1. B Rajesh Kumar, Mergers and Acquisitions, Text and Cases: Tata McGraw Hill Education Private Limited, New Delhi
2. Mergers, Restructuring and Corporate Control, Fred Weston, Kwang S Chung, Susan E Hoag, 4/e, Pearson Education.

Elective Course 10: Direct and Indirect Taxes

Credits: 2; Duration 30 hours

Course Outcomes:

Upon successful completion of this course, students should be able to:

CO1: Understand the core concepts, provisions, and definitions under the Indian Income Tax Act and Indirect Tax Laws.

CO2: Apply provisions of Income Tax, GST, and Customs laws to compute taxable income and duties.

CO3: Analyze and compute tax liabilities for individuals, corporates, and indirect tax transactions

CO4: Evaluate ethical and legal dimensions of tax planning, avoidance, and evasion under both direct and indirect tax frameworks.

CO5: Assess the impact of recent reforms in direct and indirect taxation on compliance, administration, and economic governance.

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Indian Income Tax Act- - Concepts and definitions - Residential status - Heads of income (Salary, House property, profits and gains of business and profession, capital gains and income from other sources)	CO1,	3
2	- Computation of Total Income and Determination of Tax Liability – Individuals	CO2, CO3	6
3	- Computation of Total Income and Determination of Tax Liability – Corporates - Other provisions like , PAN, TDS, Advance Tax, interest and penalty, assessment and appeals	CO2, CO3	6
4	Indirect Taxes - - GST – Supply as Basis of charge, Input Tax Credit, Types of GST – CGST, SGST and IGST	CO2, CO3	3
5	Indirect Taxes - - Custom Act – Basic provisions related to import and export	CO2, CO3	3

6	Tax Planning, Tax Evasion, and Tax Reforms in India - Concept of tax planning vs tax avoidance vs tax evasion - Legitimate tax planning for individuals and corporates - GAAR (General Anti-Avoidance Rules) and its implications - Major tax reforms in India post-1991 (Direct and Indirect Taxes) - Recent trends: Faceless Assessment, Vivad Se Vishwas Scheme, Digital Taxation - Role of tax administration and policy in economic development	CO4, CO5	6
7	Case Discussions and Class Presentations	CO4, CO5	3

Textbooks

1. 'Students' Guide to Income Tax including GST', Singhania, V. K. & Singhania, Monica, Publisher: Taxmann Publications
2. '*Systematic Approach to Income Tax including GST',* Ahuja, Girish & Gupta, Ravi, Publisher: Wolters Kluwer

Reference Books

1. '*Income Tax Law and Accounts',* Mehrotra, H.C. & Goyal, S.P., Publisher: Sahitya Bhawan Publications
2. *'Indirect Taxes Law and Practice – GST & Customs',* Datey, V.S.*,* Publisher: Taxmann Publications
3. Bare Acts & Circular Compilations - *Income Tax Act & GST Acts with Rules, Circulars, and Notifications,* Publisher: Commercial Law Publishers / Taxmann

Semester III - Human Resource

Elective Courses - HR Specialization (Any 5)					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
Mandatory					
1	Mandatory - Specialization (HR)	Competency-based HRM & Performance Management System	2	20	**UA**
Electives (Any 5)					
1	Elective	Artificial Intelligence (AI) in Human Resource Management	2	20	**IA**
2	Elective	Compensation and Benefits	2	20	**IA**
3	Elective	Employer Branding and Employee Value Proposition	2	20	**IA**
4	Elective	HR Analytics	2	20	**IA**
5	Elective	HR Planning and Application of Technology in HR	2	20	**IA**
6	Elective	Learning and Development	2	20	**IA**
7	Elective	Global HRM	2	20	**IA**
8	Elective	Organization Theory, Structure and Design	2	20	**IA**

***IA – Internal Assessment; UA – University Assessment**

Human Resource Group - Mandatory Course: Competence based HRM & Performance Management System

Credits: 2: Duration: 30 Hours

Course Outcomes:

Upon successful completion of this course, the students should be able:

CO 1: To understand history, concept, functions, and significant role of competency in the organization. (Level 2)
CO 2: To analyse the competency mapping process and its application using various methods and tools in the organisation. (Level 4)
CO 3: To create various approaches towards building a competency model and integrate the applications with HRM functions (Level 5,6)
CO 4: To understand the conceptual framework of Performance Management System in the organisation (Level 2)
CO 5: To apply and create methods of performance appraisal and evaluate the effectiveness of various performance appraisal methods in the organisation (Level 3,5,6)

Unit/ Module	Content	CO Mapping	Hours
1	**Introduction and Concept of Competency:** · Definition and history of competency · Difference between competence and competency · Types of Competencies – Generic, Behavioural and Functional · Key components of Competency Framework	CO 2, CO 1	2
2	**Competency Mapping Process:** · Meaning and Definition · Process of Mapping Competency for HR functions	CO 2	3

3	**Developing Competency Framework and Models**: · Meaning of Competency Model · Development of competency framework Five level of Competency Model, Mc Clelland's Competency Model & Lancester Model of Competency	CO 3	3
4	**Measurement and Metrics of Competency Mapping**: · Methods of Data Collection · Repertory Grid · Critical Incident Method · Expert Surveys · Job Analysis and Design · Behavioral Event Interview, etc.	CO 3	3
5	**Assessment of Competency; Using Various Tools:** · Conducting various exercises in Assessment Centre- In Basket Exercise, Group Discussion, Role Play, Exercises, and Simulations · Psychometric Tools · Feedback and Report writing	CO 2, CO 3	4
6	**Foundation of Performance Management System** · Concept and Definition of Performance Management System · Objective and Scope of Performance Management Systems · Importance of Performance Management System	CO 4	3

7	**Management of Performance:** · Components of Performance Management · Process for Managing Performance · Implications of Performance Management System	CO 4	3
8	**Dimensions to measure Performance** · Setting Performance Standards · Job Analysis in Performance · Goal Setting: KPIs, KRAs, SMART goals	CO 4	3
9	**Performance Appraisal System Implementation:** · Defining Performance Appraisal · Methods of Performance Appraisal · Biases and Errors in Performance Appraisal · Approaches to Performance Appraisal · Appraisal Interviews	CO 5	3
10	**PMS Feedback and Ethics in Performance Management:** · Performance Feedback · Guidelines of Corrective Feedback Need and Role of Performance Consulting · Ethical Issues and Dilemmas in Performance Management	CO 4, CO 5	3

Textbooks:

1. The handbook of Competency Mapping: Understanding, Designing and implementing Competency Models in organization's by Seema Sanghi Sage Publication
2. Competency Mapping and Assessment: A practitioner's Handbook: Seema Sanghi Routledge India Original.
3. Armstrong, M. & Baron, A., Performance Management and development, Jaico Publishing House, Mumbai
4. Bagchi, S. N., Performance management, Cengage Learning India
5. Bhattacharyya, D.K., Performance Management Systems and Strategies, Pearson Education

Reference Books:

1. Performance Management by Julie Freeman
2. Bringing out the best in people by Daniels.
3. Effective Performance Appraisal by James Neil
4. International Human Resource Management by Peter J Dowling, Device E Welch, 4th Edition.
5. International Human Resource Management by Hilary Harris, Chris Brewster and Paul Sparrow, VMP Publishers and Distributors

Recommended Pedagogy:

1. Lectures and Discussion
2. Case studies
3. Videos
4. Role Plays

Elective Course 1: Artificial Intelligence (AI) in Human Resource Management

Credits: 2; Duration: 30 Hours

Course Outcomes:

Upon successful completion of this course, the students should be able:

CO 1: To develop an understanding of Artificial Intelligence (AI) and its applications in Human Resource Management (HRM). (Level 2)
CO 2: To apply AI-driven tools and techniques in HR functions. (Level 3)
CO 3: To analyse ethical and legal considerations in AI-powered HR decision-making and implementation. (Level 4)
CO 4: To evaluate and develop practical expertise in AI-powered HR analytics and process automation. (Level 5)
CO 5: To create and integrate AI Models in HRM. (Level 6)

Unit/ Module	Content	CO Mapping	Hours
1	Introduction to AI in HRM · Overview of Artificial Intelligence (AI) and Machine Learning (ML) · Evolution of AI in HRM · The Role of AI in Enhancing HR Functions	CO 1	3
2	AI in Talent Acquisition and Recruitment · AI-Based Resume Screening & Applicant Tracking Systems (ATS) · Adoption of AI in Task automation, Recruitment, and Talent acquisition · Chatbots and Virtual Assistants for Candidate Engagement · Predictive Analytics for Hiring Decisions · AI in Diversity and Inclusion in Hiring · HR Metrics	CO 1, CO 2	4

3	AI in Employee Engagement and Performance Management · AI-Driven Employee Feedback Systems · Sentiment Analysis and Employee Experience Monitoring · AI for Performance Appraisals and 360-Degree Feedback · Personalized Learning & Development with AI	CO 3	4
4	Usage of AI in various functions of HR · Using AI in Workforce Planning · Using AI in Onboarding · Using AI in Employee Training · Using AI in Performance Management · Using AI for Employee Retention	CO 2, CO 3	6
5	AI in HR Analytics and Decision-Making · Workforce Planning with AI · Predictive HR Analytics for Retention and Productivity · AI-Powered Compensation & Benefits Optimization · HR Metrics & Dashboards for Data-Driven Decisions	CO 3, CO 4	3
6	Ethical, Legal, and Future Implications of AI in HRM · Ethical Challenges of AI in HR (Bias, Privacy, and Transparency) · Legal & Compliance Aspects of AI in HR · The Future of AI in HRM – Trends and Innovations	CO 3	3
7	Challenges and Future Opportunities of AI in HRM · Challenges of AI adoption in HRM · HRM digitalization Success and Future Opportunities.	CO 4, CO 5	3

	· AI in Career Succession Planning of Employees		
8	Emerging Trends of AI in HRM · AI in Sustaining Green HRM · Emerging trends of AI based HRM · Benefits of Synergizing AI and HRM · AI in Compensation & Benefits · AI in Compliance	CO 5	4

Textbooks:

1. Artificial Intelligence for HR: Use AI to Support and Develop a Successful Workforce – Ben Eubanks
2. The Future Workplace Experience: 10 Rules for Managing Disruption in Recruiting and Engaging Employees – Jeanne C. Meister & Kevin Mulcahy
3. Human + Machine: Reimagining Work in the Age of AI – Paul R. Daugherty & H. James Wilson
4. Ben Eubanks (2018). Artificial Intelligence for HR: Use AI to Support and Develop a Successful Workforce. Kogan Page Publishers, 2018
5. Strohmeier, Stefan (2022). Handbook of Research on Artificial Intelligence in Human Resource Management. Edward Elgar Publishing, 2022

Reference Books:

1. Reports from Gartner, McKinsey, and Deloitte on AI in HR
2. Case studies from Harvard Business Review (HBR)
3. Articles from SHRM (Society for Human Resource Management)

Recommended Pedagogy:

1. Lectures and Discussion
2. Case studies
3. Videos
4. Application through Software

Elective Course 2: Compensation and Benefits

Credits: 2; Duration: 30 Hours

Course Outcomes:

Upon successful completion of this course, the students should be able:

CO1: To understand the key concepts, components, and legal aspects of Compensation and benefits & the strategic role of Compensation. (Level 2)

CO2: To apply job evaluation methods and pay structures in real-world scenarios. (Level 3)

CO3: To analyse Compensation data to assess internal and external pay equity and various Compensation models (Level 4)

CO4: To evaluate the effectiveness of Compensation strategies in achieving organizational goals. (Level 5)

CO 5: To create an innovative and competitive Compensation and benefits plan for an organization. (Level 6)

Unit/ Module	Content	CO Mapping	Hours
1	Introduction to Compensation and Benefits · Human Resources Philosophy and Perspectives on Compensation · Difference between Compensation and Benefits. · Approaches of organization for Compensation and Benefits · Global Compensation Approaches · Aligning Compensation Strategies with Business and HR Goals Regulatory adherence	CO 1	3
2	Job Evaluation & Pay Structures · Job Evaluation - Process & Methods (Ranking, Classification, Point Method, Factor Comparison, Hay Guide) · Designing Pay Structures - Grade Pay, Pay Band and Broadband	CO 2	3

	Internal & External Equity		
3	Reward Strategy & Elements of Reward Strategy · Articulating and understanding business context for reward strategies · Total Rewards Models, Equity-Expectancy Model · Reward Management · Benefits & Perquisites · Flexible Benefits, Employee Stock Options (ESOPs) and Phantom Stock Option Plan (PSOPs) Legal Compliance	CO 1, CO 2, CO 4	3
4	Understanding Compensation Structure and Salary Framework - - Costing the CTC of each element - Compensation Structure- ➔ Wages and Salary ➔ Fixed ➔ Cash Benefits ➔ Retirals ➔ Social Security ➔ Variable Pay/Incentives/Stock Options ➔ Forms of Pay – Base Pay, Merit Pay, Cost of Living - Elements in different salary slips - Consolidated and Separated Pay structure. - Designing a salary offer template - Evaluating and Understanding salary ranges - Extending a Salary Offer	CO1, CO 3, CO 5	6

5	Understanding Inflation - Neutralization of Inflation - Dearness Allowance - Consumer Price Indices	CO 1, CO 5	3
6	Employee Benefits and Social Security Schemes - Calculation of PF, ESIC, Gratuity, Superannuation - Approaches to Ex-gratia & Bonus	CO 1, CO 2	3
7	Income Tax and Its Impact on Salary Structure - Understanding & Calculating Income Tax - Gross and Net Pay - Key Deductions	CO 1, CO 3, CO 5	2
8	Equity Compensation - Meaning, Objectives - Types of Stock Plans - Valuing Stock Grants - SEBI Guidelines - Taxability of Stock Options Performance-Based Pay Strategies - Pay-for-Performance Models - Merit Pay, Bonuses and Incentives - Profit Sharing & Gainsharing - Executive Compensation - Competitive Pay Policy	CO 4, CO 5	4
9	Emerging Trends in Compensation and Benefits - Impact of Technology on Compensation Management - Gig Economy and its impact - Competitive Pay Policy Alternatives – Lead, Lag, Match - Pay Transparency - Ethics in Compensation Decisions	CO 4, CO 5	3

Textbooks:

1. Compensation Management, Dipak Kumar Bhattacharya, Oxford Publications
2. Compensation Management in a Knowledge Based World, Richard I Henderson, Pearson Publications
3. Human Resource Management-Text and Cases, K. Aswathappa, McGraw Hill Education, 8th Edition

Reference Books:

1. Managing Human Resources – Bohlander, Snell, Sherman
2. Berger, L. A., Berger, D. R., & Berger, L. A. The Compensation handbook. 6e, 2016. New York: McGraw-Hill

Recommended Pedagogy

1. Interactive Lectures
2. Case studies
3. Videos
4. Application through Excel

Elective Course 3: Employer Branding and Employee Value Proposition

Credits: 2; Duration: 30

Course Outcomes:

Upon successful completion of this course, the students should be able:

CO 1: To understand employer branding and initiatives undertaken by different organizations. (Level 2)

CO 2: To apply the concept of employee value proposition as an element of employer branding. (Level 3)

CO 3: To analyse the impact of Employer Brand Management on organizations. (Level 4)

CO 4: To evaluate the impact of employer branding on employee value proposition. (Level 5)

CO 5: To create competitive advantage for an organization through Employer Branding Strategies. (Level 6)

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Employer Branding · Brand Definition, Management, and Development · Evolution and history of Employer Branding · Brand Consistency and Continuity	CO1	3
2	Importance of Employer Branding · Changing needs and aspirations of employees · Role of top management in employer branding	CO1, CO2	3

	· Manager's role in Employer Branding		
3	Employer Branding Process · Diagnosing the Employer Brand · Creation and Operationalization of the Employer Brand · Integrating branding with organization's culture and values	CO3	4
4	Benefits of Employer Branding · Functional, Emotional, Higher Order and Life Cycle Benefits	CO3	4
5	Employee Value Proposition · Definition and Importance · Link to Motivation Theories · Creating a Strong EVP: Identifying unique employer strengths · Customizing EVP for diverse workforce segments	CO4	6
6	Employer Brand Management · Policies: External Reputation, Internal Communication · Senior Leadership and CSR (Corporate Social Responsibility) · Local Picture: Recruitment, Induction, and Performance Management · CSR and Employer Brand Impact: Diversity, Equity, Inclusion and Belonging (DEIB) in Employer Branding · Sustainability and Employer Brand Positioning	CO4, CO5	6

7	Process of Evaluation of Employer Branding & Employee Value Proposition · Success Stories · Change Management · Measurement of Impact · Sustaining Long-term Employer Branding · Future trends in Employer Branding (AI, Gig Economy, Remote Work)	CO5	4

Textbooks:

1. The Employer Brand Bringing the Best of Brand Management to People at Work, Simon Barrow & Richard Mosley, Second Edition, Wiley
2. Employer Branding: Use your Brand to Attract the Employees you Need for your Business to Succeed, James Ellis, First Edition, Kogan Page

Reference Books:

1. The Talent Magnet - Employer Branding & Recruitment Marketing Strategies to Attract Millennial Talent, Richard Evans, , Create Space Independent Publishing Platform

Recommended Pedagogy:

1. Interactive Lectures
2. Case studies
3. Videos
4. Simulation

Elective Course 4: HR Analytics

Credits: 2; Duration: 30 Hours

Course Outcomes:

Upon successful completion of this course, students should be able:

CO 1: To understand the importance of Human Resource Analytics. (Level 2)

CO 2: To apply HR Analytics to facilitate decision making in organizations. (Level 3)

CO 3: To analyze the business environment and use HR Analytics for various HR functions.(Level 4)

CO 4: To evaluate the impact of HR Analytics in resolving business challenges. (Level 5)

CO 5: To create ethical ways to use AI and enhance organization effectiveness. (Level 6)

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Analytics: · Evolution of Analytics · Need for Analytics in Business · Introduction to HR Analytics and link to organizational goals	CO 1	2
2	Matrices and Analytics · Terminology of Matrices and Analytics · Descriptive Analytics · Prescriptive Analytics · Predictive Analytics · Models in HR Analytics.	CO 2	7
3	HR Information Systems and Data: - Information Sources - Analysis software options - Preparing data: Using Software Big Data	CO 2	3

4	Analysis Strategies - Descriptive reports to predictive analytics - Statistical Significance: Types of data - Types of statistical tests: Factor Analysis, Reliability & Validity Analysis, SEM etc.	CO 2	5
5	Recruitment and Selection Analytics - Reliability and validity of selection process - Human bias in recruitment and selection - Predicting Employee Performance - Indicators of Performance - Methods for Measuring Performance	CO 3, CO 4	3
6	Employee Engagement and Workforce Perceptions - Measuring Employee Engagement: Interrogating the measures - Conceptual Explanation of factor analysis	CO 3, CO 4	3
7	Predicting Employee Turnover · Relevance of employee turnover as an HR indicator · Descriptive Turnover Analysis: Measuring and exploring differences between turnover at an individual and team level · Equality, diversity and inclusion: Approaches to measuring and managing D&I	CO 3, CO 4	3
8	Monitoring the Impact of Interventions - Tracking the impact of various HR interventions	CO 4	2
9	Ethics in Analytics: - Ethical Standards for HR Analytics	CO 5	2

	- Limitations of AI		

Textbooks:

1. The New HR Analytics: Predicting the economic value of your company's human capital investment: Jac Fitz-enz
2. HR Analytics: The Wat,Why and How: Tracey Smith
3. HR Analytics Understanding Theories and Applications Dipak Kumar Bhattacharya Sage
4. Practical Applications of HR Analytics Pratyush Banerjee,Jatin Pandey,Manish Gupta Sage

Reference Books:

1. Predictive HR Analytics: Mastering the HR Metric: Dr. Martin R. Edwards, Kirtsten Edwards

Recommended Pedagogy:

1. Lectures and Discussions
2. Case studies
3. Videos
4. Application through Software

Elective Course 5: HR Planning and Application of Technology in HR

Credits: 2; Duration: 30

Course Outcomes:

Upon successful completion of this course, students should be able:

CO 1: To understand the importance of Human Resource Planning (HRP), Job Analysis, Job Design & Re-Design and its integration with Strategic HRM to enhance Organizational Effectiveness. (Level 2)

CO 2: To apply HR Planning techniques to understand manpower requirements in the organization in the dynamic business environment. (Level 3)

CO 3: To analyse HRP Strategies facilitating Workforce Diversity. (Level 4)

CO 4: To evaluate the impact of HRP Strategies on Organizational Effectiveness. (Level 5)

CO 5: To create ways to use technology as an enabler in improving HRP function. (Level 6)

Unit/ Module	Content	CO Mapping	Hours
1	Introduction to HR Planning · Concept & Importance of HR Planning · HRP Process: · Forecasting Techniques : HR Demand Forecasting, HR Supply Forecasting, Managerial Judgment, Ratio Trend Analysis, Regression Analysis, Work Study Technique, Delphi Technique · Skills Inventories, Replacement Charts, Staffing Tables · Linking HRP to Strategic HRM	CO1	6

2	Job Analysis · Job Analysis - Process, Uses, Techniques of Data Collection, Methods · Job Description & Job Specification	CO1	4
3	Job Design and Job Re-design · Job Design - Benefits, Methods · Job Re-design - Process, Steps, Types, Methods	CO1	4
4	HR Planning, Acquisition & Selection · Recruitment & Selection · Linking of HRP to Recruitment & Selection	CO2	3
5	Workforce Planning for Diversity · Diversity Planning, · Dimensions of Diversity · Policies, Valuing Diversity in Organizations · Gender Diversity Legislation · Corporate initiatives on Gender Diversity · Organizational Strategies for Promoting Diversity · Diversity Awareness Training Programs · Systemic and Individual Diversity · Change Initiatives,	CO3	4

	· The Future of Diversity – A Global Perspective		
6	Employee Engagement, Retention & Succession Planning · Employee Engagement: Conceptual Framework, Antecedents of Engagement, Outcomes of Employee Engagement, · Employee Retention · Succession Planning	CO4	3
7	Use of HRIS in HR Planning · Introduction to HRIS · HRIS & Automation in HRP Processes · Privacy & Security in Information Systems	CO5	3
8	Emerging Trends & The Future of HR Tech · Virtual Reality (VR), Augmented Reality (AR) & Blockchain in HR · The Gig Economy and Flexible Hybrid Work Arrangements	CO5	3

Textbooks:

1. Human Resource Planning, James W Walker
2. Human Resource Management-Text and Cases– K. Aswathappa, McGraw Hill Education, 8th Edition
3. Human Resource Development – Uday Kumar Haldar – Oxford Publications
4. Managing Diversity: Toward a Globally Inclusive Workplace Book by Michalle E. Mor Barak
5. HR Analytics: The What, Why and How: Tracey Smith
6. Managing Human Resources -Snell & Morris Cengage Learning
7. HR -Denisi, Griffin, Sarkar - Cengage Learning: A South-Asian Perspective

Reference Books:

1. Human Resource Planning – D.K Bhattacharya
2. Human Resource Planning – M.S Reddy
3. Planning & Managing Human Resources – William J Rothwell, H.C Kazanas
4. Reinventing Jobs: A 4-Step Approach for Applying Automation to Work by Ravin Jesuthasan and John Boudreau
5. HR Here and Now – The Making of the Quintessential People Champion Sage

Recommended Pedagogy:

1. Interactive Lectures
2. Case studies
3. Videos

Elective Course 6: Learning and Development

Credits: 2; Duration: 30 Hours

Course Outcomes:

Upon successful completion of this course, students should be able:

CO 1: To understand the importance of Learning & Development (L&D) in Human Resource Management. (Level 2)

CO 2: To discover and apply various L&D models, frameworks, and industry best practices to enhance employee growth and organizational performance. (Level 3)

CO 3: To develop the ability to design, implement, and evaluate effective training programs tailored to business needs. (Level 5)

CO 4: To examine the role of technology and AI in transforming Learning and creating suitable Learning & Development strategies. (Level 6)

CO 5: To analyse and interpret real-world case studies of successful L&D initiatives and create effective L&D strategies. (Level 4, 6)

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Introduction to Learning & Development · Importance of L&D in Organizational Growth · Difference Between Training, Learning, and Development · Aligning L&D Strategy with Business Goals The Role of HR in Learning & Development	CO 1	3

2	Learning Theories and Models - Adult Learning Theories (Andragogy, Experiential Learning, Constructivism) - ADDIE Model (Analysis, Design, Development, Implementation, Evaluation) - Bloom's Taxonomy of Learning Objectives - 70:20:10 Model for Workplace Learning	CO 2	6
3	Training Needs Assessment & Program Design - Identifying Skill Gaps & Training Needs - Designing the training module - Competency Mapping & Career Development Plans - Designing Effective Training Programs - Instructional Design Principles & Learning Styles	CO 3	6
4	Training Administration - Training Budget - Designing Training Calendar	CO 3	2
5	Learning Methods & Emerging Trends · Traditional vs. Digital Learning Approaches · E-Learning, Gamification, and Microlearning · AI and Learning Analytics in Corporate Training · Virtual Reality (VR) & Augmented Reality (AR) in Training	CO 3, CO 4	5

6	Evaluation of Training Effectiveness · Kirkpatrick's Four Levels of Evaluation · ROI of Training & Development Programs · Employee Engagement and Post-Training Performance Analysis · Continuous Learning & Upskilling Strategies	CO 3	5
7	Future of Learning & Development · Reskilling & Upskilling in the Future of Work · Learning Culture & Knowledge Management · Leadership Development Programs Diversity, Equity, Inclusion and Belonging (DEIB) in L&D	CO 5	3

Textbooks:

1. Employee Training and Development, Raymond A. Noe and Amitabh Deo Kodwani ,9th Edition, McGraw Hill
2. The New Leadership Literacies: Thriving in a Future of Extreme Disruption and Distributed Everything, Bob Johansen, Berrett-Koehler Publishers
3. Make It Stick: The Science of Successful Learning , Peter C. Brown, Henry L. Roediger III, Mark A. McDaniel, Harvard University Press

Reference Books:

1. Training and Development: Theories and Practices , S. K. Bhatia, Deep & Deep Publications
2. Fundamentals of Human Resource Management, Gary Dessler, Pearson Education
3. Harvard Business Review (HBR) Articles on L&D
4. Research Reports from McKinsey, Deloitte, and ATD (Association for Talent Development)
5. SHRM Learning & Development Resources

Recommended Pedagogy:

1. Interactive Lectures
2. Case Studies
3. Role Plays
4. Videos
5. Simulation
6. Gamification

Elective Course 7: Global HRM

Credits: 2; Duration: 30 Hours

Course Outcomes:

Upon successful completion of this course, students should be able:

CO 1: To understand the key concepts, functions and importance of human resource management across different countries. (Level 2)

CO 2: To apply recruitment, selection and staffing strategies that align with global business objectives. (Level 3)

CO 3: To analyze HR policies in a global context by examining legal frameworks, cultural influences and labor relations. (Level 4)

CO 4: To evaluate the impact of global HR practices on employees' performance, engagement, and compliance. (Level 5)

CO 5: To create and implement compensation frameworks and performance-based pay systems in accordance with the country of workplace. (Level 6)

Unit/ Module	Content	CO Mapping	Hours
1	Introduction to Global HRM: · Key Drivers of Globalization in HRM · Differences between Domestic & Global HRM · Challenges in Managing an International Workforce · Ethics in International Business	CO 1	3

2	Understanding Human Behaviour in a Global Perspective · The Influences of Cross-Cultural Issues on Organisations · Motivation, Communication and Cross-Cultural Leadership · Cultural Diversity and Multicultural Teams	CO 3	3
3	Global Workforce Recruitment & Selection: · International Recruitment – Appropriate Methods & Techniques · International Selection – Appropriate Methods & Techniques · Issues in Selection · Talent Management in a Global Context · Diversity & Inclusion in Global HR	CO 2	4
4	Global Workforce Learning & Development: · Cross-Cultural Sensitivity Training · Learning and Developing International Management Teams · Developing Staff through International Assignments and its relation to International Career Paths · Role of Expatriate Learning in Global Workforce Development	CO 3	4
5	International Performance Management System: · Types and Criteria for Performance Management System · Performance Biases	CO 4	3

	· Global Performance Management Evaluation Standards		
6	Legislation and the International Workforce & Employee Relations: · Issues in International Industrial Relations · Conflict Resolution in a Multicultural Workplace · Hofstede's Cultural Dimensions · International Labour Standards and Employment Laws · Global Unions, Negotiations and Regional Integration	CO 3	4
7	Global Compensation and Benefits: · Objectives of International Compensation · Compensation Structures in a Global Setting · Managing Executive Compensation and Expatriate Pay and Benefits · Motivation and Reward Systems Problems with Global Compensation	CO 4, CO 5	3
8	Strategic HRM in Cross-Border Mergers & Acquisitions: · Strategies for Global HRM · HRM in Cross-Border Mergers, Acquisitions and Global Expansion · HR Interventions	CO 3, CO 4	3

9	Emerging Trends in Global HRM: · Technology and Global HRM · Emerging Trends in Employee Relations and Employee Involvement · Future Trends in Global HRM Practices	CO 5	3

Textbooks:

1. International Human Resource Management, K. Aswathappa and Sadhna Dash, Second Edition (2012) , Tata McGraw Hill Education Private Limited
2. International Human Resource Management. Peter J. Dowling, Eighth Edition (2024), Marion Festing, and Allen D. Engle, Cengage Learning EMEA Publishing
3. Essentials of International Human Resource Management: Managing People Globally, David C. Thomas and Mila B. Lazarova, Second Edition (2024) Edward Elgar Publishing
4. Managing a Global Workforce: Challenges and Opportunities in International Human Resource Management, Charles M. Vance and Yongsun Paik, Second Edition (2014), Routledge Publishing
5. Human Resources Management A South Asian Perspective, Scott Snell, George Bohlander, Veena Vohra, Cengage Learning India Pvt Ltd (Publisher)

Reference Books:

1. International Human Resource Management: Policies and Practices for Multinational Enterprises, Ibraiz Tarique, Dennis R. Briscoe, Randall S. Schuler, Fourth Edition (2015), Routledge Publishing
2. Globalizing Human Resource Management, Paul Sparrow, Chris Brewster, and Hilary Harris, Second Edition (2016), Routledge Publishing

Recommended Pedagogy:

1. Interactive Lectures
2. Case Studies
3. Role Plays
4. Videos

Elective Course 8: Organization Theory Structure and Design

Credits: 2; Duration 30 Hours

Course Outcomes:

Upon successful completion of this course, students should be able:

CO 1: To understand the fundamental principles, theories, and models of organizational design and structure. (Level 2)

CO 2: To analyze and apply organizational design theories to create effective and efficient organizational structures. (Level 3, 4)

CO 3: To evaluate the impact of different organizational structures on business performance, strategy, and HR practices. (Level 5)

CO 4: To analyse the influence of technology, culture, and external environments on organizational design and structure. (Level 4)

CO 5: To create and implement organizational structures that align with strategic objectives and enhance organizational performance. (Level 6)

Unit/ Module	Content	CO Mapping	Hours
1	Introduction to Organization Design and Structure: · Key concepts in organizational design and structure · Relationship between organizational structure, performance, and strategy · Role of organization design in HR practices · Introduction to Classical and Modern Organizational Design Theories	CO 1	2

2	Theoretical Foundations of Organization Design · Classical organizational theory: Taylor, Weber, and Fayol · Neoclassical theories: Human Relations, Contingency Theory · Modern organizational theories: Systems Theory, Chaos Theory · Debate on the relevance of Classical vs. Modern theories · Application of these theories in current organizational settings	CO 1	3
3	Organizational Structure Fundamentals and Types • Types of organizational structures: Functional, Divisional, Matrix, Virtual, Ad hoc and Network Structures • Design of Organizational Structures: Key considerations and strategic alignment • Relationship between Organizational Structure and HR Functions Comparative Analysis of Structure Types and their Impact on Organizational Outcomes	CO 1, CO 3	3
4	Strategic Alignment of Organization Structure • Mintzberg's Configurations of Organizational Structures • Chandler's Strategy-Structure Relationship • Organizational Design and Structural Transformations in National and International Contexts Role of HR to align Organizational Structure with Organizational Strategy	CO 3	3

5	Organizational Design and Performance • Linking Organizational Design with Organizational Performance • Continuous Improvement through Organizational Design • Impact of Design on Innovation, Productivity, and Employee Engagement Role of HR in improving Organizational Design and Performance	CO 3	4
6	Technology and Organizational Design • Role of Technology in shaping Organizational Design • Impact of Digital Transformation, AI, and Automation on Organizational Structures • Rise of Platform-based Organizations and Remote Work Models • Influence of Technology on HR Processes and Structures Future Trends in Technology - driven Organizational Design	CO 4	3
7	The Role of Organizational Culture in Design • Role of Culture in Organizational Design Decisions • Aligning Organizational Culture with Structure and Strategic Objectives • Schein's Culture Model and Hofstede's Dimensions of Culture Shaping Organizational Culture to support Business and HR Objectives	CO 4	3

8	Managing Organizational Change and Structural Adaptation • Types of Organizational Change: Transformational Vs. Incremental • Managing Resistance to Change in the context of Organizational Design • Models of Organizational Change: Lewin's Change Model, Kotter's 8-step process, ADKAR • Importance of Organizational Agility in adapting Organizational Design to changing Environments	CO 2, CO 4	4
9	Leadership, Power, and Decision-Making in Organizational Design • Impact of Leadership Styles on Organizational Structure and Design • Role of Power, Politics, and Authority in shaping Structures • Interplay between Leadership, Decision-Making, and Organizational Design	CO 2	2
10	Contemporary Trends in Organizational Design • Agile Organizations and Holacracy • Gig economy and its impact on Organizational Structures • Trends in Remote Work, Virtual Teams, and Decentralized Structures • AI-driven Organizational Structures and Technology-Enabled Design Future challenges and opportunities in Organizational Design	CO 3, CO 4	3

Textbooks:

1. Gareth R. Jones - Organizational Theory, Design, and Change
2. Richard L. Daft and Nishant Uppal - Understanding the Theory and Design of Organizations, 11th Edition
3. Stephen P. Robbins & Timothy A. Judge - Organizational Behavior
4. Jay R. Galbraith - Strategic Organizational Design
5. Kates, A., & Galbraith, J.R. - Designing Your Organization: Using the Star Model to Solve 5 Critical Design Challenges

Reference Books:

1. Organization Development and Change by Thomas G. Cummings & Christopher G. Worley
2. The Theory and Practice of Change Management by John Hayes

Recommended Pedagogy:

1. Interactive Lectures
2. Group Projects
3. Role Plays
4. Presentations and Case Study Analysis
5. Guest Speakers

Semester III - Marketing

Semester III Courses - Marketing Specialization					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
Mandatory					
1	Mandatory	Marketing Strategy	2	20	**UA**
Electives (Any 5 including Open Elective)					
1	Elective	Consumer Buying Behaviour	2	20	**IA**
2	Elective	Sales Management	2	20	**IA**
3	Elective	Product Management	2	20	**IA**
4	Elective	Brand Management	2	20	**IA**
5	Elective	Digital Marketing	2	20	**IA**
6	Elective	Marketing Analytics	2	20	**IA**
7	Elective	Retail Management	2	20	**IA**
8	Elective	Rural Marketing	2	20	**IA**
9	Elective	Tourism Marketing	2	20	**IA**

***IA – Internal Assessment; UA – University Assessment**

Marketing Group - Mandatory Course: Marketing Strategy

Credits:2 ; Duration: 30 Hours

Course Outcomes

CO1: Understand the fundamentals of strategy formulation

CO2: Apply concepts learnt to create meaningful differentiation for customers

CO3: Analyze the market position and opportunities using frameworks learnt

CO4: Evaluate alternative strategies keeping in mind customer differences, their trade-offs etc.

CO5: Create a marketing strategy based on concepts.

Unit / Module	Content	CO Mapping	Hours
1	Segmentation, Targeting and Positioning – brief overview; marketing segments to strategic segments	CO1, CO2,	3
2	5C's analysis – customer/consumer analysis, competitor strategies and strategic moves, collaborator- value net, company- capabilities, competitor capabilities matrix, context	CO1, CO2	5
3	Formulate the Product policy – elements of value creation for the customer; product mix, line decisions; modifications of product lines; product testing –	CO2, CO3, CO4	6

	become the voice of the customer – go/no go decisions		
4	Formulate the Promotions policy – role of moments of truth, customer reviews, 6 M's model of communication – market, mission, message, media, money, measurement; one-way v/s two-way communication; mass v/s customized communication; use of social media	CO2, CO3, CO4	4
5	Formulate the Distribution Policy – types of channels, channel selection based on product characteristic; consumer behaviour impact on channel decisions; extent of control and resources available and choice of channel; strategic channel management – role conflict, goal conflict, communication failure, incentives and penalties in channel management	CO2, CO3, CO4	6
6	Decide on Pricing Decisions – value-based pricing, designing a price band; pricing strategy and tactics; linkage between managing the price band width and types of promotions, competitive responses to pricing strategies	CO2, CO3, CO4	6

It is recommended that the course be instructed through cases.

Textbooks:

1. What is Marketing? Alvin Salk, HBS Press

2. Marketing Strategy. Orville Walker, Harper Boyd Jr, John Mullins. McGraw Hill Education.

Reference Books:

1. Harvard Business Essentials: Marketer's Toolkit. Harvard Business Review Press.
2. Tilt: Shifting your Strategy from Products to Customers. Niraj Dawar. Harvard Business Review Press.
3. Marketing as Strategy: Understanding the CEO's agenda for Driving Growth and Innovation. Nirmalya Kumar. Harvard Business School Press. Boston, MA.

Elective Course 1: Consumer Buying Behaviour

Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Understand how consumers differ in their behaviours across categories, situations

CO2: Apply consumer's decision-making process (DMP) at various stages of the buying process to make appropriate decision

CO3: Analyze the consumer decision making process based on above frameworks and make optimal decisions

CO4: Evaluate different forces shaping consumer behaviour and their impact on marketing strategies

CO5: Create a marketing plan based on the frameworks learnt in this course.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Psychology of Buying Process: Frameworks- High involvement v/s low involvement; Cognitive v/s Emotional, optimizing v/s Satisficing; compensatory v/s non-compensatory decision making	CO1, CO2, CO3	4
2	Motivation, attitudes, perception, learning and role in consumer buying decision	CO1, CO2	3
3	Consumer decision making process – Pre-purchase – triggers for need recognition; search and consideration of alternatives, evaluation of alternatives; role of above frameworks in this stage of buying process	CO1, CO2, CO3	2

4	Purchase Process – which brand, from which sell, when to buy, how to pay?	CO2, CO3, CO4	2
5	Post-purchase decisions- after sales care, end of life recycle, Net Promoter score, loyalty programmes for customer retention	CO2, CO3,CO4	2
6	Prospect Theory, endowment effect and impact on consumer psychology, influence on diffusion of innovation, 9X effect, capturing value from Innovation	CO2. CO3, CO4	3
7	Forces impacting consumer behaviour – ageing of society, women in the workforce, declining middle-class; social media – role in every stage of the buying process, reasons for usage of social media by consumers	CO2, CO3, CO4	3
8	Impact of AI Platforms and digital assistants on Consumer behaviour – navigate consumer choices, control access to companies, reduced role of brand recognition; understanding algorithms used to choose and identify brands for each customer; promotion of branding outside AI platforms; acquisition of consumer data from platforms to inhibit brand switching.	CO3, CO4	2
9	CO-creating value with consumers – crowdsourcing, lead user research; fringe customers – lovers, haters, opt-outers of the brand/category, role of empathy, online ethnography (Netnography) to analyze conversations of consumers in brand communities	CO2, CO3, CO4	2

10	Brand culture – material markers v/s brand culture, authors of a brand culture – company, popular culture, customers, influencers, role of stories, images, and associations in creating brands a cultural artefacts, brnad values – reputational, relationship, experiential, symbolic	CO2, CO3, CO4	3
11	Brand Storytelling -emotional connect, elements of a good story – strong ideological message, unforgettable characters for affiliation, conflict as a driving force, dynamic plots; use of humor, fear, romance, irony as storytelling devices to resonate with consumers	CO2, CO3, CO4	2
12	Conscience Marketing – socially and environmentally responsible products, carbon footprint of supply chains,	CO2, CO3, CO4	2

Text Books:

1. Consumer Behavior. Hawkins, Best and Coney. Irwin/McGraw Hill
2. Consumer Behaviour. Leon Schiffman, Joseph Wisenblit, Ramesh Kumar, 12e, Pearson

Reference Books:

1. Why we buy: The Science of shopping. Paco Underhill. Pearson
2. Thinking Fast and Slow. Daniel Kahneman. Penguin
3. Customer Behavior: A Managerial Perspective. Jagdish Sheth, Banwari Mittal. Thomson/South Western

Elective Course 2: Sales Management

Credits: 2; Duration: 30

Course Outcomes:

CO1: **Understand** the changing nature of the salesforce and complexity of selling situations

CO2: **Analyse** the impact of the quality of salesforce on revenue growth

CO3: **Evaluate** the movement from general to specialised selling; shift from product selling to deep customer understanding and impact on sales force

CO4:**Apply** the concepts learnt to increase customer retention through managing the sales force

CO5: **Develop** a sales force plan from concepts learnt in the course

Unit / Module	Content	CO Mapping	Hours Assigned
1	The new sales force approach – retain existing accounts, manage for profitability, manage accounts for long-term profitability	CO1, CO2	4
2	The sales task – focus on company/customer interface; identify accounts to serve, specific activities to accomplish, interactions with other functions to achieve the tasks,	CO1, CO2, CO3	4
3	Types of salespersons – missionary, delivery, order taker, technical salesperson; design of sales territories – workload, sales potential, territory changes	CO1, CO2	3
3	Designing the sales organization – movement from geography/product to type of account; account v/s product specialization; define salesperson activity based on product/account complexity	CO3, CO4	3

4	Salesforce tasks- define the salesforce tasks; impact on supplier-customer relationship; impact of changes in customer priorities, new competitive offerings, changes in customer needs; managing sales transactions to numerous accounts; building, managing, and protecting long-term business relationships;	CO3, CO4	4
5	Salesforce Architecture – based on defined salesforce tasks, structure of saes force, staffing and specialised skills required, mix of in-house and outsourced sales activities, resource allocation to each sales force, determinants of boundaries between sales forces	CO2, CO3, CO4	4
6	Relationship between Marketing and Sales Organizations – joint decisions on product mix, price band, sales support, private label strategies, complementary social media, digital marketing, advertising strategies, joint execution strategies	CO3, CO4, CO5	4
7	Sales Management systems – motivation system- incentives, contests, personal acknowledgement and feedback, sales task clarity as motivator; measurement system-competitor/customer intelligence, links to key variables in Corporate strategy, internal and external metrics; competency creation systems-recruitment and selection of salesforce, training, coaching	CO4, CO5	4

Textbooks:

1. Sales Management That Works: How to Sell in a World That Never Stops Changing. Frank V. Cespedes. Harvard Business Review Press
2. Aligning Strategy and Sales. The Choices, Systems, and Behaviours That Drive Effective Selling. Frank V. Cespedes. Harvard Business Review Press.
3. Harvard Business Review Sales Management Handbook: How to Lead High Performance Sales Teams. Prabhakant Sinha, Arun Shastri, Sally Lorimer.
4. Sales and Distribution Management: Decisions, Strategies and Cases. 7e, Richard R. Still, Cundiff W. Edward et al.

Elective Course 3: Product Management

Credits: 2 ; Duration: 30 Hours

Course Outcomes

CO1: Understand the roles and responsibilities of product management function withi the marketing organization

CO2: Apply the concepts and frameworks to identify opportunities for new products

CO3: Analyze competitive scenarios and consumer wants to develop product mix decisions

CO4: Evaluate product policies based on frameworks to arrive at a decision based on Product / company fit, corporate mission and objectives

CO5: Create a strategic plan for a new product launch

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to product management – roles and responsibilities of product managers, the product team and marketing organization	CO1	2
2	Product Policy decisions – product items, product line, dimensions of the product mix – breadth, depth, consistency of the product mix	CO1, CO2, CO3	4
3	Adjustments to the product mix – product abandonment, product modification, new product introduction, product positioning/repositioning,	CO1, CO2, CO3	3

	evaluating the product/company fit, fit with corporate mission and objectives		
4	New Product Development Process – opportunity identification, concept generation, concept evaluation, product development, launch; New product spectrum – incremental improvements, expansion of existing product lines, new to the world products	CO2, CO3, CO4	4
5	Product requirement Document (PRD) – functionality and use cases, create stories, PRD coordination with engineering, customer service, sales, marketing functions	CO2, CO3	3
6	Product Portfolio Planning – assumptions – product definition, experience curve effects, link between market share and profitability; Ansoff Product-Market Matrix, BCG growth share matrix, GE/McKinsey Business Assessment array, Arthur D. Little Business Profit matrix for strategies at different stages of PLC	CO3, CO4	6
7	Launch Planning – demand, competition analysis, types of market testing	CO3, CO4	3
8	Disruptive Innovation – from low-end and high-end products, achieving scale,	CO3, CO4	2

	Christensen's disruptive innovation process		
9	AI products – changing role of product managers in the AI era; understanding of data science and machine learning, integration of AI into customer experiences; evaluate technology capabilities and limitations; AI product development cycle – Ideation, Opportunity assessment, concept/prototype, testing and analysis, roll-out	CO3, CO4	3

Textbooks:

1. New Products Management. Merle Crawford, Anthony Di Benedetto. Tata McGraw Hill, 9e.
2. Product Management. Donald Lehmann, Russel Winer, 4e, McGraw Hill education Indian Edition

Reference Books

1. The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail. Clayton Christensen, Marc Benioff. Harvard Business Review Press. 2024
2. Product and New Product Management. Yoram (Jerry) Wind. Vibrant Publishers. Vijay Mahajan (ed).

Elective Course 4: Brand Management

Credits: 2; Duration: 30 Hours

Course Outcomes

CO1: To develop a thorough understanding of building, measuring, and managing Brand equity

CO2: Apply the concepts and frameworks to building brands across all types of organizations

CO3: Analyze brand strategies through theories, models and other tools

CO4: Evaluate Brand Architectures and valuations

CO5: Create branding strategies to maximize brand equity

Unit / Module	Content	CO Mapping	Hours Assigned
1	Definition and evolution of brands, role of brands, distinction between product and brands, roles of brand managers	CO1	3
2	Strategic brand management – developing brand plans, designing and implementing brand marketing programmes, growing and measuring brand equity – qualitative and quantitative techniques, brand audits	CO1, CO2, CO3	6
3	Customer Based Brand Equity (CBBE) – Keller's Brand equity Model; Kapferer's Brand pyramid, building blocks of brand equity – salience,	CO2, CO3, CO4	4

	performance, imagery, judgments, feelings, resonance		
4	Brand Identity and Positioning- dimensions of brand identity, brand positioning – points of parity/difference, positioning strategies, competitor analysis, emotional and cultural branding principles	CO3, CO4, CO5	3
5	Brand extensions - strategies, managing brand portfolio, challenges in brand revitalization	CO3, CO4, CO5	6
6	Measures of branding success – perceptual mapping, BAV (Brand Asset Valuator Model); Interbrand method, BrandZstrategies, Brand Finance method, brand tracking studies	CO3, CO4, CO5	4
7	Contemporary issues – impact of digital marketing and social media on branding, ethical issues in branding, sustainability and CSR in branding	CO3, CO4	4

Textbooks:

1. Strategic Brand Management. Kevin Lane Keller, M.G. Parameswaran, Isaac Jacob. 3e. Pearson

2. Marketing and Branding. The Indian Scenario. S. Ramesh Kumar. Pearson Education

Reference Books:

1. Strategic Brand Management. New Approaches to creating and Evaluating Brand equity. Jean-Noel Kapferer. Kogan Page.
2. How Brands Become Icons. The Principles of Cultural Branding. Douglas Holt. HBS Press
3. How customers Think. Gerald Zaltman. HBS Press.
4. Emotional Branding. The New Paradigm for Connecting Brands to People. Marc Gobe

Elective Course 5: Digital Marketing Strategy

Credits: 2; Duration: 30 Hours

Course Outcomes

CO1: Understand the issues in transitioning from traditional marketing to digital marketing

CO2: Analyse outbound and inbound marketing programmes and impact on consumer behaviour through frameworks

CO3: Apply the learnings to critique F2C and D2C communications and its effectiveness on company revenues and profits

CO4: Evaluate digital marketing programmes across channels using and frameworks learnt in the course

CO5: Design a comprehensive digital marketing strategy integrating multiple channels to achieve business objectives

Unit / Module	Content	CO Mapping	Hours Assigned
1	Fundamentals of digital marketing – challenges for traditional firms to go digital; consumer adoption and radical changes in consumer behaviour online; new tools for consumer research – micro-blogging, blog posts to monitor social chatter and buzz online; measure of consumer exposure, interest, reactions to advertising messages, offers, purchases across a variety of contexts	CO1, CO2,	3

2	Frameworks for Digital Marketing – Outbound (Firm initiated) marketing – traditional: print, radio, TV advertising; digital: search, display, video advertising. Inbound (Consumer Initiated) marketing – firm websites aligned with consumer's search process, search engine algorithms, search engine optimization process; Social Media – digital platforms where consumers actively create content on X, Facebook; Native Advertising - preview of websites, influence on other consumers' buying behaviour; role of mobile phones in consumer search and purchase process; alternative to online/offline ads, emulate voice of unsponsored editorials by third party writers, reporters on website	CO1, CO2	3
3	Search Engine Optimization – On page, Off page SEO, bidding on keywords, budgeting for search advertisements, Metric – Cost per Click, Click Through Rate (CTR), Impressions, Conversion rate, Profit Margin, quality of landing page, Relevance to Consumers; keyword portfolio, keyword proliferation, Branded versus generic keywords; impact on consideration set of buyers, repositioning of keywords to auction ; respond to competitor tactics;	CO2, CO3	4

	generalized Second Place auction; bids v/s Willingness to Pay		
4	Digital Advertising and Promotions – bi-directional communication, gathering attitudinal and behavioral feedback in real time, real time market research -online tools to talk with and listen to consumer to consumer conversations; role of social networks like X, Facebook; purpose of online communication – understand what customers value, communicate value to them, provide value; advertising v/s promotions – display ads, viral ads; benefits of online ads – interactive, finer selection of audience, D2C access, speed of updating; Objectives of consumer promotions – product trial, repeat purchase, brand switching	CO2, CO3, CO4	4
5	Firm – to Consumer (F2C) and Consumer – to – Consumer Advertising (C2C): F2C – firm creates, consumers consume content, C2C- consumers propagate and others consume content; use of text, static messages, audio/video content, use influencers to talk with other consumers through viral marketing or modified content through electronic Word of Mouth (e WOM)	CO3, CO4	3

6	Framework for Selection of Digital and Social Media – purpose of the medium – listen/talk?; persuasion element – deals/arguments?; ; who initiates contact – firm/consumer? content provider – frim/ consumer? ; select from a broad class of tools; identify precise tools; importance of high-involvement versus low-involvement products in deciding tools	CO3, CO4	3
7	Transition from 4P's to Digital 3 P's- for traditional companies, issues are - speed of transition, change in business model; Gupta & Deighton Framework for transition; Digital 3P's (Wagonfield & Deighton, 2012) – delivery of product/service, Market Research, Posting and testing prices; Digital Product – digital content, hybrid products (Digital + Physical); problem of copying/piracy in digital products/services; crowd sourcing of products; Digital Distribution – choice of channels, stratification of online channels – own channels, retailer website, auction websites; evaluation of channel options – coverage, channel conflicts, cost of channel, control over offering to end consumer; managing different channels with different cost	CO1, CO3, CO4	5

	structures, usage of mobile phone and channel decisions; Digital Pricing – by individual, discounts, schedule of payments, impact on revenues, profits, cash flows, non-financials- brand image, customer profile, distributor relations; price discrimination, dynamic pricing, cross-subsidization of consumers;		
8	Digital Storytelling – blogging, video podcasts, visual storytelling, user generated content and interactive content; content distribution and promotion strategies	CO3	3
9	Web analytics and performance management – Google analytics and UTM tracking; attribution models and conversion funnel analysis	CO4	2

Textbooks:

1. Digital Marketing for Dummies – Ryan Deiss & Russ Henneberry
2. Marketing 4.0: Moving from Traditional to Digital – Philip Kotler, Hermawan Kartajaya, Iwan Setiawan
3. The Art of Digital Marketing – Ian Dodson
4. Social Media Marketing: A Strategic Approach – Melissa Barker, Donald Barker, Nicholas Bormann, Krista Neher
5. Google Analytics Demystified – Joel Davis

Reference Books

1. Driving Digital Strategy. A Guide to Reimaging Your Business. Sunil Gupta. Harvard Business Review Press
2. Starting Small to Winning Big: The Definitive Digital Marketing Guide for Startup Entrepreneurs. Shishir Mishra. Business Expert Press

Elective Course 6: Marketing Analytics

Credits: 2, Duration: 30

Course Outcomes:

CO1: Explain the Role of Analytics in Modern Marketing Decision-Making.

CO2: Differentiate between Predictive, Classification, Clustering, and Segmentation Models in Marketing Analytics.

CO3: Apply Statistical and Machine Learning Techniques such as Regression, Classification, and Clustering to Marketing problems.

CO4: Evaluate Customer Lifetime Value (CLV) and its impact on Marketing Strategies.

CO5: Develop Data-Driven Marketing Performance measurement frameworks.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Marketing Analytics - Definition, Scope, and Importance; Types of Data in Marketing-Structured vs. Unstructured, First-party, Second-party, Third-party Data; Role of Data in Customer Segmentation and Personalization; Overview of Analytical Tools and Platforms (Google Analytics, Power BI, Python/R Basics for Marketing)	CO1	4

2	Prediction and Classification in Marketing Analytics - Basics of Predictive Analytics; Regression Models and their Applications in Forecasting; Decision Trees & Random Forest for Customer Response Prediction; Classification Techniques (Naïve Bayes, SVM) for Lead Scoring and Customer Intent Analysis	CO2, CO3	10
3	Clustering, Segmentation, and Text Analytics in Marketing- Basics of Clustering in Marketing Analytics; K-Means Clustering and Hierarchical Clustering for Customer Segmentation; Market Basket Analysis and Association Rule Mining for Consumer Behavior Insights; Text and Sentiment Analytics	CO2, CO3	6
4	Customer Lifetime Value (CLV) and Retention Analytics-Concept and Importance of Customer Lifetime Value (CLV); Methods to Calculate CLV (Historical vs. Predictive CLV); Retention Analysis and Churn Prediction Models; Personalization Strategies and Customer Engagement Based on CLV Insights	CO4	6

5	Measuring Marketing Performance - Key Marketing Performance Metrics (ROI, CAC, Conversion Rates, Churn Rate); A/B Testing and Experimental Design in Marketing Analytics; Attribution Modelling: First-Touch, Last-Touch, Multi-Touch Attribution; Dashboarding and Reporting for Marketing Metrics (Using Excel, Tableau, or Power BI	CO5	4

Textbooks:

1. Marketing Analytics: A Practical Guide to Improving Consumer Insights Using Data Techniques – *Mike Grigsby*
2. Marketing Data Science: Modeling Techniques in Predictive Analytics with R and Python – *Thomas W. Miller*
3. Predictive Analytics: The Power to Predict Who Will Click, Buy, Lie, or Die – *Eric Siegel*
4. Applied Predictive Analytics: Principles and Techniques for the Professional Data Analyst – *Dean Abbott*

Reference Books:

1. Customer Segmentation and Clustering Using SAS Enterprise Miner – *Randall S. Collica*
2. Text Mining and Analysis: Practical Methods, Examples, and Case Studies Using SAS – *Gokhan S. Yildirim, Gary A. Koppenhaver*
3. Sentiment Analysis: Mining Opinions, Sentiments, and Emotions – *Bing Liu*
4. Managing Customers for Profit: Strategies to Increase Profits and Build Loyalty – *V. Kumar & Werner Reinartz*
5. Customer Analytics for Dummies – *Jeffrey Strickland*
6. Marketing Metrics: The Manager's Guide to Measuring Marketing Performance – *Paul W. Farris, Neil T. Bendle, Phillip E. Pfeifer, David J. Reibstein*
7. Cutting-Edge Marketing Analytics: Real-World Cases and Data Sets for Hands-On Learning – *Rajkumar Venkatesan, Paul Farris, Ron T. Wilcox*

Elective Course 7: Retail Management

Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Understanding the basics of shopper marketing, shopper behaviour and retail management.

CO2: Apply the concepts and frameworks to different retail environments

CO3: Analyze data and identify relationships and retailing models

CO4: Evaluate different channel and retail models for developing optimum solutions

CO5: Create an integrated plan based on the learnings and observations made for a channel to reach shoppers, based on course work done

Unit / Module	Content	CO Mapping	Hours Assigned
1	Basics of Retailing: consumers / Shoppers / Introduction to supply chain / Marketing / Behaviour / Habit; how retailing emerged	CO1, CO2, CO3	2
2	Value chain and consumers; catchments and how these impact retail; building and understanding catchments	CO1, CO2	2
3	Channels of distribution; types of retailing and the impact of the type of store on different processes in retail - Traditional trade / Grocers / Convenience stores / Supermarkets / Hypermarkets / Department stores / Super centres / EBOs and MBOs / Chain stores	CO1, CO2, CO3	2
4	Customer and shopper behaviour; Segmentation in retailing	CO2, CO3,	2

5	Elements of Store design; Space allocation and space planning	CO1, CO2, CO3	2
6	Store Operations , Finance, HR, Marketing; Functions: Category, Buying and merchandising	CO1, CO2, CO3	4
7	Merchandising and sourcing	CO3, CO4	3
8	Shopper marketing concepts	CO2, CO3	2
9	Movement of products and services, Types of Buying & Merchandising, Supply chain and distribution in offline retail	CO2, CO3, CO4	3
10	How online works: Internet , Smart phones, data costs, digitization	CO2, CO3, CO4	2
11	Loyalty programmes, CRM; Strategic Retail Model for measuring retail productivity	CO3, CO4	1
12	Private labels and their roe in retailing, meeting the private label challenge	CO3, CO4	2
13	Omnichannel; multi-channel	CO3, CO4, CO5	3

Textbooks:

1. Managing Retail. Piyush K. Sinha & Dwarika P. Uniyal

Reference Books/ Reading Suggestions:

1. Why we buy: The Science of shopping. Paco Underhill. Pearson
2. Marketers guide to behavioral economics: Ned West, McKinsey Quarterly (February 2010)
3. Rigged: Supermarket shelves for sale:Centre for Science in the public interest

4. Please touch the merchandise: Sensory marketing goes tactile: HBR, December 2011
5. Thinking Fast and Slow. Daniel Kahneman. Penguin
6. Slaves to the algorithm: INTELLIGENT LIFE magazine, May/June 2013

Elective Course 8: Rural Marketing

Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: To understand the scope and opportunities in Rural Marketing in current scenario.

CO2: To know applications of rural marketing in context of Product, pricing, distribution and communication among rural segments.

CO3: To analyse Rural economy, rural marketing environment and rural consumer behaviour.

CO4: To assess role of financing and cooperative institutions in rural markets.

CO5: To develop marketing strategies for marketing of agricultural & cottage industry produce.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Rural Marketing Opportunities ● Taxonomy of Rural markets, ● Rural Marketing Models ● Bottom of the pyramid approach ● Rural versus Urban Marketing ● Innovative and Inclusive Growth	CO1	3
2	Understanding Rural Economy ● Rural Marketing environment and its implications on marketers ● Social environment ● Economic environment ● Technological environment ● Innovations ● Political Environment	CO - 3	3
3	Rural Consumer Behaviour ● Buying behaviour and decision process ● Opinion Leaders ● Environmental factors affecting buying process ● Buyer Characteristics ● Buying behaviour patterns ● Brand Loyalty	CO - 3	5

4	Segmentation, Targeting and Positioning in rural markets ● Basis of segmenting rural markets ● Evaluation and selection of Target Market segments, Coverage of Markets ● Identifying and Selecting Positioning Concepts for rural markets	CO - 2	3
5	Product and Pricing Strategy in Rural Markets ● Product concept and classification of Rural products ● Packaging for rural markets, The Sachet Revolution ● Branding and problems of fake brands ● Price setting strategies for Rural markets ● Credit in rural markets – need, sources, innovative strategies	CO - 2	4
6	Rural distribution and communication ● Challenges in rural distribution ● Channel behaviour and Distribution models in rural markets ● Challenges in rural communication ● Developing an Effective Rural Communication message ● Emerging models eg: Amul, e-Choupal, Project Shakti	CO - 2	3
8	Marketing of agricultural produce and rural and cottage industry products ● Marketing of agricultural produce ● Regulated markets ● Formation of cooperative organizations ● Contract farming ● Agricultural exports zone (AEZ)	CO -5	4

9	Role of financial institutions in rural marketing ● Agricultural credit situation ● Types of credit ● Rural credit institutions – NABARD – commercial banks – state cooperative banks (SCB) – state cooperative agricultural and rural development banks (SCARDB) – regional rural banks RRB – local area banks – flow of institutional credit to agriculture – kisan credit card scheme – impact on rural market	CO - 4	3
10	Role of cooperative institutions in rural marketing ● Cooperatives as organizations ● Structure of cooperative organizations – types – share of cooperatives in ● national economy ● Impact of cooperatives on rural marketing	CO - 4	2

Text Books:

1. Rural Marketing – Pradeep Kashyap, Pearson
2. Rural Marketing – T P Gopalaswamy – Vikas Publishing House
3. Rural Marketing – Habeeb Ur Rahman Himalaya
4. Cases in Rural Marketing: An Integrated approach – Lalitha Ramakrishnan, CSG Krishnamacharyulu – Pearson Education
5. Rural Marketing : Text and Cases – U.C. Mathur (2008) Excel books

Reference Books:

1. Agricultural Marketing In India – Acharya – Oxford I B H
2. Rural Marketing – C G Krishnamacharyulu, Lalitha Ramakrishnan – Pearson Education
3. A New Approach to Rural Marketing by Kaushik Sircar

Elective Course 9: Tourism Marketing

Credits: 2; Duration: 30

Course Outcomes

CO1: Understand the fundamentals and types of tourism

CO2: Apply concepts learnt to evaluate the tourism industry

CO3: Analyze country – specific tourism strategies using Ghemavat's AAA framework

CO4: Evaluate various country brands in tourism based on Anholt-GfK brand Indices

CO5: Create tourism strategies for different countries based on concepts learnt in the course

Unit / Module	Content	CO Mapping	Hours Assigned
1	Types of tourism – medical tourism, place tourism, gaming tourism – spas, parks, beaches, etc.	CO1	3
2	Ghemavat's AAA framework – application to comparative advantages of countries in tourism	CO1, CO2	4
3	Healthcare tourism – classification, drivers of success in Asia; success stories – Thailand, Singapore, Malaysia, India; Wildlife tourism and success stories in Southern Africa, co- opting of local communities in wildlife conservation, revenue sharing model with local communities.	CO2, CO3	4
4	Medical Travel – value proposition, product, quality, availability, timeliness; patient concerns of follow up treatments in home countries,	CO2, CO3	4

5	Brand Management of Places- communication based and policy-based models of branding places; Anholt-GfK Nation Brand Index – people, tourism, exports, governance, political leadership investments, immigration, culture, heritage, country of origin	CO3, CO4	4
6	Role of social media in place branding: information, advertising targeting to audiences based on tourist activities promoted by nations, two-way communication with prospective tourists, role of social media influencers, social media role in perceptions of national governance, public diplomacy and impact on tourism	CO3, CO4	4
7	Gaming tourism: legalization of gaming, Macau Concept, positioning as an attractive gaming destination, gaming as a destination entertainment, design of family entertainment, creation of convention centres to promote gaming destinations, role of giant shopping malls in gaming destinations, Las Vegas model	CO3, CXO4	4
8	Technology and tourism: AI as virtual travel agent, changing roles of airlines, hotels, online travel agencies due to AI, partnering with Amazon, Google in customer retention, control of customer data and use of loyalty programmes for customer leverage	CO4	3

Textbooks:

1. Tourism Operations Management. Archana Biwal and Sunetra Roday. Oxford University Press
2. Marketing for Hospitality and Tourism. Philip Kotler, John Bowen et al. 7e. Pearson

Reference Books:

1. Marketing in Travel and Tourism. Mike Morgan. 4e. Butterworth Heinman

Semester III - Operations

Semester III Courses - Operations Specialization					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
Mandatory					
1	Mandatory - Specialization (Operations)	Supply Chain Management	2	20	**UA**
Electives (Any 5 including Open Elective)					
1	Elective	Logistics Management	2	20	**IA**
2	Elective	Warehouse Management	2	20	**IA**
3	Elective	Business Process Management for Risk & Performance Management	2	20	**IA**
4	Elective	Global Supply Chain Management	2	20	**IA**
5	Elective	Service Operations Management	2	20	**IA**
6	Elective	Operations Analytics	2	20	**IA**
7	Elective	Manufacturing Resource Planning & Control	2	20	**IA**
8	Elective	Production Planning & Control	2	20	**IA**
9	Elective	Purchase and Materials Management	2	20	**IA**

***IA – Internal Assessment; UA – University Assessment**

Operations Group - Mandatory Course:Supply Chain Management

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1 (Remember): Recall basic concepts of supply chain management for business improvement

CO2 (Understand): Associate the concepts of supply chain management and connect with business scenarios

CO3 (Apply): Apply basic principles of supply chain management for streamlining business processes

CO4 (Analyse): Analyse the performance of supply chain for all the stakeholders of the business

CO5 (Evaluate): Evaluate supply chain networks and optimize solutions to have competitive edge in management

CO6 (Create): Design supply chain network for creating business value

Unit / Module	Content	CO Mapping	Hours
1	Introduction to the Supply chain: Decision phases in a supply chain. Supply Chain Models: Continuous Flow, Fast Chain, Efficient Chain, Responsive Supply chain and Agile Models. Supply Chain and Demand chain, Value creation Evolution of SCM, SCM integration, Linkages and Decisions in SCM, Difference of Supply Chains in Product (Mfg.) Industry and Service-based Industry. Delivery and Value addition through supply chain. Process view of a supply chain. The importance of supply chain flows. Achieving strategic fit.	CO1, CO2	3

2	Logistics and Shipping: A concept, Logistics and Shipping, functions. Objectives, Goals, Decisions. Reverse Logistics. Inbound and Outbound Logistics, 1st Party, 2nd Party, 3rd Party, 4th Party Logistics, Introduction to Shipping Line Companies and Freight Forwarders, Introduction to shipping documents, Ports and customs	CO1, CO2	3
3	Warehousing and Distribution: Role of warehouse, Warehousing functions, Types of Warehouses, Warehouse site selection, Layout design, Warehouse automation, Hub and Spoke Model, WMS Distribution, Role, Importance, Levels, Channels, Structure, Functions. Channel partners, functions. Importance of Smart Transportation Distribution Center Concept , Modern DC's , Robotics Usage for pick and pack Factors influencing distribution network design.	CO2, CO3	3
4	Order Processing and Logistics Information system, Order Preparation, Transmittal, Order entry, Order filling, Order status reporting, Industrial order processing and Retail order processing. Web based order processing. Processing priorities, Understanding Tenders and Bidding	CO3, CO4	3
5	Performance Measurement and Controls in Supply Chain Management Pre- transaction, Transaction, Post transaction elements, Service attributes, Objective, Levels, Parameters of performance measures- Cycle time, Fill Rate. Inventory Turnover, On-time Shipping and Delivery, Perfect Order, Stock out. Transportation measurements, Customer perception measure, Audit. Gap Analysis, Best Practices SCOR and DCOR	CO4, CO5, CO6	3

6	Transportation Infrastructure, road, rail, air water, pipeline. Freight Management, Freight cost. Transportation Network Route planning, Containerization, Packing. Effective / Cost Optimizing strategies- Direct shipment, Cross-docking, Milk run, transshipment.	CO2, CO3	3
7	Supply Chain Integration Design option for a distribution network. Distribution network in practice. The value of Information Bullwhip effect. Effective forecasts. Information for the coordination of systems. Collaborative Planning Forecasting Replenishment (CPRF) concept. Inventory Management and Risk pooling, Logistics Information system, Strategic Alliances, Retailer supplier partnership. Types of RSP, Requirements of RSP Inventory ownership in RSP, Outsourcing and related decisions	CO5, CO6	3
8	Designing Global Supply Chain Networks, Global market / Technological/ Cost/ Political and Economic Forces. Risks and advantages of international supply chain.	CO5, CO6	3

	International versus Regional products. Local autonomy versus central control. Regional differences in Logistics- Cultural differences/ infrastructure/ performance expectation and evaluation Information systems availability, human resources. Global business logistics**.**		
9	Ethical issues in SCM Supply chain vulnerability. Conformance to applicable laws such as Contract and commercial laws, Trade regulation, government procurement regulations, patents Copyrights, trademark laws, transportation and logistics laws and regulations Environmental laws. International practices. Confidentiality and proprietary information.	CO1, CO2	3
10	Trends and Technology in Supply Chain: Block Chain Technology, AI in Supply Chain, Machine Learning and IOT based Supply Chain, RFID Applications in Supply Chain, Goldratt Supply Chains, Sustainable Supply Chain, Resilient supply chains Green Supply chain, Lean supply chain.	CO1, CO2	3

Textbooks:

1. Supply Chain Management - Strategy, Planning and Operation Sunil Chopra, Peter Meindl, D V Kalra
2. Designing and Managing Supply Chain David Simchi Levi, Phillip Kaminsky

Reference Books:

1. Logistics and Supply Chain Management Martin Christopher
2. Supply Chian Management Vinod Sople
3. Supply Chain Logistics Management Donald J Bowersox, David j Closs, M Bixby Cooper
4. Supply Chain Analytics T.A.S Vijayraghavan
5. Strategic Supply Chain Management, Shoshanah Cohen and Joseph Roussel

Elective Course 1: Logistics Management

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Remember / Recall fundamental concepts of logistics, transportation, warehousing and supply chain management

CO2: Understand logistics strategies, distribution models and cost structures in supply chains

CO3:Apply the principles of transportation, warehousing and inventory management in real-world scenarios

CO4: Analyse logistics performance metrics and evaluate cost-effectiveness

CO5: Evaluate risk, sustainability and technology integration in logistics

CO6: Create an effective logistics plan, incorporating modern technologies and best practices for efficient movement of inventory

Unit / Module	Content	CO Mapping	Hours
1	Introduction to Logistics Management: Definition & Scope of Logistics, Evolution of Logistics & Supply Chain, Key Logistics Functions & Objectives, Role of Logistics in Business Performance	CO1, CO2	3
2	Logistics & Supply Chain Strategy: Strategic Logistics Planning, Supply Chain Drivers & Metrics, Competitive Advantage through Logistics	CO2, CO3	3

3	Transportation & Distribution Management: Modes of Transport: Road, Rail, Air & Sea, Freight Management & Carrier Selection, Transportation Costing Models	CO3, CO4	3
4	Warehousing & Inventory Management: Warehouse Design & Layout, Inventory Planning & Demand Forecasting, Just-in-Time (JIT) & Lean Warehousing	CO3, CO4	3
5	Logistics Costing & Performance Measurement: Cost Drivers in Logistics, Activity-Based Costing (ABC), Logistics Performance Metrics & Benchmarking (Suggested Case Study: Logistics Costing & Performance Measurement at Flipkart)	CO4, CO5	3
6	Supply Chain Technology & Automation: Role of IT in Logistics, ERP & Digital Supply Chains, AI, IoT & Blockchain in Logistics (Suggested Case Study: Reliance Retail's Digital Transformation in Supply Chain)	CO3, CO5	3
7	Global Logistics & International Trade: Global Trade Regulations & Incoterms, International Logistics Network Design, Customs & Documentation (Suggested Case Study: Tata Motors' Global Logistics Strategy)	CO3, CO4, CO4	3

8	Risk Management in Logistics: Identifying & Mitigating Supply Chain Risks, Logistics Security & Compliance, Disaster Recovery Planning in Logistics (Suggested Case Study: Risk Management in Logistics – Maruti Suzuki's Supply Chain Resilience)	CO3, CO5	3
9	Sustainable & Reverse Logistics: Green Logistics & Sustainable Practices, Reverse Logistics Models, Carbon Footprint Reduction in Logistics (Suggested Case Study: Dabur India's Sustainable & Reverse Logistics Strategy)	CO4, CO5	3
10	Future Trends & Innovations in Logistics: Digital Supply Chains & Smart Logistics, Predictive Analytics & AI-driven Logistics, Role of 3D Printing & Automation in Logistics (Suggested Case Study: Mahindra Logistics' Smart & AI-Driven Supply Chain Transformation)	CO4, CO5	3

Textbooks:

1. "Logistics & Supply Chain Management" by *D.K. Agrawal.*
2. "Blockchain in Supply Chain Management" by *Babita Bhatt.*

Reference Books:

1. "International Logistics & Supply Chain Management" by *R. Panneerselvam.*
2. "Managing Supply Chain Risk & Vulnerability" by *Teresa Wu & Jennifer Blackhurst*
3. "Cost and Management Accounting" by *M.Y. Khan & P.K. Jain.*

Elective Course 2: Warehouse Management

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Remember the fundamental concepts of warehouse management and retain the basic

CO2: Understand role of warehouse management in supply chain operations

CO3: Apply safety, security, and sustainability practices in warehouse management

CO4: Analyse warehouse layout and design principles to optimize efficiency and cost-effectiveness

CO5: Evaluate inventory management strategies and warehouse performance metrics

CO6: Create an effective warehouse design plan, incorporating modern technologies and best practices for inventory and storage management

Unit / Module	Content	CO Mapping	Hours
1	Introduction to Warehouse Management: Role of Warehouses in business Types of warehouses (public, private, bonded, fulfilment centres, etc.) Functions of a warehouse Key challenges in warehouse management Warehousing Strategies, Operations, Lean & Agile Warehousing Strategies	CO1	3
2	Receiving, Storing, and Dispatching Performance Metrics in Warehousing	CO1	3

3	Warehouse Operations & Processes: Receiving, put-away, and storage operations Picking, packing, and shipping processes Cross-docking and transshipment Reverse logistics and returns management		3
4	Warehouse Layout and Design: Factors Affecting Warehouse Layout Principles of Warehouse Design Warehouse Location Selection Space Utilization & Storage System Material handling equipment (conveyors, forklifts, AS/RS, etc.)	CO2	3
5	Warehousing Inventory Management Inventory control techniques (FIFO, LIFO, JIT, EOQ, etc.) Demand forecasting and stock replenishment Role of barcoding & RFID in inventory tracking Cycle counting vs. annual inventory audits	CO2, CO3	3
6	Technology & Automation in Warehousing Warehouse Management Systems (WMS) Use of Barcoding, RFID, and IoT in Warehousing Role of Robotics and AI in Warehouse Automation ERP Integration for Warehouse Operations	CO1, CO4	3

7	Warehouse Safety, Security, and Sustainability Warehouse Safety Standards & OSHA Guidelines Security Measures: Theft Prevention & Risk Management	CO5	3
8	Green Warehousing & Sustainability Practices Reverse Logistics and Waste Management		3
9	Emerging Trends Global Best Practices in Warehousing Omnichannel Warehousing and E-commerce Trends	CO1, CO2	3
10	Resilience in Warehouse Management (Post-COVID Adaptations)	CO1, CO6	3

Textbooks:

1. Logistics and supply chain management by Christopher, M. (2016). (5th ed.). Pearson
2. Operations and supply chain management by Jacobs, F. R., & Chase, R. B. (2022). (16th ed.). McGraw-Hill.
3. Designing and managing the supply chain: Concepts, strategies, and case studies by Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, McGraw-Hill

Reference Books:

1. The warehouse: How robots, AI, and blockchain are redefining a world of work and supply chains by Schenker, J. Prestige Professional Publishing

Elective Course 3: Business Process Management for Risk & Performance Management

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Define key concepts, principles, and frameworks in Business Process Management (BPM), Risk Management, and Performance Management.

CO2: Explain the relationship between BPM, risk mitigation, and organizational performance, and their role in achieving business objectives.

CO3: Utilize process mapping, risk assessment techniques, and performance measurement tools to analyze and improve business operations.

CO4: Evaluate risks and inefficiencies in business processes and recommend strategies for risk mitigation and performance enhancement.

CO5: Assess the impact of BPM initiatives on risk reduction and overall business performance using industry benchmarks and best practices.

CO6: Design business process improvement strategies, integrating risk management and performance optimization frameworks to enhance organizational efficiency.

Unit / Module	Content	CO Mapping	Hours
1	Introduction to Business Process Management: Definition of BPM Importance in organizations Key BPM concepts and lifecycle	CO1	3
2	Business Process Modeling: Introduction to process modelling Flowcharts & BPMN Process mapping tools & software	CO2	3
3	Business Process Analysis: Identifying bottlenecks Root cause analysis techniques Process efficiency metrics	CO3	3

4	Business Process Design: Process redesign approaches Lean & Six Sigma principles Optimization strategies	CO4	3
5	BPM Technologies: Overview of BPM technologies Automation & AI in BPM Integrating BPM with IT systems	CO5	3
6	Business Process Implementation: Change management in BPM Stakeholder engagement techniques Case study on BPM implementation	CO6	3
7	Performance Measurement in BPM: Importance of measuring BPM performance Key performance indicators (KPIs) Process metrics & dashboards Risk and Performance Management Frameworks	CO5	3
8	Continuous Improvement: Continuous improvement methodologies (Lean, Six Sigma etc.) Agile and iterative BPM approaches Data-driven decision-making	CO6	3
9	Case Studies and Applications of BPM in Various Industries: Kodak, Ford Motor, IBM Credit etc Case study analysis of BPM applications Industry best practices Challenges & success factors	CO4	3
10	Project Work & Presentation: End-to-End Business Process Analysis: Business process project analysis Group presentations Review & feedback	CO6	3

Textbooks:

1. Dumas, M., La Rosa, M., Mendling, J., & Reijers, H. A. (2018) Fundamentals of Business Process Management (2nd Edition, Springer)
2. Harmon, P. (2019) Business Process Change: A Business Process Management Guide for Managers and Process Professionals (4th Edition, Morgan Kaufmann)
3. Aguinis, H. (2019) Performance Management (4th Edition, Chicago Business Press)
4. Armstrong, M. (2021) Armstrong's Handbook of Performance Management: An Evidence-Based Guide to Delivering High Performance (6th Edition, Kogan Page)

Reference Books:

1. Michael Hammer and James Champy, Reengineering the Corporation, Nicholas Brealey Publishing, (1995). Jeffrey N. Lowenthal, Reengineering the Organizations

Elective Course 4: Global Supply Chain Management

Course Credits: 2; Duration: 30 Hours

Course Outcomes:
CO1: Recall the concepts of global supply chain management for solving business related problems

CO2: Explain principles of global supply chain for decision making

CO3: Develop solutions for global supply chain improvement

CO4: Analyse the data and classify the issue regarding challenges and opportunities in global supply chain

CO5: Assess the business environment and take a leading role in providing multiple opportunities for decision making

CO6: Generate innovation approaches with technology and plan growth of the global supply chain business

Unit / Module	Content	CO Mapping	Hours
1	Global supply chain Management: Introduction and Function: Steps, Objectives and Framework Establishment of global supply chain management Global supply chain network and design Comparison between National (Domestic) and International Logistics	CO1, CO2	3
2	Factors and challenges driving logistics and supply chain management: Customs and Global Supply Chain Management Management of the Inventory in the Supply Chain Analysis Including Vendor Management Factors Contributing to the Development of Logistics Understanding the geopolitical, economic, and technological factors, Challenges for global supply chain management	CO1, CO2	3
3	Global Sourcing: Global sourcing & strategy Business process outsourcing (BPO) Procurement sourcing software	CO3, CO4	3

4	Selecting the international logistics operators: Criteria of Selecting the Third-Party Logistics Operator The Key Factors in the Development of a Successful 3PL Six Core Products: Supply Chain Management, Warehousing, Customs Clearance, Air Freight, Consolidation and Project Cargo	CO3, CO4	3
5	International transport: Introduction and importance Understanding the transport Local v/s Global Types of transport: Road, maritime, air and rail, Trade-Offs Inherent in International Logistics – Multi-Modalism Key Factors in a Transport Mode(s) Trade-Off	CO4, CO5	3
6	Operations management of global supply chain: Steps in the Global Supply Chain Benchmarking of Global Supply Chain Management Challenges in Implementing Global Supply Chain Management Supply Chain Cycle Time Management Reduction Global Supply Chain Strategy	CO4, CO5	3
7	Supply chain connective technologies: Supply chain connectivity framework action plan Development of a connectivity map for measurement of total supply chain value Flexible design-planning of supply chain networks	CO3, CO4	3
8	Specialised software in the supply chain process: Need for Specialised Systems Use of technology in Global Supply Chain The Software-Driven Process Profitability Analysis	CO3, CO4	3
9	Global trade: Introduction, its Definition and benefits to the society Types of trade - external trade and internal trade. International trade and its importance Logistic and Supply Chain Strategic Environment	CO3, CO4, CO5	3

10	Issues, Challenges, Opportunities and Dynamics of Global Supply Chain Management: Key Implementation Issues, Challenges and the Opportunities Dynamics of global supply chain Importance of developing global strategy Efforts for development of global brand recognition	CO4	3

Textbooks:

1. Global Supply Chain Management and International Logistics by Alan E. Branch
2. Essentials of Logistics and Management- The Global Supply Chain by Philippe Wieser, Francis- Lue Perret
3. Global Sourcing Logistics by Thomas Cook
4. International logistics by Reji Ismail

Reference Books:

1. Supply Chain Finance Integrating Operations and Finance in Global Supply Chains by Zhao, Lima and Huchzermeier, Arnd

Elective Course 5: Service Operations Management

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Recall the concepts of service operations management for solving business related problems

CO2: Explain service operations principles for decision making

CO3: Develop solutions for service operations business improvement

CO4: Analyse the data and classify the issue regarding challenges and opportunities

CO5: Assess the business environment and take a leading role in providing multiple opportunities

CO6: Generate innovation approaches with technology and plan growth of the service business

Unit / Module	Content	CO Mapping	Hours
1	Services: Introduction Characteristics of Services Importance of Service Sector Classification framework Service Delivery System – Process Flow Diagrams, blue printing Process Simulation	CO1, CO2	3
2	Service Strategy: Introduction to Service Strategy Strategic Positioning Service as Competitive Advantage Service Concept and Operating Strategy Turning Performance Objectives into Operations Priorities	CO3, CO4	3
3	Site Selection for Services: Types of Service Firms Site Selection for Demand Sensitive Services, Delivered Services and Quasi Management Services	CO1, CO2, CO5	3

4	Managing Service Quality: Defining, Measuring, Identifying Gaps in Service Quality Service Quality Design Achieving Service quality, Cost of Service Quality SERVEQUAL Model	CO1, CO2, CO3	3
5	Yield Management: Introduction to Yield Management, Capacity Strategies, Overbooking, Allocating Capacity and Implementation issues	CO4, CO5, CO6	3
6	Inventory Management in Services: Services versus Manufacturing Inventory Need for Inventory Science The Newsvendor Model, Uncertain Sales Multiple Products and Shelf Space Limitations Practical methods to reduce stock outs, shrinkage and inventory inaccuracy	CO2, CO3, CO4	3
7	Offshoring and Outsourcing: Outsourcing: Contract risk, Outsource Firm Risk, Pricing Risk, Competitive Advantage, Information Privacy Risk, Firm Specific Risks Offshoring: Offshoring and Competitive Capabilities: Cost Issues Offshoring and Competitive Capabilities: Non-cost Issues	CO2, CO3, CO4	3
8	Service Processes: Introduction Service Processes and their importance Understanding the nature of service processes Service Blue Printing	CO1, CO2, CO3	3

9	Performance measurement of Service Operations: Purpose of performance measurement, a balance of measures, benchmarking, the relationship between operational decision and business performance The service performance network	CO3, CO4, CO5	3
10	Driving Operational Improvement: Approached to operational improvement, Service recovery, service guarantees	CO3, CO4, CO5	3

Textbooks:

1. Metters, King-Metters, Pulliman and Walton "*Successful Service Operations Management 2e*", Sengage Learning India Pvt. Ltd. 2006
2. "*Services Operations Management : Improving Services Delivery*" by Robert Johnson Graham, Clark, Prentice Hall, Pearson Education, 2008

Reference Books:

1. James A. Fitzsimmons & Mono J. Fitzsimmons "*Service Management*" Tata McGraw-Hill, sPublishing Co. Ltd. New Delhi
2. Bill Hollins and Sadie Shinkins "*Managing Service Operations –Design and implementation*" Sage Publication New Delhi 2006
3. Roger G. Schroeder, "*Operations Management*" Tata McGraw-Hill, New Delhi 2009
4. B Mahadevan "*Operations Management (Theory & Practice)*
5. Nitin Joshi and S. Rajagopalan "*Service Operations Management: Towards Excellence*" Himalaya Publishing House

Elective Course 6: Operations Analytics

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Recall fundamental concepts of data-driven decision-making in operations

CO2: Understand key analytical techniques used in operations

CO3: Implement data analytics in real-world operational scenario

CO4: Analyse & assess the impact of operational efficiency using quantitative models and optimization techniques

CO5: Evaluate the impact of operational efficiency using appropriate data and optimization techniques for decision making

CO6: Design innovative data-driven solutions for operations challenges

Unit / Module	Content	CO Mapping	Hours
1	Introduction to Analytics Gaining data insights and Predictive Analytics Demand analytics-Qualitative forecasting	CO1, CO2	3
2	Demand Analytics Forecasting and time series analysis. Regression Analysis for Operations	CO2, CO3	3
3	Demand Analytics Regression Analysis for Operations	CO2, CO3	3
4	Quality Control Statistical Quality Control Various types of Control Charts (Mean Chart, Variation Charts …)	CO3, CO4	3

5	Machine Learning Block chain in operations. Predictive Maintenance & Failure Analysis	CO3, CO4	3
6	Performance Metrics Inventory, Fulfillment, Alerts, and Flagging etc. Dashboard Designing, Balanced Scorecard Kaplan and Norton Framework, Strategy Map	CO4, CO6	3
7	Introduction to Probabilistic Inventory Control Models. Instantaneous and Continuous demand.	CO4, CO5	3
8	Introduction to Probabilistic Inventory Control Models. Inventory Control Models with and without set-up cost	CO4, CO5	3
9	Introduction to Non-Linear Programming. Lagrange Multiplier,	CO4, CO5	3
10	Introduction to Non-Linear Programming. Graphical Method	CO4, CO5	3

Textbooks:

1. "Operations Research: Theory and Applications" by *J.K Sharma*
2. "Machine Learning for Business Analytics" by *Shmueli*

Reference Books:

1. "Business Analytics: Practitioner's Guide" by *Rahul Saxena & Anand Srinivasan*
2. "Manufacturing Planning and Control" by *Volmann, Berry, Whybark*
3. "Quantitative Techniques in Management" by *N.D Vohra*

Elective Course 7: Manufacturing Resource Planning & Control

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Choose appropriate Production planning to achieve business plan

CO2: Compare manufacturing resources available and select right ones to optimize cost

CO3: Identify ways to manage demand and capacity planning

CO4: Analys best practices followed for Material Requirement Planning

CO5: Evaluate how implementing ERP system can help organizations to operate and monitor

CO6: Create manufacturing resource plan based on understanding of concepts

Unit / Module	Content	CO Mapping	Hours
1	Overview of operations planning and control, challenges in securing a competitive edge, understanding Enterprise Resource Planning and its linkage with functional units, Customised Software, data integration; integrating MPC with ERP; performance metrics to evaluate effectiveness	CO1, CO2	3
2	Demand management and the MPC environment (MTS, ATO, MTO); communicating with other modules like Sales & Operations Planning, Master Production Scheduling; information use in demand management; CRM; balancing supply and demand; Collaborative Planning, Forecasting and Replenishment (CPFR); 9-step CPFR process model	CO2, CO3	3
3	Sales and Operations Planning: S&OP fundamentals, planning and management; payoffs; S&OP process, displays, basic trade-offs, economic evaluation of alternate plans; new management obligations, functional roles, integrating strategic planning, controlling the Operations Plan; Lawn King Inc case	CO2, CO3	3

4	Master Production Scheduling; MPS activity, statement of future output, business environment for MPS, other linkages; MPS techniques – time-phased, rolling through time, Order Planning and ATP; planning in an ATO environment; 2-level MPS; MPS stability-freezing and time-fencing; managing MPS	CO2, CO3	3
5	Material Requirements Planning; MRP in MPC; record processing – basic MRP record, linking records; technical issues-processing frequency, bucketless systems, lot sizing, pegging, FPOs, service parts, planning horizon; Scheduled Receipts vs Planned Order Releases; using the MRP system; system dynamics	CO2, CO3	3
6	Capacity Planning and Management; role in MPC systems, hierarchy of decisions, links to other MPC modules; capacity planning and control techniques – CPOF, Capacity Bills, Resource Profiles, Capacity Requirements Planning (CRP); finite capacity scheduling, using APS systems; management and capacity planning utilisation. Managing bottleneck capacity, choosing measure of capacity, choice of technique, using the capacity plan	CO3, CO4, CO5	3
7	Production Activity Control; framework, MPC system linkages, linkages between MRP and PAC, JIT effect on PAC; Production Activity Control techniques, concepts, lead-time management, Gantt Charts, Priority Sequencing Rules, Theory of Constraints (TOC), Vendor Scheduling and follow-up, influence of internet	CO3, CO4, CO5	3
8	Advanced Scheduling and Just-in-Time; basic scheduling research, 1-machine, 2-machine, dispatching and sequencing rules; advanced procedures-due date setting, dynamic due dates, labour-limited systems group scheduling and transfer batches: major elements of JIT its impact on MPC and applications, hidden factory; levelling production, pull system introduction, product and process design	CO3, CO4, CO5	3

9	Distribution Requirements Planning; DRP in the Supply Chain, MPC system linkages, marketplace, demand management, MPS; DRP techniques – basic DRP record, TPOP, linking multiple warehouse records, managing day-to-day variations from plan, safety stock; management issues – data integrity, organisational support, problem-solving	CO3, CO4, CO5	3
10	Management of Supply Chain Logistics; framework for supply chain logistics, breadth of supply chain logistics, total cost concept; design, operation and control decisions; supply chain logistical elements – transportation, warehouses, inventory; warehouse replenishment systems; warehouse location analysis; vehicle scheduling analysis; customer service measurement MTS, MTO	CO3, CO4, CO5	3

Textbooks:

1. Manufacturing Planning and Control for Supply Chain Management, 6e; F Robert Jabobs, William Berry, D Clay Whybark, Thomas Vollmann; Mc Graw Hill

Reference books:

1. Designing and Managing the Supply Chain – Concepts, Strategies and Case Studies, 4e; David Simchi-Levi, Philip Kaminski, Edith Simchi-Levi, Ravi Shankar; Mc Graw Hill

Elective Course 8: Production Planning & Control (PPC)

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Remember / Recall fundamental concepts of PPC

CO2: Understand role of PPC in business management

CO3: Apply the principles of PPC in manufacturing

CO4: Analyse the pros and cons while decision making in manufacturing

CO5: Evaluate risk, material and capacity while decision making

CO6: Create effective processes for performance improvement and sustainable business

Unit / Module	Content	CO Mapping	Hours
1	Production / Operations Planning and Control (PPC): Nature, Objectives, Factors Determining Production Planning, Production Planning and Systems, Production Controls, Benefits of Production Control, Factors Determining Production Control, Role and Scope of PPC	CO1, CO2	3
2	Production / Operations Planning and Control (PPC): Functions of PPC, Benefits of PPC, Limitations of PPC, Measuring Effectiveness of PPC, PPC in Different Production Systems and Make or Buy Analysis	CO1, CO2	3
3	Aggregate Planning and Master Production Scheduling: Nature and Objectives, Operations Planning and Scheduling Systems, Aggregate Capacity Planning, Steps in Aggregate Planning, Capacity Requirement Planning, Capacity Planning Decisions	CO3, CO4	3

4	Aggregate Planning and Master Production Scheduling: Determination of Capacity, Factors Affecting Determination of Plant Capacity, Interrelationship between Capacity and Other Factors (Location, Layout, Process Design, Equipment Selection), Aggregate Capacity Planning Strategies	CO3, CO4	3
5	Master Production Scheduling (MPS): Objectives, Functions of MPS, Time Fences in MPS, Procedure for Developing MPS and Symptoms of Poorly Designed MPS	CO3, CO4	3
6	Resource Requirement Planning: Introduction, Resource Requirement Planning System, General Overview of MRP, Issues in MRP, Potential Benefits of MRP	CO2, CO3	3
7	Shop Floor Planning and Control: Introduction, Objectives of Production Activity and Control, Scheduling Techniques, Stages in Scheduling and Line of Balance Technique	CO3, CO4	3
8	Inventory Management: Inventory Cost, Inventory Management and Control, Inventory Control Techniques and Measurement of Effectiveness of Inventory Management	CO4, CO5	3
9	ERP: Key Functions and Features, Production Planning, Capacity Planning, MRP and Scheduling	CO4, CO5	3

10	ERP: Production Control: Inventory, Work Order Management, Resource Allocation, Production Monitoring, Routing and Process Management, Process Management, Reporting and Analytics, Benefits of ERP Module for PPC	CO4, CO5	3

Textbooks:

1. "Elements of Production, Planning and Control" by Samuel Eilon, Published by Macmillian
2. "Operations Management" by Joseph Monks, Published by McGraw Hill Ryerson
3. “Fundamentals of Production Planning and Control” by Stephen N. Chapman, Published by Pearson

Reference Books:

1. " Production Planning and Control – Text and Cases" by Mukhopadhyay S. K. Published by PHI Learning

Elective Course 9: Purchase and Materials Management

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Remember important aspects of materials management

CO2: Understanding the importance and worth of Materials Management with respect to business operations

CO3: Apply concepts of materials management in business operations

CO4: Analyse data for tenders, vendor selection, material purchase and cost analysis

CO5: Evaluation of suppliers, materials, vendors and business proposals

CO6: Create an optimized procurement and inventory management system to enhance efficiency and sustainability

Unit / Module	Content	CO Mapping	Hours
1	Introduction to Purchase & Materials Management Definition, Scope & Importance Objectives & Functions Role in Business & Industry	CO1	3
2	Purchasing Management Purchasing Cycle & Methods Vendor Selection & Negotiation Legal Aspects of Procurement	CO2, CO3	3
3	Inventory Management Types of Inventory Inventory Control Techniques (ABC, VED, FSN) Economic Order Quantity (EOQ) Model Just-in-Time (JIT)	CO3	3

4	Warehouse & Storage Management Functions of Warehousing Warehouse Layout & Design Material Handling Systems Safety & Security Measures	CO1, CO2	3
5	Supply Chain Management (SCM) Overview of SCM Logistics & Distribution in SCM Supplier Relationship Management Performance Metrics in SCM	CO4, CO5	3
6	Materials Requirement Planning (MRP) & ERP MRP Process & Elements Bill of Materials (BOM) MRP vs. ERP Capacity Planning	CO2, CO3	3
7	Vendor Management & Development Vendor Rating & Performance Evaluation Supplier Development Strategies E-Procurement & Digitalization Global Sourcing	CO4, CO5	3

8	Cost & Value Analysis Cost Reduction Strategies Value Engineering & Value Analysis Make or Buy Decisions Total Cost of Ownership (TCO)	CO3, CO4, CO5	3
9	Sustainable & Green Procurement - Environmental & Social Impact - Circular Economy in Supply Chain - Ethical Sourcing & Corporate Social Responsibility (CSR) - Green Logistics	CO4, CO5	3
10	Industry 4.0 & Smart Procurement AI & Blockchain in Supply Chain Digital Procurement Systems Future Trends in Procurement	CO2, CO3	3

Textbooks:

1. Chopra, S., & Meindl, P. (2021). Supply chain management: Strategy, planning, and operation (8th ed.). Pearson.
2. Gopalakrishnan, P., & Sundaresan, M. (2015). Introduction to materials management (7th ed.). Pearson Education.
3. Monczka, R. M., Handfield, R. B., Giunipero, L. C., & Patterson, J. L. (2020). Purchasing and supply chain management (7th ed.). Cengage Learning.
4. Schnellbächer, W., & Weise, D. (2022). Digital procurement transformation: Rethinking buying in the digital age. Springer.

Reference Books:

1. Datta, A. K. (2009). Materials management: Procedures, text and cases (2nd ed.). PHI Learning.
2. Sharma, S. C. (2018). Materials management and materials handling (1st ed.). Khanna Book Publishing.

Semester III - System & Digital Business

Semester III Courses - Marketing Specialization					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
Mandatory					
1	Mandatory	Strategic Information Technology & Resource Management	2	20	**UA**
Electives (Any 5 including Open Elective)					
1	Elective	Digital Business	2	20	**IA**
2	Elective	Software Project Management	2	20	**IA**
3	Elective	Enterprise Systems for Business	2	20	**IA**
4	Elective	Big Data, Business Analytics & FinTech	2	20	**IA**
5	Elective	Advanced Database & Data Warehousing	2	20	**IA**
6	Elective	Knowledge Management	2	20	**IA**
7	Elective	Business Applications of Networking & Telecommunication	2	20	**IA**

8	Elective	Data Mining & Business Intelligence	2	20	**IA**
9	Elective	Block chain Technology for Business	2	20	**IA**

***IA – Internal Assessment; UA – University Assessment**

System & Digital Business -Mandatory Course: Strategic Information Technology and Resource Management

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1 – To understand how Information Technology used for competitive advantage. The five forces and the value chain to derive value

CO2 – To analyze the process perspective and how business process reengineering and its application for competitive advantage

CO3 – To apply Data, Information and technology integration for effective decision making and for competitive strategy and advantage across the sector ,

CO4 – To evaluate which sourcing is a better option from insourcing and outsourcing, in-shoring and offshoring, and near- shoring and far-shoring for IT integration and business strategy .

CO5 – To design an effective technology strategy using the emerging trends of technology, business strategic web related technologies, World Wide Web, and mobile technology for business.

Unit / Module	Content	CO Mapping	Hours
1	Information Technology and Competitive advantage. Role of Information Systems in organization, Key concepts related to strategy, such as value chain, five forces, information asymmetry, and Technology investment. Information Technology vs Information systems.	CO1,CO2	3
2	Approaches of competitive advantage - Market based approach and Resource based approach. Strategic Role of IT in gaining Competitive Advantages	CO1,CO2	3

3	Strategic Use of ERP in Business, Process Perspective, Business Process Reengineering.	CO2,CO3	3
4	Strategic role of information, sue of information for decision making process, How organisation leverage data and information for strategic and competitive advantage.	CO2,CO3	3
5	Research on Internet use. Marketing Online, Online Advertising, Social Media and Digital Marketing	CO3	3
6	Sourcing Information Systems around the world. Sourcing Decision cycle Framework. Explain the differences between - insourcing and outsourcing, in-shoring and offshoring, and near-shoring and far-shoring. Major drivers for outsourcing. How offshoring must be managed	CO4	3
7	Creating a Technology Strategy. Technology Trends. Emerging trends of information technology to device Business model & business strategy ; Web related technologies, web media, how to use world wide web for business and marketing purpose; Mobile technology impact of mobile technologies on business and mobile strategy for a business	CO4, CO5	3
8	Emerging Trends in Strategic IT and IT Resource Management with related case studies	CO4, CO5	3
9	Sourcing Information Systems around the world. Sourcing Decision cycle Framework. Explain the differences between - insourcing and outsourcing, in-shoring and offshoring, and near-shoring and far-shoring. Major drivers for outsourcing. How offshoring must be managed	CO3	3

Text Books:

1. Kerri Pearlson and Carol Saunders, *Strategic Management of Information Systems,* Wiley
2. Wendy Robson, *Strategic Management and Information Systems*, FT Publishing International; 2nd edition
3. Samarjeet Borah, Bhushankumar Nemade, Dharmesh Dhabliya, Nitin Sakhare,
4. *Tech-Driven Strategies: Leveraging Information Technology in Business Management*, Nova Science Publishers

Reference Books:

1. Raymond Papp, *Strategic Information Technology: Opportunities For Competitive Advantage,* IGI Publishing
2. Robert D. Galliers, Dorothy E Leidner, *Strategic Information Management*, Routledge 3rd Edition
3. Donald Waterman, *A Guide to Expert Systems*, Pearson India

Elective Course 1: Digital Business

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1 To understand the introduction to digital business, framework of drivers of digital business-, mobile, cloud computing, social media;

CO2 To Analyze Retailing in e- business-products and services, consumer behavior

CO3 To Evaluate the digital business support services- e-CRM, e-SCM, e- banking, ERP, mobile computing

CO4 – To compare digital business applications and infrastructure, IAAS, SAAS, PAAS, information super highway, collaboration tools and Legal, Ethics and Societal impacts of E- Business , for value creation.

CO5 To Design the E-Business Strategy for effective Implementation of digital business and E - Business project

Unit / Module	**Content**	**CO Mapping**	**Hours Assigned**
1	Introduction to Digital Business. Background and current status, E-market places, structures, mechanisms, economics and impacts Difference between physical economy and digital economy.	CO1,CO2	3
2	Drivers of digital business- Big Data & Analytics, Mobile, Cloud Computing, Social media, BYOD, and Internet of Things (digitally intelligent machines/services) Opportunities and Challenges in Digital Business.	CO1,CO2	3

3	Overview of E- Business. E-Business-Meaning, retailing in e- Business-products and services, consumer behaviour, market research and advertisement B2B-E-Business- selling and buying in private e-markets, public B2B exchanges and support services, e-supply chains, Collaborative Commerce, mobile commerce and pervasive computing.	CO1,CO2	3
4	Digital Business Support services- e-CRM, e-SCM, e-banking, ERP as e –business backbone, Mobile Computing	CO3	3
5	Understanding -Building Digital business Applications and Infrastructure, IAAS, SAAS, PAAS, information superhighway, collaboration tools	CO4	3
6	Managing E-Business-Managing Knowledge, Management skills for e-business, Technology integration ,Launching a successful digital and online business and E -Business project,	CO5	3
7	Legal, Ethics and Societal impacts of E-Business , Managing Risks in e –business Security Threats to e-business -Security Threats, Encryption, Cryptography, Digital Signatures, Digital Certificates	CO4	3
8	E-Business Strategy- E- Business Strategy and Implementation, E Business Models, E Business strategy and global E- Business, Economics and Justification of E-business, Strategic formulation- Analysis of Company's Internal and external environment, Selection of strategy, E-business strategy into Action, challenges and E-Transition	CO4, CO5	5

9	Emerging Trends in Digital Business and Model with related case studies	CO4,CO5	4

Text BookS:

1. Dr Chandrahauns Chavan, Digital Business, KBP International 2024 , MumbaI
2. David Rogers, " The Digital Transformation Playbook-Rethink your Business for the Digital Age, Colombia Business School Publishing 2016

Reference Books:

1. Sunil Gupta, Driving Digital Strategy, A Guide to Reimagining Your Business".
2. Aaron Brooke, "Digital Transformation with data verse", bpb,2022

Elective Course 2 : Software Project Management

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1 – To understand the foundational concepts of IT Project Management including project goals, life cycle models, methodologies (ITPM), and various software development processes

CO2 – To analyze key project initiation elements like Requests for Proposal (RFP), business cases, feasibility studies, and use of structured analysis tools

CO3 – To apply appropriate project management tools for scheduling, resource allocation, and budgeting including Work Breakdown Structures (WBS), Gantt Charts, Responsibility Matrices, and estimation models.

CO4 – To evaluate IT project quality and risk by examining testing methodologies (black box, white box, stress/load testing) and applying risk management processes including identification, analysis, mitigation strategies, and control mechanisms.

CO5 – To design an effective IT project plan addressing leadership, communication, procurement, implementation, change management, ethics, multicultural team handling, and Project closure procedure

Unit / Module	**Content**	**CO Mapping**	**Hours Assigned**
1	Overview of IT Project Management – Introduction, state of IT project management, need for project management, project goals, life cycle and IT development, extreme project management, PMBOK, ITPM, software development processes (Waterfall, Spiral, etc.), project feasibility	CO1	5

2	RFP, Proposal, Business Case, Project Selection and Approval, Contracting, IT Governance, System Analysis and Design, Feasibility Study, Requirements Gathering, DFD, ERD, SRS, Project Charter, Project Planning Framework, Master Plan	CO2	5
3	Work Breakdown Structure (WBS), Responsibility Matrix, Gantt Chart, Calendar Scheduling, Project Management Tools, Budgeting, Software Estimation (LOC, Function Point, COCOMO, COCOMO II), Finalizing Schedule and Budget	CO3	5
4	Testing Techniques – Black box vs White box, Functional Tests, Code Reviews, Stress & Load Tests, IT Project Risk Management – Planning, Identification, Analysis, Strategies, Monitoring, Evaluation	CO4	5
5	Human Side of Project Management – Organization, Team, Environment, Communication, Monitoring, Reporting, Leadership, Ethics, Multicultural Teams, Change Management, Resistance, Conflict Handling	CO5	3
6	Project Procurement & Outsourcing, Project Implementation, Administrative Closure, Project Evaluation, Audit	CO5	3
7	Emerging Trends in Software Project Management with related case studies	CO5	4

Text Books:

1. Roger S. Pressman and Bruce R. Maxim, Software Engineering: A Practitioner's Approach, McGraw-Hill
2. Information Technology Project Management by Jack T. Marchewka, Wiley India, 2009.
3. Software Project Management by Hughes and Cornell. Tata McGraw-Hill
4. Harold Kerzner, Project Management: A Systems Approach to Planning, Scheduling, and Controlling, Wiley, 12th Edition
5. Dr. Satish R. Billewar, Software Project Management: Includes Practicals, Dreamtech Press
6. Kathy Schwalbe, Information Technology Project Management, Cengage Learning, 7th Edition
7. IT Project Management by Joseph Phillips. Tata McGraw-Hill
8. Software Project Management by Joel Henry. Pearson Education, 2008

Reference Books:

1. Pankaj Jalote, Software Project Management in Practice, Pearson Education
2. Hughes & Cotterell, Software Project Management, Tata McGraw-Hill, 5th Edition
3. Bob Hughes, Mike Cotterell, Rajib Mall, Software Project Management, Tata McGraw-Hill
4. Jack T. Marchewka, Information Technology Project Management, Wiley India, 5th Edition
5. PMI – Project Management Institute, A Guide to the Project Management Body of Knowledge (PMBOK® Guide), 6th Edition
6. Project Management by S. J. Mantel, J. R. Meredith. Wiley India, 2009
7. Project Management for Business and Technology by John M. Nicholas. Pearson Education.
8. Effective Project Management by Robert K. Wyzocki and Rudd McGary. Wiley.
9. Project Management byBrown, K.A. McGraw Hill, 2002.

Elective Course 3: Enterprise Systems for Business

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1 Understand the enterprise resource planning (ERP) and its integration for effective business.

CO2 Describing the Enterprise Content Management in organisational workflow

CO3 Analyse the various business application of enterprise system across the functions and verticals of the organisation

CO4 Evaluate the emerging technologies available for building enterprise systems and portals and implementation strategies.

CO5 Design Application Areas of ERP in SCM, and CRM to Business and value creation

Unit / Module	**Content**	**CO Mapping**	**Hours Assigned**
1	Application areas of Enterprise Systems for Business, in various industry verticals and business such as service Industry like Banking and Finance, Retail, Telecom, Healthcare, Hospitality, Education, in a common manufacturing ,FMCG, Government etc. and various functions of management Marking, Finance, Operations, Human Resources and as per business processes of the organisation	CO1,CO2,CO3	6
2	Enterprise Content Management – Role of content management – ERP and other transaction related records, web content, and other unstructured content. Integrating Content management in organizational workflows and ERP systems etc Examples of content management tools.	CO1,CO2	4
3	Enterprise Portals – Concept of an enterprise portal, benefits to an organization, Emerging Technologies available for building enterprise portals for business	CO4,CO5	4

4	Enterprise Application Integration and Implementations strategies - Challenges in integrating various enterprise applications. Emerging technologies for application and system integration its merits and demerits and strategies for Enterprise system implementations	CO4,CO5	4
5	Application Areas of ERP in SCM, and CRM. Supply Chain Management (SCM) and Customer Relationship Management CRM– Need for Supply chain and Customer Relationship integration, Application overview of supply chain and Customer relationship solution, advanced SCM and CRM and ERP integration to Business and value creation	CO4,CO5	6
6	Emerging Trends in Enterprise systems with related case studies	CO4,CO5	6

Textbooks:

1. Enterprise Systems for Management by Motiwala. Pearson (2008).
2. ERP Systems and Organisational Change by Bernard Grabot, Anne Mayère, and Isabelle Bazet. Springer (2008).

Reference Books:

1. Management Information Systems for the Information Age (9e) by Maeve Cummings. McGraw-Hill/Irwin (2012).
2. Management Information System- Managing the Digital Firm by Laudon and Laudon.
3. A Management Information Systems by O'Brien, James. Tata McGraw Hill, New Delhi,
4. Elements of Systems Analysis and Design by Marvin Gore. Galgota Publications.
5. Management Information Systems by Jaiswal and Mittal. Oxford University Press.

Elective Course 4 : Big Data , Business Analytics & FinTech

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1 – Understand the fundamental concepts and importance of big data and business analytics and FinTech.

CO2 – Analyse big data architectures, tools, and technologies for data processing.

CO3 – Evaluate data analytics techniques, predictive modelling, and machine learning applications and FinTech.

CO4 – Apply big data analytics and FinTech in decision-making and business intelligence.

CO5 – Explore emerging trends and challenges in big data, FinTech, analytics-driven businesses.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Big Data and Business Analytics - Basics of big data and Business Analytics its ecosystem. - Data processing frameworks. - Industry trends and challenges.	CO1, CO2	4
2	Big Data & Data Management - Data collection and pre-processing. - NoSQL databases and data warehousing. - Data visualization techniques. -Predictive and Business analytics concepts and its applications	CO2, CO3,CO4	4
3	Big Data Implementation and Business Analytics - Big data strategy and governance. - Security and privacy in big data , -Real-time processing and streaming Business analytics -Emerging trends and Case Studies of Big Data and Business Analytics	CO3,CO4, CO5	5
5	Introduction & Applications of Financial Technology, FinTech : Technology enablers - Blockchain Technology Digital Payments FinTech in Banking FinTech in Lending Emerging trend and case studies	CO1,CO2,CO4,CO5	7

6	Introduction & Applications of Financial Technology, FinTech : FinTech in Wealth Management & Capital Markets and Other Types of FinTech – Property, Insurance and across the sectors of the Industry with their case studies etc.	CO1,CO2,CO4,CO5	7
7	Emerging Trends in Business analytics and FinTech with their related case studies	CO4,CO5	3

Textbook:

1. *Big Data and Business Analytics* by Jay Liebowitz, Pearson Education India
2. *Introduction to FinTech by Dr Chandrahauns Chavan & Atul Patankar,* Pearson India Education Services Ltd.
3. *Big Data Analytics* by Seema Acharya & Subhashini Chellappan, Wiley India
4. *Business Analytics: The Science of Data-Driven Decision Making* by U. Dinesh Kumar, Wiley India
5. *Data Science and Big Data Analytics* by EMC Education Services, Wiley India

Reference Books:

1. *Data Analytics* by V. P. Jain, Khanna Publishing House
2. *Business Analytics* by Sanjiv Jaggia, Alison Kelly, and R. A. Sharma (Indian adaptation), Cengage India
3. *Fundamentals of Business Analytics* by R. N. Prasad & Seema Acharya, Wiley India
4. *Business Intelligence and Analytics* by Ramesh Sharda, Dursun Delen & Efraim Turban, Pearson India
5. *Big Data: Concepts, Technology and Architecture* by Thomas Erl, Pearson India

Elective Course 5: Advances Database and Data Warehousing

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1 Understand the data warehousing components –building a data warehouse.

CO2 Describe the framework of the structure of the data warehouse, granularity.

CO3 Apply normalization and denormalization for operational access of data warehouse.

CO3 Analyze the distributed data warehouse, the local and global data warehouse, undistributed data warehouse and development.

CO4 Develop the multidimensional data model

Unit / Module	Content	CO Mapping	Hours Assigned
1.	Data warehousing components –Building a data warehouse, DBMS schemas for decision	CO1, CO2	5

	support – data extraction, clean-up, and transformation tools, monitoring the data warehousing environment.		
2.	The structure of the data warehouse, Granularity, partitioning as a design approach, structuring data in data warehouse, data homogeneity and heterogeneity, incorrect data in data warehouse	CO2, CO3	5
3.	Normalization and de normalization, Triggering the data warehouse record, managing volume, direct operational access of data warehouse data, levels of granularity.	CO3	4
4.	Data warehouse technology: Managing multiple media, interface to emerging technologies, and management of metadata, multidimensional DBMS and data warehouse.	CO4, CO5	4
5.	Types of data warehouse: The distributed data warehouse, the local and global data warehouse, undistributed data warehouse and development.	CO3, CO4	4
6.	Management analysis: Cost justification and return on investments for a data warehouse, corporate information compliance and data ware housing, data warehousing, design review checklist and relevance.	CO4 CO5	4
7.	Application areas of data warehousing and business issues and challenges with case studies	CO4,CO5	4

Textbooks:

1. Data Warehousing, Data Mining and OLAP by Alex Berson and Stephen J. Smith. Tata McGraw–Hill Edition, 2007
2. Data Mining Concepts and Techniques by Jiawei Han and Micheline Kamber. Elsevier, 2007
3. Introduction to Data Mining by Pang-Ning Tan, Michael Steinbach and Vipin Kumar. Pearson Education, 2007
4. Data Mining Concepts and Techniques by Jiawei Han and Micheline Kamber. Elsevier, 2007.

Reference Books:

1. Introduction to Data Mining with Case Studies by G. K. Gupta. Prentice Hall of India, 2006.
2. Data Mining Methods and Models by Daniel T. Larose. Wiley-Interscience, 2006.
3. Insight into Data Mining Theory and Practice by K. P. Soman, Shyam Diwakar and V. Ajay. Prentice Hall of India, 2006
4. Data Warehousing, Data Mining and OLAP by Alex Berson and Stephen J. Smith. Tata McGraw–Hill Edition, 2007

Elective Course 6: Knowledge Management

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Explain the fundamental concepts of knowledge management, including the distinction between data, information, and knowledge, and the importance of KM in business.

CO2: Analyze knowledge creation models, sources, and acquisition techniques to enhance organizational knowledge processes.

CO3: Evaluate knowledge sharing mechanisms, technological tools, and organizational strategies to overcome barriers in KM.

CO4: Compare different types of Knowledge Management Systems (KMS) and propose effective implementation and evaluation strategies.

CO5: Design knowledge retention strategies and organizational learning practices to sustain competitive advantage.

CO6: Assess the role of KM in fostering innovation through technology, collaboration, and performance measurement.

Unit / Module	Content	CO Mapping	Hours Assigned
1.	Definition and Scope of KM: Understanding knowledge vs. data vs. information, Types of Knowledge: Tacit vs. explicit knowledge, Importance of KM in business: How KM improves efficiency, decision-making, and innovation, KM Lifecycle: Knowledge creation, storage, sharing, and utilization, Challenges in KM: Barriers to effective knowledge management.	CO1, CO2	5
2.	Knowledge Creation Models: Nonaka-Takeuchi SECI Model (Socialization, Externalization, Combination, And Internalization), Sources of Knowledge: Internal (employees, documents) vs. external (partners, customers, competitors), Techniques for Knowledge Acquisition: Market research, R&D, benchmarking, collaboration, Knowledge Transfer Mechanisms: Communities of practice, mentorship, cross-functional teams, Role of Leadership in Knowledge Creation: Fostering a knowledge-sharing culture. & Organisational Impact KM management Dimensions, Barrier to KM and IT Dimensions.	CO2, CO3	5
3.	Knowledge Sharing Processes: How knowledge is communicated across departments, Barriers to Knowledge Sharing: Cultural, technological, and organizational challenges, Role of Technology in Knowledge Sharing: Intranets, knowledge management systems (KMS), and social media tools, Collaboration Tools: Wikis, collaborative platforms, video conferencing, and cloud-based systems, Communities of Practice (CoPs):	CO4	4

	Facilitating informal knowledge sharing networks within organizations.		
4.	Overview of KMS: Types of KMS (Document Management Systems, Content Management Systems, Enterprise Social Networks), Implementing KMS: Steps to successfully implement and manage KMS, Evaluating KMS: Metrics to measure the effectiveness of KMS, Enterprise Resource Planning (ERP) and KM Integration: How ERPs facilitate knowledge management, Best Practices in KMS Implementation: Case studies of successful KMS implementations in businesses.	CO5, CO6	4
5.	Knowledge Retention Strategies: Succession planning, mentorship programs, documentation of processes, Knowledge Loss: Managing knowledge loss due to employee turnover, retirements, or organizational changes, Organizational Learning: Creating a culture of learning through training, development, and reflective practices, Learning Organizations: Key features of learning organizations (e.g., continuous improvement, shared vision), Knowledge-Based Competitive Advantage: Leveraging knowledge for strategic advantage in the marketplace.	CO4, CO5	4
6.	Role of KM in Innovation: How effective KM fosters creativity and innovation in products, services, and processes, Innovation and Knowledge Sharing: Mechanisms that link KM and innovation (e.g., crowdsourcing, open innovation),	CO4 CO5	4

7.	Emerging trends and Case Studies of KM-Driven Innovation: Examining real-world examples where KM has enhanced innovation, Technology and Innovation: Role of AI, Big Data, and other emerging technologies in KM and innovation, Measuring the Impact of KM on Innovation: Key performance indicators and success metrics for KM-driven innovation.	CO5 , CO6	4

Text Books:

1. Knowledge Management, Mruthyunjaya H.C., Prentice Hall.
2. Knowledge Management Systems and Processes in the AI Era by Irma Becerra-Fernandez & Rajiv Sabherwal, Richard Kumi, Routledge 3rd Edition.
3. Knowledge Management by Ganesh Natarajan and Sandhya Shekhar, Tata McGraw-Hill.
4. Knowledge Management in Organizations by Donald Hislop, Oxford 2nd Edition.
5. Knowledge Management in Theory and Practice, Kimiz Dalkir, MIT Press 3rd Edition.
6. Knowledge Management Challenges, Solutions, and Technologies by Irma Becerra- Fernandez, Avelino Gonzalez, Rajiv Sabherwal. Prentice Hall, 2004.
7. Knowledge Management by Elias M. Awad, Hassan M. Ghaziri. Prentice Hall, 2004.
8. Knowledge Management in Organizations by Donald Hislop. Oxford University Press.
9. Knowledge Management Tools and Techniques by Madanmohan Rao. Butterworth- Heinemann

Reference Books:

1. Knowledge Management Tools and Techniques: Practitioners and Experts Evaluate KM Solutions by Madanmohan Rao, Butterworth-Heinemann.
2. Organisational Learning and Knowledge Management by William R. King, Springer.
3. Knowledge Management Challenges, Solutions, and Technologies by Irma Becerra-Fernandez, Avelino Gonzalez, Rajiv Sabherwal, Prentice Hall.
4. Working Knowledge: How Organizations Manage What They Know by Thomas H. Davenport & Laurence Prusak, Harvard Business Press.
5. The Knowledge-Creating Company by Ikujiro Nonaka & Hirotaka Takeuchi, Oxford University Press.

Elective Course 7: Business Application of Networking and Telecommunication

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Understand the fundamental concepts of networking and communication models for Business.

CO2: Identify and compare different network devices and transmission media used in networking.

CO3: Analyse data communication processes and network access mechanisms in modern networks for Business.

CO4: Apply the role of telecommunications and wireless technologies in business environments.

CO5: Evaluate network security mechanisms and their role in cyber security management.

CO6: Propose emerging networking technologies for business innovation and competitive advantage.

Unit / Module	Content	CO Mapping	Hours Assigned
1.	Fundamentals of Networking for digital Business: Types of networks (LAN, WAN, MAN, PAN), Network topologies, OSI and TCP/IP models, IP addressing, DNS	CO1	5
2.	Network Devices and Transmission Media: Routers, Switches, Hubs, Modems, Firewalls, Wired and wireless media, Bandwidth and latency	CO2	5
3.	Application of Data Communication and Network Access to Business: Signal transmission, Multiplexing, encoding techniques, Ethernet, Switching techniques, Protocols (HTTP, FTP, TCP/IP) its application to integrate the business with case studies.	CO3	5
4.	Business Applications of Telecommunications system and Wireless Networks . Mobile networks (3G, 4G, 5G), Bluetooth, Satellite communication, VoIP, IoT connectivity, Business telecom infrastructure its Application to Business with case studies	CO4	5
5.	Network Security and Cyber security Management for business : Firewalls, VPNs, IDS/IPS, Encryption, Authentication protocols, Cyber threats and countermeasures and its significance to business with case studies	CO5	5
6.	Emerging Trends of Networking and Telecommunication system and its strategic significance with case studies: Cloud computing, SDN, Edge computing, AI in networks, green networking with emerging case studies	CO6	5

Textbook:

1. Behrouz A. Forouzan, *Data Communications and Networking*, McGraw-Hill Education, 5th Edition.

Reference Books:

1. Andrew S. Tanenbaum and David J. Wetherall, *Computer Networks*, Pearson, 5th Edition.
2. William Stallings, *Data and Computer Communications*, Pearson, 10th Edition.
3. Curt White, *Data Communications and Computer Networks: A Business User's Approach*, Cengage, 8th Edition.
4. James F. Kurose and Keith W. Ross, *Computer Networking: A Top-Down Approach*, Pearson, 7th Edition.

Elective Course 8: Data Mining and Business Intelligent

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1 Understand the introduction to data mining: introduction, definition of data mining, data mining parameters, how data mining works?

CO2 Identify the data mining techniques, statistical perspective on data mining, statistics-need and algorithms focused on business intelligence

CO3 Analyze the business intelligence essentials.

CO4 Apply the Business Intelligent and Data Mining tools and its application for Business

CO5 Design Data mining and BI Strategy for effective business,

Unit / Module	**Content**	**CO Mapping**	**Hours Assigned**

1	Introduction to Data Mining: Introduction, Definition of Data Mining, Data mining parameters, How Data Mining works? Types of relationships, Architecture of Data	CO1	3
2	Classification on Data Mining system, Various risks in Data Mining, Advantages and disadvantages of Data Mining, Ethical issues in Data Mining, Ethical issues	CO1	3
3	Data Mining Techniques: Introduction, Statistical Perspective on Data Mining, Statistics-need and algorithms	CO1,CO2	3
4	Business Intelligence an Introduction: Introduction, Definition, History and Evolution, BI Segments, Difference between Information and Intelligence, Defining Business Intelligence Value Chain, Factors of BI System, Real time Business Intelligence, BI Applications.	CO1,CO2	4
5	Business Intelligence Essentials: Introduction, Creating BI Environment, BI Landscape, Types of BI, BI Platform, Dynamic roles in BI, Roles of Business Intelligence in Modern Business- Challenges of BI.	CO3	4
6	Multiplicity of BI Tools, Types of BI Tools, Modern BI, the Enterprise BI, Information Workers and its applications	CO4	3

7	Business Intelligence Life Cycle: Introduction, Business Intelligence Lifecycle, Enterprise Performance Life Cycle Framework, Life Cycle Phases, Human Factors in BI Implementation, BI Strategy, Business Intelligence Issues and Challenges: Introduction, Critical Challenges for Business Intelligence success. Application of Business Intelligent and Data Mining for Business.	CO4,CO5	5
8	Emerging Trends of Data Mining and Business Intelligent with case studies	CO4,CO5	5

Textbooks:

1. Introduction to Data Mining with Case Studies by G K Gupta.
2. Introduction to Data Mining by Pang-Ning Tan, Michael Steinbach and Vipin Kumar. Pearson Education, 2007
3. Insight into Data Mining Theory and Practice by K. P. Soman, Shyam Diwakar and V. Ajay. Prentice Hall of India, 2006.
4. Introduction to Data Mining with Case Studies by G. K. Gupta. Prentice Hall of India, 2006.
5. Data Mining Methods and Models by Daniel T. Larose. Wiley-Interscience, 2006

Reference Books:

1. E-commerce from Vision to Fulfilment by Elias M. Awad. PHI, 2002.
2. Digital Business and E-Commerce Management by Dave Chaffey, 2014.
3. Introduction to E-Business-Management and Strategy by Colin Combe. ELSVIER, 2006.
4. Digital Business Concepts and Strategy by Eloise Coupey. Pearson.
5. Trend and Challenges in Digital Business Innovation by Vinocenzo Morabito. Springer.
6. Digital Business Discourse by Erika Darics. Palgrave Macmillan, 2015.

Semester III - Open Electives Across Specializations

Open Electives (Across Specializations)					
1	Open Elective	Marketing of Financial Products and Services	2	20	**IA**
2	Open Elective	Climate Risk and Sustainable Finance	2	20	**IA**
3	Open Elective	Acquiring and Managing Talent	2	20	**IA**
4	Open Elective	Labour, Social Security and Welfare Law	2	20	**IA**
4	Open Elective	Services Management	2	20	**IA**
6	Open Elective	Events Management	2	20	**IA**

7	Open Elective	Quality Management	2	20	**IA**
8	Open Elective	Predictive Analytics	2	20	**IA**
8	Open Elective	Predictive Analytics	2	20	**IA**
9	Open Elective	Enterprise Risk Management Course [Approved under OE Basket](https://mu.ac.in/wp-content/uploads/2025/04/IRMs-Global-Level-1-Enterprise-Risk-Management-2-Credits-Open-Elective-Course-ERM-A.C.-9.8.pdf)	2	20	**Virtual *(By IRM)*** [https://www.gicededu.co.in/irm-mumbai-university-global-enterprise-risk-management-2-credit-course.php]
10	Open Elective	Swayam Course	2	20	***Through Swayam Process***

*** IA - Internal Assessment; UA - University Assessmen**

Open Elective 1 : Marketing of Financial Products and Services

Course Credits: 2; Duration 30 hours

Course Outcomes:

CO1 (Understand): Explain the role, scope, and significance of marketing in financial services, including an overview of key products such as banking, insurance, and investment services.

CO2 (Apply): Apply segmentation, targeting, and positioning (STP) strategies, and design marketing mixes for diverse financial products including banking, NBFCs, insurance, and mutual funds.

CO3 (Analyze): Analyze customer behavior and marketing strategies in digital financial services, including fintech, mobile marketing, and CRM tools.

CO4 (Evaluate): Evaluate legal and ethical frameworks governing financial marketing in India, and assess their role in ensuring transparency and consumer protection.

CO5 (Create): Design and present a field-based marketing strategy for a financial product using experiential insights, CRM, and digital tools.

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Introduction to Financial Services Marketing:** Overview of financial products and services; The role and importance of marketing in the financial services industry; Types of financial services (banking, insurance, investment products, etc.)	CO1	3
2	**Marketing of Banking products and services:** - Features of banking products - STP (Segmentation, Targeting, Positioning) for banks - Buying behavior of banking customers - Marketing strategies in banking	CO2, CO3	3
3	**Marketing of NBFC products and services** - Product structure of NBFCs - Consumer behavior - STP and marketing mix for NBFCs - Marketing strategy insights through actual market case studies	CO2, CO3	3
4	**Marketing of Insurance products and services** - Types of insurance (life, health, general) - Consumer behavior in insurance - STP and promotional strategies - Marketing strategy insights through actual market case studies	CO2, CO3	3
5	**Marketing of Mutual funds and services** - Mutual fund types and schemes - STP and customer profiles; Consumer behavior in Mutual Funds - Marketing channels and promotional tactics through actual market case studies	CO2, CO3	3

6	**Marketing of Portfolio management services and investment advisory services** - PMS and investment advisory models - Target market analysis and client profiling; Buying Behaviour analysis - Marketing techniques including Marketing to high-net-worth clients	CO2, CO3	3
7	**Customer Relationship Management** - CRM tools and technology - Customer retention and satisfaction - Role of feedback and service personalization - CRM tools and techniques used by financial institutions	CO2, CO3	3
8	**Digital Marketing and Technology in Financial Services** - Role of digital marketing in financial services - Mobile marketing, social media & online tools - Introduction to Fintech and their marketing strategies - Suggested Case study - Zerodha Or Any other	CO3, CO4	3
9	**Legal and Ethical Aspects of Marketing Financial Products** - Regulatory framework governing financial services marketing (e.g., SEBI, RBI) - Ethical concerns and consumer protection - Legal requirements for advertising and disclosures in financial services	CO4	3

10	**Presentation of Field projects** - On-ground sales experience with a retail financial product (insurance, credit card, loan, etc.) - Strategy presentation and reflection *(Suggestion of Student immersing in 6-10 hours for project on the field)*	CO5	3

Text Books:

1. Financial Services in India, Concepts and application- Rajesh Kothari
2. Financial Services- M Y Khan
3. Marketing of Financial Services- V. A. Avadhani

Reference Books:

1. **"**Principles of Marketing**"** by Philip Kotler & Gary Armstrong (Chapter on Services Marketing)
2. **"**Marketing of Financial Products" by Dr. Prafulla Ranjan

Open Elective 2: Climate Risk and Sustainable Finance

Credits: 4 Total Hours: 60

Course Outcomes:

CO1: Understand the fundamentals of climate change, its economic impact, and the financial risks it poses
CO2: Analyze the role of financial institutions and global policies in climate mitigation and sustainable development
CO3: Evaluate ESG frameworks, investment strategies, and the regulatory landscape influencing sustainable finance
CO4: Apply tools and instruments such as green bonds, carbon pricing, and climate risk management in financial decision-making
CO5: Assess real-world cases, innovations, and emerging trends in climate risk and sustainable finance with relevance to India

Unit / Module	Content	CO Mapping	Hours Assigned

1	**Introduction to Climate Change and Financial Implications** ● Basics of Climate Change and Global Warming ● Impact of Climate Change on the Economy and Financial Markets ● Climate-Related Financial Risks: Physical and Transition Risks	CO1	3 Hours
2	**Role of Financial Institutions in Climate Action** ● Financial Institutions in Climate Mitigation and Adaptation ● Climate Change Policy Landscape: National and International Perspectives ● Key Global Agreements: The Paris Agreement, SDGs, and COP Summits	CO2	3 Hours
3	**Evolution of Sustainable Finance** ● Sustainable Finance: From CSR to ESG ● Understanding ESG (Environmental, Social, Governance) in Finance ● ESG Integration in Financial Decision-Making	CO3	3 Hours
4	**ESG Reporting and Regulatory Frameworks** ● ESG Metrics, Reporting, and Disclosure Standards (TCFD, GRI, SASB) ● Regulatory and Policy Developments: SEBI, RBI, EU Taxonomy, and IFRS Sustainability Standards ● Corporate Governance and Climate-Related Disclosures	CO3	3 Hours

5	**ESG Investment Strategies and Risk Assessment** ● ESG Investment Approaches: Screening, Thematic Investing, and Impact Investing ● Role of Central Banks and Supervisory Authorities in Sustainable Finance ● ESG Risk Analysis and Due Diligence in Financial Institutions	CO3	3 Hours
6	Financial Instruments for Sustainable Finance ● Green Bonds, Social Bonds, and Blue Bonds: Market Trends and Case Studies ● Carbon Markets and Carbon Pricing Mechanisms ● Blended Finance and Public-Private Partnerships (PPPs)	CO4	3 Hours
7	**Role of Development Banks and Risk Management in Climate Finance** ● Role of Development Banks and Multilateral Agencies in Climate Finance ● Risk Assessment Tools for Climate Finance ● Sustainable Lending and Green Credit Policies	CO4	3 Hours
8	**Climate Risk Management in Financial Institutions** ● Climate Stress Testing and Scenario Analysis ● Incorporating Climate-Related Financial Risks into Risk Management Frameworks ● Portfolio Alignment with Net-Zero Goals:	CO4	3 Hours

	Strategies for Banks and Investors		
9	**Case Studies and Practical Insights on Climate Risk** ● Climate Risk Assessment in Asset Pricing and Valuation ● Case Studies on Climate Risk in Banking and Investment Management ● Role of Insurance and Reinsurance in Managing Climate Risks	CO5	3 Hours
10	Emerging Trends and Innovations in Sustainable Finance Technological Innovations in Green Finance: Blockchain, AI, and IoT Natural Capital and Biodiversity Finance The Future of Climate Finance in Emerging Markets India's Green Finance Roadmap and Net-Zero Commitments Transition Finance and Just Energy Transition Strategies	CO5	3 Hours

Textbooks:

1. Sustainable Finance: Using the Power of Money to Change the World, Hermann Falk, Springer, 1st Edition (2022)
2. Sustainable Finance and ESG Investing, A. Arjaliès, J.-P. Reiter, Routledge, 1st Edition (2020)

Reference Books / Texts:

1. Climate Finance: Theory and Practice, Anil Markandya, Ibon Galarraga, Mikel González-Eguino, World Scientific, 1st Edition (2017)
2. Handbook of Green Finance: Energy Security and Sustainable Development, Jeffrey Sachs, Wing Thye Woo, Naoyuki Yoshino, Springer, 1st Edition (2019)
3. Greening India's Financial System, FICCI and Climate Policy Initiative (CPI India), Industry Reports

Open Elective 3: Acquiring and Managing Talent

Credits: 2; Duration: 30 Hours

Course Outcomes:

Upon successful completion of this course, students should be able:

CO 1: To recognize the role of talent acquisition and selection. (Level 2)

CO 2: To identify the methods of acquisition and management of talent for a given position. (Level 2)

CO 3: To apply different interview techniques and demonstrate required interviewing skills for a given position. (Level 3)

CO 4: To analyse the requirements of the measures used in employee talent acquisition and selection to evaluate applicants fairly and in an unbiased manner. (Level 4 & 6)

CO 5: To create effective ways of acquiring, managing and retaining talent and evaluate the impact of talent management through the HR function. (Level 5 & 6)

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Conceptual and modern approaches** of Talent Management and Acquisition	CO 1	2
2	**Competency based Job Analysis** – ● Contents of Job Description & Job Specification, Job Design.	CO 1, CO 2	3
3	**Acquiring Talent:** ● Recruiting Talent Externally, Recruiting Talent Internally, Developing Talent Over Time, Developing a Diverse Talent Pool, ● Use of technology for talent acquisition	CO 2, CO 4 & CO 5	6
4	**Selection Process** – Matching People and Job, Sources of Information about Job Candidates, Use of various contemporary tools for selection, Assessment Center, Interview Techniques.	CO 2, CO 3, & CO 5	5
5	**Employee Testing and Selection** ● Profiling Techniques: Personality, Aptitude, Competency ● Documentation for Acquiring Talent, Statutory and legal requirements affecting the talent acquisition policies.	CO 3, CO 4 & CO 5	5

6	**Talent Development** ● Contemporary techniques of training, PCMM model, Analysis and evaluation of Learning and development needs. **Talent Retention:** ● Strategies for talent retention. Employee engagement practices for retention. **Compensation as a tool for retention:** ● concept and objective of compensation as a retention tool. **Talent Acquisition**: ● Measuring the impact and use of various matrices for Talent Acquisition.	CO 4, CO 5	9

Textbooks:

1. Effective Acquiring Talent and Selection Practices, Alan Nankervis, Robert Compton, Bill Morrissey.
2. Acquiring Talent and Selection (Developing Practice), Chartered Institute of Personnel and Development
3. Successful Interviewing and Acquiring Talent, Rob Yeung, Kogan, Page Publishers
4. Human Resource Management – A South Asian Perspective by Snell, Bohlander & Vora Fourth Edition 2011
5. Gary Dessler & Biju Varkey. Human Resource Management 16th Edition, Pearson Publication.
6. Fred Luthans. Organisational Behavior: An Evidence-Based Approach 12th Edition, McGraw Hill Education

Reference Books:

1. Aswathappa K.. Human Resource Management-Text and Cases 8th Edition, McGraw Hill Education

Recommended Pedagogy:

1. Interactive Lectures
2. Case studies
3. Gamification

4. Simulation
5. Psychometric tools

Open Elective 4: Labour, Social Security and Welfare Law

Credits:2; Duration 30 Hours

Course Outcomes:

Upon successful completion of this course, students should be able:

CO 1: To u**nderstand** the labour Laws implemented in Organizations (Level 1)

CO 2: To **analyse** the social security legislation relevant in the given scenario. (Level 3)

CO 3: To **apply** the laws related to Labour Laws and Labour Welfare Laws in organizational situations. (Level 2)

CO 4: To **analyse and evaluate** the role of governing bodies in security and welfare of employees. (Level 4 & 5)

CO 5- To **create and develop** a framework of social security and welfare laws for smooth functioning of an organization. (Level 5 & 6)

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Introduction: Labour Laws:** · Concept, Evolution · Government of India Structure, Constitutional provisions for labour · Principles of Labour Laws · Classification of Labour Laws viz: Regulative, Employment, Wage, Social Security & IR	CO 1, CO 2	3
2	**Regulative Laws:** · Factory Act 1948, prohibition of employment of young children and woman. · The Bombay Shop and Establishment Act, 1948	CO 2, CO 3	3
3	**Industrial Relations Legislations:** · Industrial Disputes Act, 1947, Authorities, Awards, Settlements, Strikes Lockouts, Lay Offs, Retrenchment and Closure · The Trade Union Act, 1926 · MRTUP & PULP 1971 (only unions politics & recognition provision) · Industrial Employment (Standing Order) Act 1946	CO 2, CO 3	6

4	**Laws Related to Compensation:** · The Payment of wages Act 1936: Maintenance of register and records, penalty for offences like Delayed Payment, non –payment of wages and failure to maintain records. · The Minimum Wages Act 1948 - Minimum rate of wages, Procedure for fixing and revising minimum Wages, Advisory Board, Maintenance of Registers and records. · The Payment of Bonus Act 1965 - Rate of Bonus, Calculation of Amount Payable as Bonus, Eligibility for bonus and its payment, set –on and set off of Allocable surplus. Deductions and Recovery of Bonus.	CO 2, CO 3, CO 4	6
5	**Social Welfare and Security Laws I:** · The Employee Provident Fund & Miscellaneous Provision Act 1952 **-**Basic wages contribution and superannuation. Provident Fund, Pension fund, Employee deposit linked insurance fund. Payment of contribution, Benefit under the scheme, Penal provision. · The Payment of Gratuity Act 1972**:** Scope & Coverage calculation of Gratuity, Gratuity not payable, obligation of the employer, Process of receiving payment.	CO 2, CO 4, CO 5	6

6	**Social Welfare and Security Laws II:** · The Workmen's Compensation Act 1923: Definition – wages, workman, Disablement –partial /Total Employer's liability for compensation, Occupational disease. Quantum of Compensation, Commissioners Power. · Maternity Benefit Act 1961-Coverage, condition & Eligibility. Benefits as per latest amendments. · The Employer State Insurance Act 1948 - scope, coverage, Disablement, ESI Corporation, Contribution & Benefit period, Benefits in Detail, Obligations of employers. · Child Labour (Prohibition & Regulation) Act, 1986 Sexual Harassment at the Workplace (Prevention, Prohibition and Redressal) Act, 2013, Occupational Safety, Health and Working Conditions Act	CO 2, CO 4, CO 5	6

Textbooks:

1. Mamoria, C. B. & Mamoria, S., Dynamics of Industrial Relations in India, 16th Edition, 2019, Himalaya Publishing House
2. Sharma, A. M. Industrial Relations: Conceptual & Legal Framework. Himalaya Publishing House

Reference Books:

1. Sharma, A. M. Industrial Relations: Conceptual & Legal Framework. Himalaya Publishing House

Recommended Pedagogy:

1. Lectures and discussions
2. Case studies
3. Law presentations with Industrial Application Examples

Open Elective 5: Service Management

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Understand the various aspects of service at all customer touch points to enrich the lives of customers.

CO2: Apply the various concepts and frameworks in the course to leverage service as a source of competitive advantage

CO3: Analyze service quality, various metrics, and service design to leverage information flows and enhance customer value

CO4: Evaluate value provided, customer behaviour, gaps in competitor offerings to create new, innovative services

CO5: Devise a comprehensive service plan considering the company and competitive situation to complement marketing strategy

Unit / Module	Content	CO Mapping	Hours Assigned
1	Service management – introduction; Taguchi's Robust Design Methodology and service outcomes; customer service requests and unexpected service variability; robust people/robust process matrix	CO1, CO2	3
2	Customer Relations- core purpose – enrich lives of customers; customer needs v/s desire; map customer touchpoints – pre-purchase, purchase, post-purchase; role of staff in exceeding customer expectations	CO1, CO2	2

3	Service Quality – managing the customer mix; Customer to Customer Interactions (CCI), Customer to Employee Interactions (CEI); Hoffman and Bateson's (2011) Servuction Model – visible and invisible factors influencing service experience, Parasuraman, Zeithaml and Berry's SERVQUAL model	CO1, CO2, CO3	5
4	Service Metrics - Net Promoter Score (NPS), leveraging the power of customer recommendations; Customer Lifetime Value (CLV) – Historic and future lifetime values; Acquisition Customer Lifetime Value, Existing Customer Lifetime Value	CO2, CO3, CO4	2
5	Service Systems design – service as a source of competitive advantage; role of technology in changing nature of service processes; leveraging information flows from service provider to customer and vice versa; role of Augmented Reality, AI in helping customers make specific transactions	CO2, CO3, CO4	3
6	Service Operations – queue management- reduce/eliminate waiting times; using technology to eliminate waiting times, virtual queuing, internet ordering, using AI to enhance waiting	CO2, CO3, CO4	3

	experience; increased brand engagement, subliminal messaging during wait times		
7	Value Co-creation in service process – dimensions of customer benefits – price, speed of delivery, service quality, frictionless services and social media, trade-offs – online security and vulnerability; design service process to meet emotional and psychological customer needs	CO3, CO4	3
8	Customer Behaviour in Service Operations – organization culture and employee behaviour; customer reviews on social media as insights into customer behaviour, instrumental controls to induce desired behaviour – self-service; normative approach – social approval/disapproval, pride/belongingness, shame/rejection, creating customer communities	CO2. CO3, CO4	3

9	Creating New Services – external and internal perspectives on firm capabilities and customer interactions; criteria for creating new services – type of service desired, management of customer expectations; categories of new services – Firm's operational expertise and customer needs matrix; service as a platform for innovation, types of service innovations – changing role of customers, change processes, fill an unsatisfied need, dis- aggregate the value chain, create new business models	CO3, CO4, CO5	3
10	Consolidation of Fragmented Service industries – benefits of size, shared assets reduce costs, high bargaining power with suppliers, national brand presence, cross-selling opportunities; drawbacks – lengthy process, poor service quality; decisions in consolidation – post acquisition integration and cultural issues; hub and spoke v/s spoke models of operations	CO3, CO4, CO5	3

Textbooks:

1. Service Marketing – People, technology, strategy. 8e. Christopher Lovelock, Jochem Wirtz, Jayanta Chatterjee. Pearson Indian Subcontinent Edition
2. Services marketing – Integrating Customer Focus Across the Firm. 7e. Valarie A. Zeithaml, Mary Jo Bitner et al. McGraw Hill

Reference Books:

1. From Designing Service Processes to Unlock Value. 3e. Joy M. Field. Business Expert Press
2. Winning on Purpose- The Unbeatable Strategy of Loving Customers. Fred Reichheld. Bain & Company. Harvard Business review Press. Boston. MA
3. Highly Effective Marketing Analytics. A Practical Guide to Improving Marketing ROI with Analytics. Mu Hu. Business Expert Press

Open Elective 6: Events Management

Credits: 2; Duration: 30 Hours

Course Outcomes

CO1: Understand the structure and scope of the event management industry.

CO2: Apply the concepts learnt to Plan and design events aligned with client or organizational goals.

CO3: Analyze the scheduling, logistics, risk mitigation and budgeting requirements for an event

CO4: Evaluate integrated marketing communication strategies, and event execution including vendors and talent

CO5: Plan an event and evaluate its success suing metrics and concepts learnt in the course

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Event Management & Industry Overview - Scope, History, and Evolution of Event Management; Classifications: Corporate, Social, Cultural, Sports, MICE; Structure of the Event Industry: Organizers, Agencies, Clients, Vendors; Careers in Event Management	CO1	3
2	Event Planning and Conceptualization Event Lifecycle & Process; Setting Objectives and Target Audience Identification; Theme and Content Development; Feasibility Analysis	CO1, CO2	3
3	Budgeting & Financial Management Budget Components: Fixed & Variable Costs; Estimating Revenues and Break-Even Analysis; Cost Control, Contingency Funds, and Financial Reporting; Sponsor Engagement: ROI, Packages, and Negotiation	CO2, CO3	3

4	Event Marketing and Communication Marketing Mix for Events (7Ps); Branding and Positioning of Events; Integrated Marketing Communication Plan; Media Planning: Traditional, Digital & social media.	CO3, CO4	3
5	Venue Selection and Site Management Resource Allocation: Equipment, Catering, Décor; Technical Management: Lighting, AV, Stage Setup; Guest Management and Registration	CO3, CO4	3
6	Vendor & Stakeholder Management Vendor Selection, Contracts, and Deliverables; Coordination with Sponsors, Clients, Artists, Government Bodies; Team Management: Roles, Timelines, and Briefings; Communication Matrix & Escalation Planning	CO3, CO4	3
7	Legal, Ethical & Risk Management Permissions, Licenses, and Regulatory Compliance; Risk Identification and Mitigation Strategies; Insurance Policies and Liability; Ethical Codes: Data Privacy, Cultural Sensitivity	CO4	3
8	Sustainability & Technology in Events Green Events: Sustainable Practices and Certifications; Waste Management, Carbon Footprint, Local Sourcing; Event Technology: AR/VR, AI, RFID, Event Apps; Managing Hybrid and Virtual Events	CO4	3
9	Program Flow, Entertainment & Talent Management- Designing the Run of Show (ROS); Engaging Performers, Speakers, and Artists; Technical Riders, Hospitality, and Coordination; Time Management on Event Day	CO4, CO5	3
10	Post-Event Activities- Evaluation: KPIs, ROO, ROI, Feedback Mechanisms; Post-Event Reporting and Closure	CO4, CO5	3

Textbooks:

1. Event Management and Marketing: Theory, Practical Approaches and Planning by Dr. Anukrati Sharma and Dr. Shruti Arora
2. The Business of Events Management by John Beech, Robert Kaspar, et al.
3. The Art of Building Experiential Events: An Event Designer's Almanac by Dr. Deepak Swaminathan

Reference Books:

1. Events Management by Glenn Bowdin, Johnny Allen, William O'Toole, Rob Harris, Ian McDonnel
2. Successful Event Management: A Practical Handbook by Anton Shone & Bryn Parry
3. The Event Manager's Bible by D.G. Conway

Suggested Cases:

1. Corporate Event – Product Launch (Apple Event)
2. Cultural Event – Jaipur Lit Fest
3. Virtual Event – CES Tech Conference

Open Elective 7: Quality Management

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: Define fundamental concepts, principles, and historical developments in quality management, including key contributions from Deming, Juran, and Crosby.

CO2: Explain various quality management tools, techniques, and methodologies such as Six Sigma, Total Quality Management (TQM), and Statistical Process Control (SPC).

CO3: Demonstrate the implementation of quality control and assurance strategies in real-world scenarios, using tools like Pareto Analysis, Cause-and-Effect Diagrams, and Failure Mode and Effects Analysis (FMEA).

CO4: Examine international quality standards (ISO 9001, ISO 14001) and their impact on organizational performance, compliance, and continuous improvement.

CO5: Assess different business excellence models and continuous improvement strategies like Lean and Kaizen for enhancing operational efficiency.

CO6: Create and implement innovative quality management strategies to enhance organizational performance and sustainability.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Quality Management: Definition of Quality Evolution of Quality Dimensions of Quality Quality Philosophies (Deming, Juran, Crosby, Taguchi, Feigenbaum, Ishikawa) Quality and Competitive Advantage	CO1	3

2	Total Quality Management (TQM): Principles of TQM Continuous Improvement (Kaizen) Customer Focus and Satisfaction Leadership and Strategic Planning in Quality Quality Culture	CO2	3
3	Quality Management Systems (QMS): ISO 9000 Standards & Certification Implementation of QMS Documentation and Auditing Environmental Management Systems (ISO 14000)	CO3, CO4	3
4	Statistical Process Control (SPC): Basics of Statistics in Quality Process Capability Analysis Acceptance Sampling Plans	CO3	3
5	Six Sigma and Lean Manufacturing: Six Sigma Concept and DMAIC Lean Principles & Tools (5S, Kanban, Value Stream Mapping)	CO4, CO5	3
6	Six Sigma and Lean Manufacturing: Integration of Lean and Six Sigma (Lean Six Sigma) Case Studies of Six Sigma Implementation	CO4, CO5	3

7	Quality Improvement Tools and Techniques: Cause-and-Effect Diagram (Ishikawa) Pareto Analysis Failure Mode and Effects Analysis (FMEA) Benchmarking Poka-Yoke (Mistake-Proofing)	CO4, CO5	3
8	Malcolm Baldrige Quality & Reliability and Quality Costs: Malcolm Baldrige National Quality Award (MBNQA) Definition and Importance of Reliability Reliability Measures (MTBF, MTTR, Availability) Quality Cost Categories (Prevention, Appraisal, Internal & External Failure Costs)	CO3	3
9	Emerging Trends in Quality Management: Industry 4.0 and Quality	CO3, CO4	3
10	Emerging Trends in Quality Management: Digital Quality Management AI in Quality Control Sustainable Quality Management	CO3, CO4	3

Textbooks:

1. Bedi, K. (2006). Quality management. Oxford University Press.
2. Besterfield, D. H. (2018). Total quality management (5th ed.). Pearson.
3. Juran, J. M., & Godfrey, A. B. (1999). Juran's quality handbook (5th ed.). McGraw-Hill.
4. Montgomery, D. C. (2020). Introduction to statistical quality control (8th ed.). Wiley.

Reference Books:

1. Mitra, A. (2021). Fundamentals of quality control and improvement (5th ed.). Wiley
2. Gupta, B. C. (2021). Statistical quality control: Using MINITAB, R, JMP and Python (1st ed.). CRC Press

Open Elective Course 8: Predictive Analytics

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1: the basic concepts of predictive analytics, including types of analytics and their applications in business decision-making.

CO2: the use of regression models for prediction and estimation in real-world business scenarios.

CO3: logistic regression and classification techniques to solve business problems, including customer segmentation and event prediction.

CO4: data using forecasting methods to make accurate predictions based on business data.

CO5: the performance of predictive models and assess their relevance to business outcomes.

CO6: actionable insights and predictive models using software tools to address real-world business challenges

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Introduction to Predictive Analytics and Types of Analytics** - Types of analytics: Descriptive, Predictive, and Prescriptive. - Real-life examples of predictive analytics in various industries (finance, marketing, healthcare). - Benefits of using analytics for decision-making.	CO1, CO2	3
2	**Understanding Analytics in Business Decision-Making** - How predictive analytics helps in forecasting future events and behaviours. - Case studies of successful businesses using predictive analytics.	CO1, CO2	3

3	**Regression Analysis: Simple vs. Multiple Linear Regression** - Explanation of Simple Linear Regression: Concept, assumptions, and applications. - Moving to Multiple Linear Regression (MLR): How multiple variables influence the dependent variable. - Model fitting, residuals, and interpretation of coefficients. - Hands-on practice: Fitting a regression model using sample data.	CO2, CO3	3
4	**Applying Multiple Linear Regression to Predict Business Outcomes** - Identifying and handling multicollinearity, outliers, and model diagnostics. - Assumptions of MLR and how to check for violations. - Interpreting model outputs and making data-driven decisions. - Hands-on practice: Solving a real-world problem using MLR.	CO3, CO4	3
5	**Introduction to Logistic Regression and Classification Problems** - Introduction to classification problems and the need for logistic regression. - Difference between continuous and categorical outcomes. - Concept of odds ratio and logit function in logistic regression. - Applications of logistic regression (e.g., customer churn, fraud detection). - Hands-on practice: Building a logistic regression model for classification.	CO3, CO4	3

6	**Using Logistic Regression for Customer Segmentation and Event Prediction** - Using logistic regression for binary classification (e.g., predicting customer churn). - Multinomial logistic regression for multi-class classification. - Building a customer segmentation model based on demographic and behavioral data. - Evaluating model performance using metrics like Accuracy, AUC, Precision, and Recall. - Hands-on practice: Solving a customer prediction problem using logistic regression.	CO4, CO5	3
7	**Decision Trees and Classification Methods** - Introduction to decision trees: Concept, structure, and splitting criteria (e.g., Gini index, entropy). - Building a decision tree for classification. - Pruning and avoiding overfitting in decision trees. - Comparison with other classification methods like SVMs and k-NN. - Hands-on practice: Creating a decision tree model for classifying customers.	CO4, CO5	3
8	**Forecasting Methods and Time Series Analysis** - Introduction to time series data and its components: Trend, Seasonality, Noise. - Forecasting methods: ARIMA, Exponential Smoothing, and Moving Averages. - Evaluation of forecast accuracy: Mean Absolute Error (MAE), Root Mean Squared Error (RMSE). - Case study: Predicting sales or demand for a business using time series methods. - Hands-on practice: Applying ARIMA for sales forecasting.	CO2, CO4	3

9	**Analyzing Structured vs. Unstructured Data, Sentiment Analysis** - Difference between structured and unstructured data (e.g., text, images, social media). - Introduction to sentiment analysis and text mining. - Using natural language processing (NLP) techniques for sentiment analysis. - Hands-on practice: Creating word cloud	CO5, CO6	3
10	**Hands-on Practical Applications and Case Studies in Predictive Analytics** - Review of key concepts learned: Regression, Logistic Regression, Decision Trees, Forecasting. - Real-world business case studies: Predicting customer behaviour, sales forecasting, and market trends. - Group activity: Working on a predictive analytics case study in a team, applying multiple techniques. - Final project work: Developing a predictive model for a business problem using software tools (SPSS, SAS, Excel).	CO3, CO5, CO6	3

Textbooks:

1. Essentials of Business Analytics - Descriptive, Predictive and Prescriptive Analytics, Jeffrey D. Camm, James J. Cochran, Michael J. Fry, Jeffrey W. Ohlmann, David R. Anderson, Cengage Learning, 2nd Edition, 2017
2. Business Analytics, Albright & Winston, Cengage Learning, 5th Edition
3. Data Science for Business: What you need to know about data mining and data-analytic thinking, Provost, F., & Fawcett, T., O`Reilly Media, Inc., 2013.

Reference Books:

1. Applied Simulation Modeling: Andrew F. Seila, V. Ceric and P. Tadikamalia,Cengage Learning, 2004
2. Decision Making under Uncertainty with RISK Optimizer: Wayne Winston,Kelley School of Business, Indian University, Palisade Corporation, 2010.
3. Data Mining for Business Analytics: Concepts, techniques, and applications inR. Shmueli, G., Bruce, P. C., Yahav, I., Patel, N. R., & Lichtendahl Jr, K. C.,John Wiley & Sons., 2017

4. Uncertainty & Risk Analysis - Chris Rodger and Jason Petch, Business Dynamics, PricewaterhouseCoopers United Kingdom firm, 1999.

Open Elective 9: Data Mining and Business Intelligent

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1 Understand the introduction to data mining: introduction, definition of data mining, data mining parameters, how data mining works.

CO2 Identify the data mining techniques, statistical perspective on data mining, statistics-need and algorithms focused on business intelligence

CO3 Analyze the business intelligence essentials.

CO4 Apply the Business Intelligent and Data Mining tools and its application for Business

CO5 Design Data mining and BI Strategy for effective business,

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Introduction to Data Mining**: Introduction, Definition of Data Mining, Data mining parameters, How Data Mining works? Types of relationships, Architecture of Data	**CO1**	**3**
2	**Classification on Data Mining system**, Various risks in Data Mining, Advantages and disadvantages of Data Mining, Ethical issues in Data Mining, Ethical issues	**CO1**	**3**
3	**Data Mining Techniques**: Introduction, Statistical Perspective on Data Mining, Statistics-need and algorithms	**CO1,CO2**	**3**

4	**Business Intelligence an Introduction:** Introduction, Definition, History and Evolution, BI Segments, Difference between Information and Intelligence, Defining Business Intelligence Value Chain, Factors of BI System, Real time Business Intelligence, BI Applications.	**CO1,CO2**	**4**
5	**Business Intelligence Essentials**: Introduction, Creating BI Environment, BI Landscape, Types of BI, BI Platform, Dynamic roles in BI, Roles of Business Intelligence in Modern Business- Challenges of BI.	**CO3**	**4**
6	**Multiplicity of BI Tools**, Types of BI Tools, Modern BI, the Enterprise BI, Information Workers and its applications	**CO4**	**3**
7	**Business Intelligence Life Cycle:** Introduction, Business Intelligence Lifecycle, Enterprise Performance Life Cycle Framework, Life Cycle Phases, Human Factors in BI Implementation, BI Strategy, Business Intelligence Issues and Challenges: Introduction, Critical Challenges for Business Intelligence success. Application of Business Intelligent and Data Mining for Business.	**CO4,CO5**	**5**
8	**Emerging Trends of** Data Mining and Business Intelligent **with case studies**	**CO4,CO5**	**5**

Textbooks:

1. Introduction to Data Mining with Case Studies by G K Gupta.
2. Introduction to Data Mining by Pang-Ning Tan, Michael Steinbach and Vipin Kumar. Pearson Education, 2007

3. Insight into Data Mining Theory and Practice by K. P. Soman, Shyam Diwakar and V. Ajay. Prentice Hall of India, 2006.
4. Introduction to Data Mining with Case Studies by G. K. Gupta. Prentice Hall of India, 2006.
5. Data Mining Methods and Models by Daniel T. Larose. Wiley-Interscience, 2006

Reference Books:

1. E-commerce from Vision to Fulfilment by Elias M. Awad. PHI, 2002.
2. Digital Business and E-Commerce Management by Dave Chaffey, 2014.
3. Introduction to E-Business-Management and Strategy by Colin Combe. ELSVIER, 2006.
4. Digital Business Concepts and Strategy by Eloise Coupey. Pearson.
5. Trend and Challenges in Digital Business Innovation by Vinocenzo Morabito. Springer.
6. Digital Business Discourse by Erika Darics. Palgrave Macmillan, 2015.

Open Elective 10: Block chain Technology for Business

Course Credits: 2; Duration: 30 Hours

Course Outcomes:

CO1 – To understand the fundamental principles, architecture, and working of block chain technology.

CO2 – To analyse the role of block chain in transforming business operations across industries.

CO3 – To explore various block chain platforms, smart contracts, and their applications in business.

CO4 – To assess security, legal, regulatory, and ethical considerations in block chain adoption.

CO5 – To evaluate emerging trends and future opportunities in block chain technology for business innovation.

Unit / Module	Module Name & Subtopics	Course Objectives (COs)	Teaching Hours
1	Introduction to Block chain Technology – Basics, architecture, types, and case studies.	CO1, CO2	5
2	Block chain Applications in Business – Supply chain, finance, identity management, tokenization.	CO2, CO3	5
3	Block chain Platforms and Smart Contracts – Ethereum, Hyperledger, smart contract development, DApps.	CO3, CO4	6
4	Security, Governance, and Compliance in Block chain – Security threats, legal aspects, and governance models.	CO4	4
5	Emerging Trends and Future of Block chain – AI, IoT integration, sustainability, Web3, and Metaverse.	CO5	4

6	Block chain Strategy and Implementation in Business – Business strategy, implementation challenges, evaluation. Emerging Trends with case studies	CO2, CO3, CO4, CO5	6

Textbooks:

1. Sustainable Digital Transformation: Trends, Business Models, and Best Practices | Stefan Henningsson, Magnus Mähring | Springer India
2. Digital Transformation: Survive and Thrive in an Era of Mass Extinction | Thomas M. Siebel | RosettaBooks
3. Digital Transformation: A Model to Master Digital Disruption | Jo Caudron, Dado Van Peteghem | Lannoo Publishers
4. Managing Digital Transformation | Peter Weill, Stephanie L. Woerner | MIT Press (available via Amazon India and other academic platforms)

Reference Books:

1. Green IT: Technologies and Applications | Jyrki Tulokas | Springer India
2. Sustainable Digital Innovation and Transformation | Stefan Gold, Nils Urbach, Maximilian Röglinger | Routledge India
3. Digital Sustainability: Why Digital Transformation is the Key to Sustainable Business Models | Markus Linder | Palgrave Macmillan
4. Ethics of Digital Innovation: AI, Data Privacy, and Responsible Tech | Luciano Floridi | Oxford University Press
5. Innovating with Impact: How Sustainability Drives Digital Transformation | Nikki Greenberg | Wiley India

MMS Semester IV
(Detailed Syllabus)

Semester IV - Mandatory Courses

Semester IV					
Mandatory Subjects					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
1	Mandatory - General Management	International Business	4	40	**UA**
2	Mandatory - General Management	Business Ethics and Corporate Governance	4	40	**IA**
Seminar					
3	Mandatory	Seminar Paper	2	-	**IA**
Research Project					
1	Mandatory	Research Project	8	-	**IA**

***IA – Internal Assessment; UA – University Assessment**

Mandatory Core Course: International Business

Credits: 4; Duration: 60 Hours

Course Outcomes

CO1: Understand key concepts and global contexts driving international business strategies.

CO2: Apply analytical frameworks to evaluate countries, markets, and global value chains.

CO3: Formulate strategic decisions on entry modes, market selection, and subsidiary structuring.

CO4: Assess financial, legal, cultural, and operational challenges in cross-border operations.

CO5: Design comprehensive country entry strategies considering institutional, cultural, and competitive factors.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Global Business Landscape: Understanding globalization, political-economic dynamics, Thucydides' Trap, and the Clash of Civilizations and their implications for firms.	CO1	5
2	Theories of International Trade: Mercantilism, Absolute and Comparative Advantage, Heckscher-Ohlin, and Product Lifecycle Theory.	CO1	5
3	Drivers and Process of Internationalization: Strategic intent, global pressures, and common pitfalls.	CO1, CO2	4
4	Country Analysis Frameworks: PESTEL, CAGE, and Economic Complexity Atlas; Quantitative and qualitative methods to assess market attractiveness.	CO2	6

5	Market Entry Strategy Design: Ghemawat's AAA framework; designing entry strategies based on institutional and cultural differences.	CO2, CO5	7
6	Modes of Entry: Exporting, Licensing, Franchising, Joint Ventures, Strategic Alliances, and M&As – strategic fit, risk, and control.	CO3, CO5	5
7	Subsidiary Management and MNE Structures: Types, autonomy, performance evaluation, and mandate assignment in MNE networks.	CO3	4
8	Competitive Advantage of Nations: Porter's Diamond, industry clusters, and implications for firm location and innovation.	CO3	4
9	Bottom-of-the-Pyramid Markets: Institutional voids, product/service innovation for emerging markets, and alternate operating models.	CO3, CO4	4
10	Cross-Cultural Management and HRM: Hofstede dimensions, Meyer's cultural map, expatriate management, and the EPRG framework.	CO4	5
11	International Trade Mechanics: INCO terms, trade documentation, letters of credit, and global logistics.	CO4	3
12	Global Finance and Risk Management: Currency structures, capital sourcing, fund transfer, multilateral netting, and exposure management.	CO4	4

13	Regulatory Institutions and Trade Agreements: WTO, FTAs, MFN principles, and impact on national policy and corporate decisions.	CO4	4
1	Global Business Landscape: Understanding globalization, political-economic dynamics, Thucydides' Trap, and the Clash of Civilizations and their implications for firms.	CO1	5

It is recommended that the course be instructed through cases.

Textbooks:

1. International Business Strategy, Management, and the New Realities – S. Tamer Cavusgil, Gary Knight, John Riesenberger. Pearson
2. Transnational Management Text, Cases, and Readings in Cross- Border Management. Christopher Bartlett, Sumantra Ghoshal, Paul Beamish. McGraw Hill International Edition.
3. International Management. Arvind V. Phatak, Rabi S. Bhagat, Roger. J. Kashlak. Tata McGraw Hill.

Reference Books:

1. The Future of the Multinational Company. Julian Birkinshaw, Sumantra Ghoshal, Constantinos Markides, John Stopford, George Yip (Eds) John Wiley & sons
2. Multinational Management. A Strategic Approach. John Cullen. South Western Thomson Learning.
3. Global Business Strategy. Cornelis A. de Kluyver and John Pearce II. Business Expert Press

Mandatory Core Course: Corporate Governance and Ethics

Credits: 4; Duration : 60 Hours

Course Outcomes

CO1: Understand the role of the Board of Directors in issues of Governance

CO2: Apply the frameworks of Governance and ethics to business issues

CO3: Analyze business decisions through the prisms of best governance practices and ethical issues

CO4: Evaluate decisions from governance and ethical perspectives to arrive at a decision

CO5: Formulate a business plan considering best ethical practices

Unit / Module	Content	CO Mapping	Hours Assigned
1	Corporate Governance – Definition; OECD principles of corporate governance; need for corporate governance systems as checks to balance agency issues. Corporate Governance - Evolution in India, SEBI LODR regulations(Listing Obligations and Disclosure Requirements), Companies Act provisions, role of governance in preventing agency problems.	CO1	4
2	Structure and Role of the Board in India: Independent directors, diversity, nomination and remuneration committees. Role of Board of Directors in guiding and implementing corporate governance systems; dual mandate – monitor and advise; fiduciary duties – Duty of care – decisions based on all information to be made in good faith; consult experts and advisers when needed; personal liabilities –	CO1	6

	indemnification agreements to cover independent directors, D&O insurance, DEI and ESG norms. Duty of Loyalty – act without self-interest, business judgment rule; independent course of action		
3	Role of Boards: selection of CEO and Senior Management team; approve their compensation; provide incentives to achieve operating and financial goals of the company; create development plans to ensure continuity of Top management; hiring internally or externally;	CO1, CO2	6
4	Board approval for statement of purpose, specifying financial and non-financial goals of business; determine the lines of business and kinds of transactions activity; approve strategy proposed by CEO and Top Management; evaluate the strategy, discuss merits, risks and opportunities, approve/ modify plans and budgets; check reliability of expert reports prepared by investment bankers and third party experts; monitor implementation	CO1, CO2, CO3	5
5	Board's role in financial strategy, capital structure, risk governance including cybersecurity, AI, climate risk. Role of the Board in M&A, contracts representing significant risks; set levels for which matters come to the board and delegate appropriate amount approvals to the CEO; evaluate M&A and satisfy itself that it is in the interest of all shareholders; protect interests of non-controlling shareholders from involuntary transfer of control, Oversee operating and financial performance; evaluate reporting systems	CO1, CO2, CO3	6

6	Board Oversight of Financial Reporting and Controls – evaluate revenues and expenses by segments and products; monitor adequate capitalization of the company for future plans, risks and opportunities; approval for raising additional equity, taking additional debt, ensuring sufficient working capital for business cycles, approving the company's capital structure, and use of capital for investments, M&A, payments of dividends, etc.	CO3, CO4	6
7	Board Oversight of Risk Management – evaluate company systems and processes to monitor different types of risk – launching new products, market entry, M&A of other business, monitor risks of cybersecurity, geopolitical and supply chain risks, oversee risk management systems	CO3, CO4	6
8	Surveying Officers, Directors and key employees to identify company's most significant risks, bring general business knowledge and experience to identify and decide on how to address emerging risks like AI, climate change etc.	CO3, CO4	4
9	Board Committees – fulfilment of oversight responsibilities, Standing Committees on Audit, Compensation, Governance , role of independent Directors; Specialized committees on ESG, Risk etc; Reporting of committees to the full Board for adopting their recommendations after due deliberations	CO3, CO4	4
10	Business ethics – ethical dimensions of top management decisions, alignment with ethical role models, corporate values	CO3, CO4	3
11	Tensions between results and processes, structural and institutional dimensions of business ethics, role of senior management	CO3, CO4	2

	in overseeing and correcting norms and behaviours such as compliance, ethics		
12	Rewards and sanctions – apply fairly, foster culture of integrity and accountability, design incentive structures to align precisely with organization purpose and objectives, incentives and intrinsic motivation	CO3, CO4	3
13	Role of culture in attracting and retaining right individuals, theories of business ethics – moral principles and norms; human good at state; education of character for a good life; moral dilemma and business ethics; social responsibility of managers-shareholders v/s stakeholders, psychological level of ethics – actions, habits, character, role models	CO3, CO4, CO5	5

Alternate

Course Outcomes

CO1: Demonstrate an understanding of corporate governance principles, board roles, and regulatory frameworks in the Indian context.

CO2: Apply governance and ethical frameworks to business practices in compliance with Indian corporate laws and SEBI regulations.

CO3: Analyze governance, CSR, and ESG practices of Indian companies using real-world disclosures and case examples.

CO4: Evaluate corporate decisions and leadership approaches through ethical and governance perspectives for accountability and sustainability.

CO5: Design strategic initiatives for CSR and ESG integration in alignment with Indian statutory requirements and stakeholder expectations.

Unit / Module	Content	CO Mapping	Hours Assigned

1	Introduction to Corporate Governance: Concept, evolution, and global principles (including OECD principles of corporate governance) with emphasis on SEBI LODR and Companies Act 2013 provisions applicable in India.	CO1	6
2	Board Structures and Responsibilities in India: Roles of independent directors, board diversity, D&O insurance, DEI initiatives, and the Nomination & Remuneration Committee.	CO1	6
3	Strategic Role of Boards: Oversight on business strategy, M&A, capital allocation, financial approvals, and safeguarding interests of minority shareholders.	CO1, CO2	6
4	Risk and Financial Oversight: Board role in financial policies, capital structure, emerging risk evaluation (climate, AI, cyber) and governance mechanisms.	CO2, CO3	6
5	Board Committees in Indian Corporates: Composition and functioning of statutory committees like Audit, CSR, ESG, Risk Management, and their reporting structures.	CO2, CO3	4
6	Corporate Social Responsibility (CSR): Section 135 mandates, Schedule VII, CSR strategies, impact assessments, and best practices from Indian corporates.	CO3, CO5	6
7	Environmental, Social, and Governance (ESG): ESG metrics, SEBI's BRSR framework, ESG risks and compliance in Indian listed companies.	CO3, CO5	6
8	Ethical Leadership and Culture: Role of top management in fostering ethics, aligning business values, building a culture of trust and integrity.	CO3, CO4	4

9	Managing Ethical Dilemmas: Frameworks to resolve conflicts between goals and processes, legal obligations vs ethical conscience in Indian corporations.	CO4	4
10	Stakeholder Governance: From shareholder primacy to stakeholder responsibility; ethical aspects and CSR-ESG alignment in Indian business context.	CO4, CO5	4
11	Incentives, Accountability, and Governance: Designing responsible incentive structures, promoting transparency, and aligning individual goals with ethical outcomes.	CO4, CO5	4
12	Case Discussion and Presentations	CO5	4

Textbooks:

1. A Primer on Corporate Governance. Cornelis A. de Kluyver. Business Expert Press
2. Ethics Without the Sermons. Laura L Nash. Harvard Business Review.
3. A Strategic and Tactical Approach to Global Business Ethics, 2e. Lawrence A. Beer, Business Expert Press
4. Entrepreneur's Handbook: Independent Directors, Corporate Governance, and Leadership. 3 Vols. Institute of Directors

Mandatory Core Course: Seminar Paper

CO1: Demonstrate the ability to identify and define a relevant research problem within a selected functional area (Finance, Marketing, HR, Operations, or Systems).

CO2: Apply appropriate research methodology, including the design of tools for collecting primary and secondary data, in line with academic standards.

CO3: Analyze and interpret data using relevant analytical techniques to derive meaningful insights.

CO4: Critically evaluate existing literature and integrate theoretical and conceptual frameworks to support the research study.

CO5: Create and communicate research findings effectively through a structured report and oral presentation, demonstrating academic writing, critical thinking, and presentation skills.

Guidelines:

- The Seminar work should be undertaken in the selected functional area (Finance / Marketing / Human Resource / Operations / Systems)
- The topic selected and research work conducted for the Seminar Paper should incorporate both primary and secondary data components.
- The Seminar work completed by students should be submitted as a written Seminar report of minimum 6000 words, Times New Roman, Text Font:12, Title Font: 14, Line Spacing: 1.5
- Structure of the report to include following components:
  - Introduction
  - Literature review
  - Theoretical / conceptual framework of Research and Research Methodology
  - Data analysis and interpretation
  - Result discussions, findings, managerial implications and recommendations.
- The evaluation of the report to be based on following parameters: (a) 50% of the marks based on evaluation by internal guide and (b) remaining 50% of marks based on presentation and viva-voce by external pane.

Semester IV - Finance

Semester IV - Finance Specialization Outline

Elective Courses - Finance Specialization (Any 2)					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
1	Elective	Financial Market Regulations	4	40	**IA**
2	Elective	Behavioural Finance	4	40	**IA**
3	Elective	Investment Banking and Alternate Investment Funds	4	40	**IA**
4	Elective	Fixed Income Securities	4	40	**IA**
5	Elective	Wealth Management	4	40	**IA**

***IA – Internal Assessment; UA – University Assessment**

Elective Course 1: Financial Market Regulations

Credits: 4; Total Hours: 60

Course Outcomes:

CO1: Describe the structure, evolution, and role of financial regulations in India in the context of global financial developments

CO2: Analyze the regulatory powers and responsibilities of Indian financial institutions including RBI, SEBI, IRDA, and CCI

CO3: Interpret SEBI regulations and assess their implications on capital markets, mutual funds, and investor protection

CO4: Evaluate the effectiveness of legal frameworks concerning foreign exchange, money laundering, and international funds.

CO5: Assess and critique regulatory frameworks governing credit rating agencies and foreign investments under Indian law.

Unit/ Module	Content	CO Mapping	Hours Assigned
1.	Introduction to Financial Regulations Need and significance of Indian financial system regulations structure of financial regulations in India global financial crisis – response of the Indian regulations.	CO1	6 Hours
2.	Reserve Bank of India (RBI) Functions of RBI, credit control measures, qualitative credit control and quantitative credit control, regulatory measures taken by RBI to facilitate financial inclusion. Securities and Exchange Board of India (SEBI): Introduction to SEBI Act (1992) – powers and functions of SEBI.	CO2	10 Hours
3.	Introduction to important SEBI Regulations pertaining to Capital Market: Issue of Capital and Disclosure Regulations (2009). SEBI (Prohibition of Insider Trading) Regulations – 2015.	CO3	10 Hours

	SEBI (Prohibition of Fraudulent and Unfair Trade Practices Related to Securities Market) Regulations – 2003. SEBI Substantial Acquisition and Takeover Regulations – (2011). Mutual Fund: SEBI (Mutual Funds) Regulations – 1996.		
4.	Insurance Regulatory and Development Authority (IRDA) IRDA Act: Salient features of the IRDA Act, 1999, IRDA (protection of policy holder interests) Regulations 2002, its duties, power and functions of authority. Competition Commission of India Concept of competition , development of Competition Law, Competition Policy - Competition Act, 2002 - Anti Competitive Agreements, abuse of dominant position, combination, regulation of combinations, competition commission of India, appearance before commission and Appellate Tribunal, compliance of Competition Law.	CO2	8 Hours
5.	Foreign Exchange Management and Regulations Objectives and definitions under FEMA, 1999,current account transactions and capital account transactions, establishment of branch, office etc. in India, realization and repatriation of foreign exchange, authorized person, penalties and enforcement, foreign contribution (Regulation)Act, 2010.	CO4	8 Hours
6.	Prevention of Money Laundering Genesis Prevention of Money Laundering Act, 2002, concept and definitions, various transactions, etc., obligations of banks and financial institution, KYC.	CO4	6 Hours
7.	Regulatory framework for International Funds: Regulations framework for rising fund through: Global Depository Receipts (GDRs) and American Depository Receipts (ADRs), External Commercial Borrowings. Foreign Direct Investment Regulations:	CO4	6 Hours

	Foreign Direct Investment (FDI) Policy. SEBI (Foreign Portfolio Investors) Regulations -2014, SEBI (Alternate Investment Fund) Regulations – 2012.		
8.	Regulatory framework related to Credit Rating Agencies: SEBI (Credit Rating Agencies Regulations) – 1999.	CO5	6 Hours

Textbooks:

1. Financial Institutions and Markets, L.M. Bhole & Jitendra Mahakud, McGraw Hill Education
2. Indian Financial System, Bharati V. Pathak, Pearson Education

Reference Books

1. Financial Market Operations, S. Gurusamy, Tata McGraw Hill
2. Law and Practice of Banking, G.S. Gill, Macmillan India
3. The Indian Financial System: Markets, Institutions and Services, E. Gordon & K. Natarajan, Himalaya Publishing House

Elective Course 2: Behavioural Finance

Credits: 4; Duration: 60 hours

Course Outcomes:

CO1 (Remember): Recall key psychological principles and biases influencing financial decisions.

CO2 (Understand): Explain common psychological obstacles that hinder rational financial decision-making.

CO3 (Analyze): Analyze risks and outcomes associated with biased decision-making in financial contexts.

CO4 (Apply): Apply behavioral finance theories, including Expected Utility Theory, to real-world financial scenarios

CO5 (Evaluate & Create): Evaluate the Efficient Market Hypothesis and construct reasoned arguments using behavioral case studies.

Unit/ Module	Content	CO Mapping	Hours Assigned
1	**Introduction** Introduction to Behavioral finance – Nature, scope, objectives and application; Investment Decision Cycle: Judgment under Uncertainty :Cognitive information perception - Peculiarities (biases) of quantitative and numerical information perception - Representativeness – Anchoring - Exponential discounting - Hyperbolic discounting	CO1,CO2,CO3	10
2	**Utility/ Preference Functions** Expected Utility Theory [EUT] and Rational Thought: Decision making under risk and uncertainty - Expected utility as a basis for decision-making – Theories based on Expected Utility Concept - Investor rationality and market efficiency.	CO2,CO3, CO4	12
3	**Behavioral Factors and Financial Markets** The Efficient Markets Hypothesis- Fundamental Information and Financial Markets-Behavioral factors and Corporate Decisions on Capital Structure and Dividend Policy - Capital Structure dependence on Market Timing -. Systematic approach to using behavioral factors in corporate decision making. External Factors and Investor	CO3, CO4, CO5	16

	Behavior: Mechanisms of the External Factor influence on risk perception and attitudes - Connection to human psychophysiology and emotional regulation Active portfolio management – the source of the systematic underperformance.		
4	**Behavioral Corporate Finance & Neuro Finance** Behavioral factors and Corporate Decisions on Capital Structure and Dividend Policy - Capital Structure dependence on Market Timing -. Systematic approach to using behavioral factors in corporate decision making. External Factors and Investor Behavior: Mechanisms of the External Factor influence on risk perception and attitudes - Connection to human psychophysiology and emotional regulation Active portfolio management – the source of the systematic underperformance. Overview of Neuro-scientific Methods in studying financial decision making	CO3, CO4, CO5	16
5	**Discussion and Analysis of Cases Studies on** Behavioral finance in Markets - Examples "Manias, Panics and Crashes", by Charles Kindleberger; "The Great Crash 1929", by John Galbraith; "When Genius Failed" & "Origins of the Crash", by Roger Lowenstein; "The Big Short", by Michael Lewis; "Too Big To Fail", by Andrew Ross Sorkin	CO4, CO5	6

Textbooks

1. Chandra, P. (2020), Behavioural Finance, Tata Mc Graw Hill Education, Chennai (India).7th Edition
2. Ketan Vira (2024), Behavioural Finance, AG Publishing House (AGPH Books), India

Reference Suggested:

1. Shleifer, Andrei (2000). Inefficient Markets: An Introduction to Behavioral Finance. Oxford, UK: Oxford University Press
2. Kahneman, D. and Tversky, A. (2000). Choices, values and frames. New York : Cambridge Univ. Press
3. Forbes, William (2009), Behavioural Finance, Wiley.

4. Ackert, Lucy, Richard Deaves (2010), Behavioural Finance; Psychology, Decision Making and Markets, Cengage Learning
5. Thaler, R. (1993). Advances in Behavioral Finance. Vol. I. New York, Russell Sage Foundation.

Elective Course 3: Investment Banking and Alternate Investment Funds

Credits: 4; Duration: 60 hours

Course Outcomes:

CO1 (Understand): Explain the fundamentals of Investment Banking and Alternative Investment Funds (AIFs), including their roles and structures.

CO2 (Remember & Understand): Describe and outline the processes of capital raising, issue management, and due diligence in financial transactions.

CO3 (Evaluate): Critically assess various services in project finance and structured finance to evaluate feasibility and structure of funding models.

CO4 (Analyze): Analyze the characteristics and management strategies of alternative investment products and their use in investment portfolios.

CO5 (Apply & Evaluate): Apply AIF models in assessing risk scenarios and Evaluate overall AIF formats and structures

Unit/ Module	Content	CO Mapping	Hours Assigned
1	**Introduction to Financial System-**An Overview of Indian Financial System, Investment Banking in India, Recent Developments and Challenges ahead, Institutional structure and Functions of Investment / Merchant Banking; SEBI guidelines for Merchant Bankers, Registration, obligations and responsibilities of Lead Managers, Regulations regarding Continuance of association of lead manager with an issue	CO1	6
2	**Introduction to Investment Banking-** Introduction to investment banking and corporate finance careers, What is an investment bank?, What is the structure of an investment bank?,What do investment banks do?, What are the types of groups within the investment banking division?,What is the hierarchy within the investment bank?,What kind of work do investment bankers do?,Overview of private equity, venture capital and hedge funds	CO1	6
3	**Types of Investment Banking-** Corporate Finance- Raising Capital Equity Capital market as well as Debt Capital market	CO1	4

4	**Issue Management-** Public Issue: classification of companies, eligibility, issue pricing, minimum public offer, prospectus, allotment, preferential allotment, private placement, Book Building process, designing and pricing, Green Shoe Option; Right document, Bought out Deals, Post issue work & obligations, Investor protection, Broker, sub broker and underwriters.	CO2	6
5	**Due Diligence**: Concept, Need and steps in due diligence especially in Mergers and Acquisitions	CO2	4
6	**Project Finance**- Infrastructure projects, Large-Scale Industrial Developments, Energy and Renewable Energy Projects and Complex Long-Term Financing Arrangements	CO3	6
7	**Structured Finance-** Create Financial Instruments-Collateralized Debt Obligations (CDOs), Asset-Backed Securities (ABS), Credit Default Swaps (CDS). Develop Innovative Financing Solutions-Structured Leasing, Project-Linked Bonds, Hybrid Instruments Manage Risk Through Financial Engineering-Credit Enhancement, Interest Rate Hedging, Liquidity Management. Designing Securitization Strategies-Asset Pooling, Tranching, Issuance of Securities	CO3	8
8	**Overview of Alternative Investments:** Introduction, Different Avenues, Alternative Investments – Antecedents and Growth, Alternative Assets, Role of Alternative Investments in Portfolio Management	CO4	3
9	**Growth of Alternative Investment Funds in India and Suitability of Category III AIFs:** **Evolution and growth of Category III** Alternative Investment Funds in India and their types, Different categories of AIFs as per SEBI (AIF) Regulations, 2012 • Suitability of Category III AIF products to different class of investors • Current market status of Category III AIFs in India	CO4	3
10	**Introduction to Category III AIF Ecosystem:** Investments and characteristics of funds under Category III AIFs • Category III AIF ecosystem) • Various Concepts of Category III AIF& Comparison of Category III AIF with PMS and Mutual Funds Role of Category III AIF in portfolio diversification • Use of Category III AIF as a risk management tool (Alpha/ Beta management)	CO5	5

11	**Category III AIF: Fund Structures and Service Providers** Fund structures of Category III AIFs Roles of various service providers in Category III AIF industry Documentations done for Category III AIFs at On-shore and Off-shore Levels Various Investment Strategies (Equity market strategies, Convertible arbitrage strategy, Event-driven strategies)	CO5	5
12	**Presentations and Assignments**	CO5	4

Textbooks

1. Investment Banking- Concept, Analysis and Cases by Pratap Giri, 4th Edition, McGraw Hill; Forth edition (29 October 2021), New Delhi
2. Workbook for NISM-Series-XIX-B: Alternative Investment Funds (Category III) Distributors Certification Examination- Taxmann Publication

Reference Books

1. INVESTMENT BANKING: VALUATION, LBOS, M&A, AND IPOS by by Joshua Rosenbaum and Joshua Pearl, John Wiley & Sons Inc; Updated edition (23 February 2022)
2. NISM's Alternative Investment Funds (Category I and II) Distributors, by NISM (An Educational Initiative of SEBI), 3 November 2022

Elective Course 4: Fixed Income Securities

Course Credits: 4; Duration: 60 Hours

Course Outcomes:

1. CO1: Students will be able to **discuss** the various products and operations in bond and money markets and **explain** the recent developments in the money and bond markets.
2. CO2: Students will be able to **calculate** the various parameters of bond markets accurately using the established approaches and framework and **solve** problems in various areas of bond and money market
3. CO3: Students will be able to critically **apply** various tools and techniques for effective risk management in bond markets and will **formulate** key strategies using various frameworks of bond portfolio management in well-defined contexts.
4. CO4: Students will be able to **determine** the various risks inherent to bond and money market and **decide** the various instruments of financial derivatives available for managing such risk.
5. CO5: Students will be able to **Defend** the learnings about the structure of debt market, role of regulators, government, Banks, Global bond market and other stake holders in crisis and failures of debt market during case study discussions and presentation

Unit / Module	**Content**	**CO Mapping**	**Hours Assigned**
1	OVERVIEW OF THE INDIAN DEBT MARKET • Role of the Debt Market • Importance of Debt Markets • The Bond Market Ecosystem • Role of Regulators • Role of Monetary Policy in Debt Markets • Evolution of Debt Markets • Market Dynamics	CO1	3
2	TYPES OF FIXED INCOME SECURITIES • Classification of fixed income securities based on the Type of Issuer • Classification of fixed income securities based on Maturity • Classification of fixed income securities based on Coupon • Classification of fixed income securities based on Currencies • Classification of fixed income securities based on Embedded Options	CO1	3

	• Classification of fixed income securities based on Security • Other fixed income securities in India		
3	PRICING OF BONDS • Concept of "Par Value" • Time Value of Money • Determining Cash Flow, Yield and Price of Bonds • Pricing of Different Bonds • Price-Yield Relationship • Price Time Path of a Bond • Pricing of a Floating Rate Bond	CO2	3
4	YIELD MEASURES AND TOTAL RETURN • Understand the Sources of Return • Traditional Yield Measures	CO2	3
5	RISKS ASSOCIATED WITH INVESTING IN FIXED INCOME SECURITIES • Risks associated with fixed income securities • Risk Mitigation Tools	CO1, CO3	3
6	MEASURING INTEREST RATE RISK • Price Volatility Characteristics of Option Free Bonds and Bonds with Embedded Options • Understand the Concept of Duration • Difference between Modified Duration and Effective Duration • Price Value of Basis Point (PV01) • Convexity Measure • Modified Convexity and Effective Convexity • Taylor's Expansion and Its Application in Approximating Bond Price Changes	CO3	6
7	TERM STRUCTURE OF INTEREST RATES • Yield Curve and Term Structure • Relationship between Spot and Forward Rates • Determinants of the Shape of the Term Structure	CO3	3
8	INDIAN MONEY MARKET • Introduction to Money Market • Types of Instruments in Money Market • Trends in the Indian Money Market • Importance of the Call Money Market • Important Rates in the Indian Interbank Call Market -MIBOR/LIBOR	CO1, CO2	3

9	GOVERNMENT DEBT MARKET • Introduction to Government Debt Market • Types of Instruments in Government Debt Market • Trends in the Indian G-Sec Market • The Issuance Mechanism • Secondary Market Infrastructure for G-Secs in India • Clearing and Settlement of Secondary Market Trades • G-sec Valuation in India • Key Regulatory Guidelines for the Indian G-Sec Market • I.10-year Benchmark bond Yield India	CO1, CO2,	3
10	CORPORATE DEBT MARKET • The Indian Corporate Debt Market • Types of Instruments in Corporate Debt Market • Trends in Indian Corporate Debt Market • Issuance Mechanism • Secondary Market Mechanism • Key Regulatory Guidelines for Corporate Debt Market • Corporate Bond Valuation • Indian Govt Bond market index inclusion at Global Level 9 (J.P. Morgan)	CO1, CO2	3
11	BOND PORTFOLIO MANAGEMENT: Passive strategies: (Buy & Hold, Indexing) Immunisation (Quasi Active) Other Active Strategies.	CO3, CO2	3
12	ROLE OF REGULATORY AND RATING AGENCIES: Credit rating process, CIBIL Score, CRISIL, CARE, ICRA etc.	CO1, CO2	3
13	Case study related to bond markets like Subprime crisis/ Case study of Signature bank/ silicon Valley bank -sale of treasury bond portfolio in 2023 (Credit default Swap)	CO4, CO5	3
14	BOND MARKET FUTURES: Forward rate agreement concept, mechanics and uses Interest rate futures and its prices INTEREST RATE SWAPS: Definition features and its uses, design and valuations of interest rate swaps.	CO5	3
15	INTEREST RATE SWAPS:	CO5	3

	Definition features and its uses, design and valuations of interest rate swaps.		
16	Presentation	CO4, CO5	6

Textbooks:

1. Sunil Parameswaran, Sankarshan Basu, Fixed Income Securities: Wiley
2. NISM-Series-XXII: Fixed Income Securities, e-book, NISM Website
3. Gupta S L, Financial Derivatives: Theory, Concepts and Problems, Prentice Hall of India, New Delhi.
4. M. Kannadhasan: Fixed Income Securities: Valuation and Risk Management, Cengage
5. Sundaresan, Suresh: Fixed Income Markets and Their Derivatives
6. Fabozzi, Frankj, Mann, Steven V., The Handbook of Fixed Income Securities: New York, McGraw-Hill Companies

Reference Books:

1. Frank J Fabozzi, Fixed Income Securities, Wiley
2. John C Hull: Options, Futures and Other Derivatives, Prentice Hall of India
3. Redhead: Financial Derivatives: An Introduction to Futures, Forwards, Options, Prentice Hall of India

Elective Course 5: Wealth Management

Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1: Remembering – Define key concepts and principles of Wealth Management. (Level 1)

CO2: Understanding – Explain the role of different asset classes in Portfolio Management and their Risk return characteristics. (Level 2)

CO3: Applying – financial planning principles for individual and institutional wealth. (Level 3)

CO4: Analyzing – investment portfolios and asset allocation strategies. (Level 4)

CO5: Evaluating – Assess risk management techniques in wealth planning. (Level 5)

CO6: Design – comprehensive wealth management plans incorporating tax and estate planning. (Level 6)

Unit/ Module	Content	CO Mapping	Hours Assigned
1	**Introduction to Wealth Management**: Definition, Importance, Scope and Process of Wealth Management, Evolution of Wealth Management Industry, Role of a Wealth Manager, Investment Advisor – Functions, Code of Ethics of Wealth Manager, Different Client Segments & Needs	CO1, CO2	6
2	**Financial Markets & Instruments:** Overview of Equity, Debt and Alternative Investments, Market Trends & Economic Indicators, Role of Mutual Funds, ETFs, and REITs, Financial Derivatives and Structured Products, Global Investment strategies, Time Value of Money for investment.	CO1, CO2, CO3	6
3	**Portfolio Management Theories:** Portfolio Modelling and Rebalancing Strategies, Portfolio Performance Measurement, Modern Portfolio Theory (MPT), Capital Asset Pricing Model	CO3, CO4	4

	(CAPM), Asset Allocation & Diversification Strategies, Smart Beta Strategies & Factor Investing		
4	**Risk Management in Wealth Planning:** Risk Meaning, Types and Categories of Risk, Risk Profiling & Risk-Return Trade-off, Behavioral Aspects of Risk Management, Hedging Techniques & Stress Testing, Portfolio Risk Management	CO3, CO4 CO5	6
5	**Investment Planning & Strategies:** Active vs. Passive Investing, Fundamental & Technical Analysis, Alternative Investments: Private Equity, Hedge Funds, Commodities, Quantitative Investment Strategies, Concept of Benchmarking, Fee Structures and costs involved in investing	CO2 CO3, CO4 CO5	6
6	**Taxation & Wealth Preservation Strategies:** Taxation of Various Investment Vehicles and Products, Estate Planning & Succession Planning, Tax-efficient Investment Strategies, Global Taxation Aspects & Cross-border Wealth Management	CO4 CO5 CO6	5
7	**Retirement & Estate Planning:** Succession Laws, Wealth Transfer Strategies, Types of Retirement Plan, Pension fund and retirement fund, Trusts, Wills, and Power of Attorney, Intergenerational Wealth Transfer, Financial Planning for Different Life Stages, Wealth Creation Factors and Principle Pre and Post Retirement Strategies	CO4 CO5 CO6	6
8	**Behavioral Finance & Wealth Psychology:** Behavioural Finance – Meaning and relevance in Investment Decision, Psychological Biases in Investment Decisions, Emotional Aspects of Wealth Management, Strategies to Overcome Behavioral Biases, Investor Profiling & Decision-Making Patterns	CO3, CO4, CO6	4
9	**Financial Planning & Advisory Process:**	CO3,	3

	Client and Risk Profiling, Goal Setting and Budgeting, Steps in Financial Planning, Financial Advisory Business Models	CO4, CO5	
10	**Alternative Investments & ESG Investing:** Investment Products and Alternative – Meaning, Types, Evaluation Criteria of Investment Alternative, ESG (Environmental, Social, and Governance) Investments, Sustainable and Impact Investing, Green Investment Startegies, Private Market Investments & Real Assets	CO1, CO2, CO3, CO4	6
11	**Regulatory & Compliance Framework:** Role of SEBI, RBI and other statutory Bodies, Anti-Money Laundering (AML) and KYC Norms, Ethical & Legal Considerations in Wealth Management, Global Compliance & Fiduciary Responsibilities	CO3, CO4, CO5	4
12	**Role of Technology in Wealth Management:** Financial Modelling & Decision-making Frameworks, Fin-Tech – Innovation and their Impact, ROBO Advisor, Artificial Intelligence and Machine Learning in Digital Asset, Block Chain and Crypto Currencies	CO4, CO5 CO6	4

Textbooks:

1. Kapoor, J. R., Dlabay, L. R., & Hughes, R. J. – Personal Finance (McGraw Hill)
2. Hallman, G. V., & Rosenbloom, J. S. – Personal Financial Planning (McGraw Hill)
3. Hiriyappa, B. – Wealth Management (New Age International)
4. Suyash Bhatt – Wealth Management – Excel Books
5. S.K.Bagchi, Wealth Management- Jaico Publishing House

Reference Books:

1. Prasanna Chandra – Investment Analysis and Portfolio Management (McGraw Hill)
2. Kevin, S. – Security Analysis and Portfolio Management (PHI)
3. Bodie, Kane, & Marcus – Investments (McGraw Hill)

Semester IV - Human Resource

Semester IV - Human Resource Specialization Outline

Elective Courses - HR Specialization (Any 2)					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
1	Elective	Human Resource Capital, Accounting and Audit	4	40	**IA**
2	Elective	Industrial Relations and Alternate Dispute Resolution	4	40	**IA**
3	Elective	OD and Change Management	4	40	**IA**
4	Elective	Strategic Human Resource Management	4	40	**IA**

***IA – Internal Assessment; UA – University Assessment**

Elective Course 1: Human Resource Capital, Accounting and Audit

Credits: 4; Duration 60 Hours

Course Outcomes:

Upon successful completion of this course, students should be able:

CO 1: To **understand** HR Accounting & Audit and its importance. (Level 2)

CO 2: To a**nalyse** the HR Accounting and Auditing methods. (Level 4)

CO 3: To **apply** HR Accounting methods. (Level 3)

CO 4: To **evaluate** the effectiveness of HR Accounting and Audit practices in organisations. (Level 5)

CO 5: To **create** Human Accounting Systems in organisations. (Level 6)

Unit/ Module	Content	CO Mapping	Hours Assigned
1	**Introduction to HR Capital and HR Accounting:** · HR Accounting and HR as an Asset · Definition of Human Resource Accounting · HRA – concepts, methods and applications · Human Resource Accounting vs. Other Accounting · Employee and Labour Costing	CO 1	6
2	**HR Audit** · Objectives, Concepts, Components, Need, Benefits, Importance · Methodology and instruments of HR Audit · HR Audit Process and Issues in HR Audit · Role of HR Audit in business environment	CO 1	6

3	**Human Resource Costs / Investments** · Human Resource Costs – the Monetary Value Approach, Non-Monetary value Based Approaches · Investment in employees -HRD	CO1, CO2	6
4	**Return on Investments** · HR Budget · Development of HR · ROI through High Performance Employees · Measurement of Group Value – The Likert and Bowers Model, Herman son's Unpurchased Goodwill Model	CO2, CO3	6
5	**Human Resource Accounting System** · Developing Human Resource Accounting System · Implementation of Human resource Accounting system · Integration with other accounting system	CO 3, CO 4	9
6	**Human Resource Score Card** · HR Score Card, Constituents of HR Scorecard · HR Score Card as an instrument in HR Audit	CO 4	6
7	**Human Resource Audit Report** · HR Audit Report – purpose · Report Design – Preparation of report · Use of HR Audit report for business improvement	CO 4	12

8	**Recent Advancements in** Human Resource Audit and Accounting	CO 5	9

Text and Reference Books:

1. Human Resource Management Text and Cases by K. Aswathappa
2. Personnel & Human Resource Management – P. Subba Rao
3. Human Resource Audit T.V. Rao

Recommended Pedagogy:

1. Lectures and Discussions
2. Case Studies
3. Role Play
4. Workshops

Elective course 2: Industrial Relations and Alternate Dispute Resolution

Credits: 4; Duration 60 Hours

Course Outcomes:

Upon successful completion of this course, students will be able:

CO 1: To understand Evolution and Approaches of IR. (Level 2)

CO 2: To analyse the social security legislations laws cases relevant in the given scenario (Level 3)

CO 3: To understand and apply conflict preventing & resolution methods under IR (Level 2 & 4)

CO 4: To evaluate various methods to solve the conflict and to draft settlement agreements. (Level 5 & 6)

CO 5: To create models of adapting to changes in the dynamics of IR in changing Industry Employee Relations (Level 5 & 6)

Unit/ Module	Content	CO Mapping	Hours Assigned
1	**IR Issues in Organizations:** · IR Evolution and Definitions · Different approaches to IR: o Functional approach o Systems Approach & Dunlop's Contribution o Oxford Model o HR Approach o Comprehensive IR Model of Internalist & Externalist Approach	CO 1	9

2	**Prevention, Machinery of Conflict in IR:** · Issues & Levels of Conflict in IR, The State & Industrial Relations Policy, Tripartite & Bipartite Bodies, Ethical Codes & IR · Industrial Employment (Standing Orders) Act,1946, Model Grievance Procedure & Disciplinary Proceedings · Overview of Trade Union Movement, Union Politics, Difference between Trade union registration & recognition. Trade Union Registration Act 1926. Union recognition under MRTUP & PULP & Code of Discipline · Conditions for effective Collective Bargaining and its process	CO 3	12
3	**Alternate Dispute Resolution (ADR):** · Meaning and Importance of ADR · Discuss cases using ADR to settle cross cultural, environment, healthcare business disputes · ADR Clause Drafting	CO 2, CO 3	9
4	**Industrial Disputes:** · Meaning of Industrial Dispute, Causes, Forms/Types, Consequences/Effects, Methods of Settling Industrial Disputes (Arbitration, Joint Consultations, Works Committee, Conciliation, Adjudication, etc.) · Concepts Related to Industrial Disputes (Relevant Examples): Strike, Layoff, Lockout, Retrenchment	CO 2, CO 3, CO 4	12

5	**Labour Welfare:** - Concept of Labour Welfare, Approaches to Labour Welfare, Statutory and Non-Statutory Welfare, Occupational Safety, Health and Working Conditions in the organisations, Workers Participation in Management Practiced in Germany, France & Britain. - Indian Cases, Suggestion Schemes, Kaizen, Quality Circles, TQM, ISO, Productivity Bargaining	CO 1, CO 3, CO 4	9
6	**New Trends in IR & Future of IR in India:** · The changing demographics of Indian Industry, manufacturing to service sector, from formal to informal, digitisation, etc. · Expected changes in the dynamics of IR in this changing Industrial Scenario · Ways to cope up with IR Issues · Collaboration - A new Perspective to IR	CO 5	9

Textbooks:

1. Mamoria, C. B. & Mamoria, S., Dynamics of Industrial Relations in India, 16th Edition, 2019, Himalaya Publishing House
2. Sharma, A. M. Industrial Relations: Conceptual & Legal Framework. Himalaya Publishing House
3. Mamoria, C. B., Mamoria, S. & S. V. Gankar. Dynamics of Industrial Relations in India. Himalaya Publishing House
4. Venkata Ratnam, C. S. Industrial Relations. Oxford University Press
5. Industrial Relations – Late C.S Venkata Ratnam – Oxford Publications
6. Industrial Relations, Trade Unions and Labour Legislation – P.R.N Sinha, Indu Bala Sinha, Seema Priyadarshini Shekhar – Pearson Publications
7. Alternative Methods of Dispute Resolution by Martin A. Frey
8. ADR principles and practice By Henry J. Brown
9. Human Resource Management Gary Dessler and Biju Varkkey

Reference Books:

1. Getting to Yes: Negotiating Agreement Without Giving in By Roger Fisher and William Ury
2. Dispute resolution: negotiation, mediation, arbitration, and other processes By Stephen B. Goldberg
3. Sharma, A. M. Industrial Relations: Industrial Jurisprudence and Labour Legislation. Himalaya Publishing House

Recommended Pedagogy:

1. Lectures and discussions
2. Case studies
3. Law presentations with Industrial Application Examples

Elective Course 3: OD and Change Management

Credits: 4; Duration 60 Hours

Course Outcomes:

Upon successful completion of this course, students will be able:

CO 1: To **understand** the fundamental concepts, theories, and importance of Organizational Development and Change Management. (Level 2)

CO 2: To **apply** the Concepts and Frameworks of OD Approaches, OD Interventions and Change Management Models. (Level 3)

CO 3: To **analyze** various diagnostic tools and assess the impact of OD and Change Management in Organizational Performance. (Level 4)

CO 4: To **evaluate** the role of Leadership and Culture in Implementing and Sustaining Change Initiatives. (Level 5)

CO 5: To **create** change strategies for Organizational Transformation using OD Approaches.(Level 6)

Unit/ Module	Content	CO Mapping	Hours Assigned
1	**Introduction to Change Management**: · Definition, Nature and Types of Change: Individual, Group and Organizational Change · Understanding Organization Development and Change Management · Need for Change · Process of Organizational Change	CO 1	3
2	**Introduction to Organizational Development**: · Overview of the field of OD · Concept, Definitions and Importance of OD · Underlying Assumptions, Values and Goals of Organization Development	CO 1	3

3.	**Approaches to Organizational Development:** - Action Research as a Process - Action Research Model - Action Research as an Approach - History of Action Research - Examples of Action Research in OD - Systems Theory - The Nature of Systems - Systems Approach - Socio-Technical Systems Theory and Open Systems Planning	CO 2	6
4	**Organizational Diagnosis and Diagnostic Models:** - Managing the OD Process - Diagnosing the System, its Subunits and Processes - Organizational Diagnostic Models and their Relevance- A. Kurt Lewin Model B. Seven Stage Model C. Beyond the "Quick Fix" D. Force Field Analysis E. Open Systems Theory F. Weisbord's Six-Box Model G. The Congruence Model H. McKinsey 7S Framework I. The Burke-Litwin Model of Organizational Change - Porras and Robertson Model of Organizational Change	CO 3	9
5	**Data Collection and Analysis using Climate Survey:** · Methods of Data Collection · Tools of Data Collection · Climate Survey · Research Design · Research Process	CO 3	3

6	**OD Interventions Theories & Methods:** · Meaning and Definition · Factors Required to Plan and Implement OD · Goals of OD Intervention · Types of OD Interventions · Major "Families" of OD Interventions · Interventions Designed to improve Effectiveness- o Individual Interventions- o Team Intervention o Large System Intervention o Inter group interventions · Measuring the Effectiveness of OD Interventions	CO 3, CO 4	9
7	**Execution of Change:** · Guidelines for Effective Implementation to Change · Environment Factors for Organizational Change- Internal and External Factors · Models of Planned Change · Approaches to Planned Change · Organizational Change and Process Consultation · Work Redesign Model	CO 3, CO 4	6

8	**Resistance to Change and Monitoring Change in Organizations:** · Meaning and Definition · Sources of Resistance to Change- o Individual Sources o Organizational Sources · Impact of Change on Employees · Dealing with Resistance to Change · Role of Communication in Managing Change · Effective Organizational Change Management · Methodologies for Measuring Change · Cummings and Worley's Model for Managing Change · Managing Organizational Change · Challenges in Managing Change	CO 3, CO 4	6
9	**Leadership in Change Management:** · Role of HR in Leading Change · Emotional Intelligence in Change · Leadership and Change Management · Organizational Learning and Change- o Power o Politics o Organizational Conflicts	CO 3, CO 4	6
10	**Organizational Culture and Development** · Understanding Organizational Culture · Culture Change Initiatives · Models of Culture in Organizations · Values Alignment and Ethical Considerations	CO 3	3

11	**Implementation and Assessment of OD:** · Implementation Conditions for Failure and Success in OD efforts · Assessment of OD and Change in Organizational Performance · The Impact of OD on Organization Performance · Developing OD Strategies · Role of OD Practitioners	CO 4, CO 5	3
12	**Emerging Trends in OD and Change Management:** · Systemic Approach towards OD and Change Management · Galbraith Star Model of Organizational Design · Mechanistic & Organic System and Contingency Approach · Emerging Trends in OD and Change Management · Learning Organization · The Future of OD	CO 3, CO 4	3

Textbooks:

1. Organization Development and Change (11th ed.). Cummings, T. G., & Worley, C. G. (2019), Cengage Learning
2. Organization Development: Behavioral Science Interventions for Organization Improvement, French, W. L., & Bell, C. H., (6th ed.), Prentice-Hall
3. Organizational Change and Development, Dipak Kumar Bhattacharya, Oxford University Press
4. Organization Development: Principles, Processes, and Performance, Gary McLean, (1st Ed), Berrett-Koehler Publishers

Reference Books:

1. Management of Change and Organizational Development: Innovative Strategies and Approaches, S.K. Bhatia, Deep & Deep Publications
2. Organizational Change and Development, Kavitha Singh, Excel Books
3. Practicing Organization Development: Leading Transformation and Change, William J. Rothwell, Jacqueline M. Stavros, Roland L. Sullivan, (4th Ed.),Wiley's Publication

Recommended Pedagogy:

1. Interactive Lectures
2. Case Studies
3. Role Plays
4. Videos

Elective course 4: Strategic Human Resource Management

Credits: 4; Duration: 60 Hours

Course Outcomes:

Upon successful completion of this course, students will be able

CO 1: To **understand** concepts, principles, and frameworks of Strategic HRM. (Level 2)

CO 2: To **apply** HR strategies, models and techniques to solve business and workforce challenges (Level 3)

CO 3: To **analyze** and differentiate various SHRM approaches in diverse business environments. (Level 4)

CO 4: To **evaluate** the HR policies and practices in alignment with corporate strategies. (Level 5)

CO 5: To **design** and **create** strategic HR plans and innovative solutions to contemporary HR issues. (Level 6)

Unit/ Module	Content	CO Mapping	Hours Assigned
I.	- Introduction to Strategic HRM - Concept and Evolution of SHRM - Traditional HRM vs. Strategic HRM - Aligning HRM with Business Strategy - Models of SHRM (Best Fit, Best Practice, RBV0 - Challenges faced in implementation of SHRM	CO 1	9
II.	- HR Strategy and Business Performance - Linkage Between HR Strategy and Organizational Goal - Workforce Planning and Talent Management Strategies - High-Performance Work Systems (HPWS - HR Strategic Models - HR Metrics and Analytics	CO 2	9

	- · HC Bridge Framework Model - · HR Scorecard		
III.	**Talent Acquisition & Retention Strategies** - Strategic Recruitment and Selection - Employer Branding and Employee Value Proposition - Retention Strategies and Employee Engagement. - Succession Planning and Leadership Development	CO 1 , CO 2, CO 3	6
IV.	- Performance and Reward Strategies - Strategic Performance Management Systems - Compensation and Benefits Strategies - Pay for Performance and Incentive System - Non-monetary Rewards and Employee Motivation	CO 4, CO 5	6
V.	- **Learning, Development & Change Management** - Strategic Learning and Development - Training ROI and Impact Assessment - Change Management and HR's Role in Organisational Transformation - Organisational Culture and HR Strategies	CO 4, CO 5	6
VI.	**Employee Relations & Legal Aspects in SHRM** - Industrial Relations and HR's Strategic Role - Labour Laws and Compliance Strategies - Diversity, Equity, Inclusion and Belongingness (DEIB) Strategies - Ethical Issues in SHRM	CO 1, CO 2	6

VII.	**Strategic HRM Culture and Climate** - Understanding Organization Culture and Climate - Culture and Climate in HR Strategy - Role of AI and HR Technology in shaping Culture - Agile HR and Adapting to SHRM	CO 3, CO 4, CO 5	6
VIII.	**Global SHRM & Future Trends** - Global HR Strategies and Cross-Cultural Challenges - Digital Transformation in HR (AI, HR Tech, Remote Work) - Gig Economy and Strategic HR Adjustments - Nomics and Power Upside Down - Outsourcing and its HR Implications - Sustainability and Corporate Social Responsibility (CSR) in HRM	CO 4, CO 5	12

Textbooks:

1. Strategic Human Resource Management – Jeffrey A. Mell
2. HR Strategy: Creating Business Strategy with Human Capital – Paul Kear
3. Human Resource Management – Aswathaa
4. Human Resources Management A South Asian Perspective, Scott Snell, George
5. Bohlander, Veena Vohra, Cengage Learning India Pvt Ltd (Publisher)

Reference books

1. The New HR Leader's First 100 Days – Alan Collins
2. HBR's 10 Must Reads on Strategic HRM – Harvard Business Review

Recommended Pedagogy

1. Lectures and Discussions
2. Case studies
3. Videos

Semester IV - Marketing

Semester IV - Marketing Specialization Outline

Elective Courses - Marketing Specialization (Any 2)					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
1	Elective	Global Marketing	4	40	**IA**
2	Elective	Technology Strategy	4	40	**IA**
3	Elective	Business to Business Marketing	4	40	**IA**
4	Elective	Social Marketing	4	40	**IA**

***IA – Internal Assessment; UA – University Assessment**

Elective 1: Business to Business Marketing

Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1: Understand the key factors in B2B segmentation, role of DMU's in organisation purchases, and value creation in B2B markets

CO2: Apply the concepts learnt in the course to develop an appealing value- proposition for business customers

CO3: Analyse the buyer value system to identify opportunities

CO4: Evaluate the competitor's strategies, position in the ecosystem / network and identify the most suitable position for the firm.

CO5: Create a business plan for launch of a product/solution from theories learnt in the course

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Nature of Business markets, key differences between B2B and B2C markets; Global or cross-border B2B contexts - export/import.	CO1, CO2	4
2	Assessing market opportunities, industrial market segmentation, targeting, and positioning; fit between product variables and target segment; account-based marketing; segmentation and hyper-focused targeting on high-value accounts; refining B2B segmentation and positioning; Coordinating marketing and sales for customized pitches.	CO1, CO2	6

3	Decision Making Units – roles in purchase decision, composition, priorities and interests, size and formal organization, power structure, Global teams and virtual DMU's, cultural issues	CO1, CO2 CO3	5
4	Types of products – straight rebuy, modified rebuy, new tasks, B2B benefits typology – economic, tangible benefits; non-economic, tangible benefits; economic, intangible benefits, non-economic intangible benefits; Industrial Product Lifecycle Analysis; solutions marketing v/s product marketing; product/service bundling	CO1, CO2, CO3	6
5	New Product Development Process, impact of technology, diffusion of innovation; AI role in product/solutions innovation, predictive analytics, personalization, big data analytics	CO2, CO3	5
6	Value Proposition in B2B markets – resonating focus, deep understanding of customer and priorities; B2B branding, sustainability and ESG as emerging consideration in purchase decisions	CO2, CO3, CO4	6
7.	Business ecosystems – network of independent niches; co-evolving roles and responsibilities, shape co-evolution of innovation; keystone, Landlord and	CO3, CO4	6

	nicher strategies in the business ecosystem		
8.	Platform Business Model – network effects, role of platforms, platform decisions, coring of platform,	CO3, CO4	6
9	Pricing strategies – determinants of price, competitive bidding, price negotiations; value-based pricing and subscription models; linking price to ROI and outcome metrics	CO3, CO4	4
10	Managing Logistics, channels of distribution, channel design decisions, identification of cost centres; digital channels and e-commerce, B2B procurement online portals, self‑serve SaaS signups.	CO3, CO4	4
11	Managing the sales force – design, structure – product, market, geography, key account management, planning the sales organization; use Martech to track and monitor sales	CO3, CO4	4
12	Promotions – trade fairs and exhibitions; social media in B2B markets, use in various stages of the sales cycle, use in customer service to create positive feedback loops, sales funnel and social media tactics	CO3, CO4	4

It is recommended that the course be instructed through cases.

Text Books:

1. Industrial Marketing: Analysis, Planning and Control. Robert Reeder, Edward Brierty, Betty Reeder. 2e. Prentice- Hall India Edition
2. Business to Business Marketing. Ross Brennan, Louise Canning. 3e, Sage

Reference Book

1. Business to Business Marketing Management. A Global Perspective. Alan Zimmerman, Jim Blythe. Routledge.

Elective 2: Global Marketing

Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1: Understand the application of marketing principles in the global Context

CO2: Apply glocal strategy concepts to international contexts

CO3: Analyse international marketing strategies considering cultural, political, geographic and other differences, as well as standardization v/s localization etc

CO4: Evaluate Global marketing strategies using frameworks taught in the course

CO5: Create a global marketing plan for a product/category to be launched in selected countries

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Global marketing environment – WTO, country competitiveness, Balance of payments, international trade in goods and services	CO1, CO2	4
2	Competing in Global Markets – company influences – economies of scale, demand in other countries, differences in consumer behaviour	CO1, CO2	3
3	Understanding consumer behaviour in global context – Hofstede's dimensions; Meyer's cultural map; country of origin effect on consumer behaviour; High and Low context cultures; World Values Survey (WVS); impact of culture on marketing mix	CO2, CO3	6

4	Country influences on global strategies – political systems, importance of Free Trade Agreements and Preferential Trade Agreements, regulatory issues such as protection of intellectual property rights	CO2, CO3	4
5	Global Market Research – primary and secondary data sources, estimate market size – chain ratio method	CO2, CO3	3
6	Global Segmentation- bases for segmentation; approaches to segmentation in international markets, positioning - Global Consumer Culture Positioning (GCCP), Global branding	CO2, CO3, CO4	6
7	Marketing strategy – cross-subsidization of markets, lead market concept, strategies in Emerging Markets	CO3, CO4, CO5	6
8	Country Entry strategies – indirect exports, direct exports, licensing, franchising, contract manufacturing, Joint Ventures, FDI mode, wholly owned foreign entities (WOFE); impact of International Product life cycle on entry modes	CO3, CO4, CO5	8
9	Product Policy – adaptation v/s standardization; diffusion of innovation, Global Product Platforms, packaging and labelling norms; managing multinational product lines; counterfeit and piracy; global services	CO2, CO3, CO4	5

10	Pricing Policy – impact of currency movements on price, transfer pricing, role of gray channels, pricing corridor, consideration of anti- dumping duties, counter-vailing duties; price harmonization, counter trade; ethnocentric, polycentric, geo-centric pricing	CO2, CO3, CO4	6
11	Logistics – 3rd party logistics, theatre warehousing, free trade zones, distribution agreements,	CO3, CO4	2
12	Promotion – advertising, personal selling, trade fairs and exhibitions,	CO3, CO4	3
13	Internet and marketing – structural barriers to e-commerce, integrated v/s locally responsive web marketing strategies, mass customization	CO3, CO4	4

It is recommended that the course be instructed through cases.

Text Books:

1. Masaaki Kotabe, Kristiaan Helsen. Global Marketing Management. John Wiley.
2. Warren Keegan, Gautam Dutta. Global Marketing Management. Pearson
3. Vern Terpstra, Ravi Sarathy. International Marketing. Thomson South-Western

Elective 3: Technology Strategy

Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1: Understand issues in using new technology to compete successfully

CO2: Develop strategies to manage technology risks, identify market needs, commercialize new technologies, and compete successfully in the market

CO3: Analyze timing of entry of new technology, issues in collaboration v/s Competition

CO4: Evaluate different positions to exploit new technologies

CO5: Create a business plan for a hypothetical startup targeting an unmet need.

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Technology: definition; impact of technological change on strategy; the Technology Life Cycle; Schumpeterian competition;	CO1, CO2	4
2	Technology Strategy – enables firms to create new value by targeting unmet needs; achieve lower costs than previously possible, possibility of new competitive positions and sources of competitive advantage	CO1, CO2	6
3	Factors impacting technology strategy – risks and uncertainty; choices to commercialize new technology; approaches to driving technology growth	CO1, CO2	6

	and adoption; potential threats with maturing of technology		
4	Importance of complementary assets and ecosystems; choice of collaborating with competitors or fighting competitors for introducing new technology; importance of timing and question of first mover advantage; Network effects and switching costs; multi-homing costs	CO2, CO3, CO4	8
5	Technology Strategy for Innovators – managing across the technology S-curve; alternative strategies to commercialize innovation; role of licensing, JV, strategic alliances, M&A; Joshua Gans & Scott Stern Framework – strength of intellectual property protection and relevance of complementary assets; alternative revenue model development and testing for innovators;	CO2, CO3, CO4	6
6	Growth and Adoption of new innovation – challenges in the technology adoption life cycle; sustaining competitive advantage and bargaining power as technology evolves; methods of shaping the competitive environment	CO2. CO3, CO4	6
7	Managing technological maturity – decision on transitioning to a new industry or exit the business	CO2, CO3, CO4	6

8	Leader v/s Follower Strategy- first mover or wait and follow - role of customer lock-in, pre-empting scarce assets, sustaining technology advantage, achieving scale, rate of change of technology, control of valuable complementary assets	CO3, CO4	6
9	Strategy for Existing Markets: strategies for incumbent and new entrants affected by new technology; role of incumbents - develop strategy road map, assess strategic implications of new technology, awareness of disruptive technologies, build entry barriers, develop complementary assets, respond to industry convergence; role of new entrants – create technological gap, build an installed base, sell complementary goods, shape customer perceptions about future installed base,	CO2, CO3, CO4	6
10	Riding the new technology base – be ready for uncertainties, establish dominant design, commoditize elements of the ecosystem, create tech platforms	CO2, CO3, CO4	6

Text Books:

1. Winning at New Product: Accelerating the Process from idea to Launch. 3e. Robert G. Cooper
2. Harvard Business Review on Aligning Technology with Strategy. Harvard Business School Publishing Corporation.

Reference Books:

1. Everyday Chaos. Technology, Complexity, and How we're Thriving in a New World of Possibility. David Weinberger. Harvard Business Review Press
2. The Keystone Advantage: What New Dynamics of Business Ecosystems Mean for Strategy, Innovation, and Sustainability. Marco Iansiti, Rod Levien. Harvard Business Review Press

Elective 4: Social Marketing

Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1: understand the importance of social marketing in influencing Behaviours

CO2: Apply concepts learnt to real life plans

CO3: Analyse social marketing campaigns

CO4: Evaluate the plan on Objectives, behaviours, cost, and ethical aspects

CO5: Create a social marketing campaign based on concepts learnt

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Definition, difference from commercial marketing, non-profit marketing, value proposition of social marketing, impact on social issues	CO1	4
2	Steps in developing a social marketing plan, marketing mix strategies, monetary and non-monetary costs,	CO1, CO2	6
3	Analyzing the social marketing environment, purpose and focus of the plan, situations audit	CO2, CO3	6
4	Segmentation, evaluation and selecting target audiences, variables for segmentation, criteria for evaluating segments, ethical issues in selecting target audiences	CO2, CO3	6

5	Behavioral objectives, knowledge and belief objectives, campaign evaluation	CO2, CO4	5
6	Target audience barriers, revision of target audiences, researching target audiences	CO2, CO3	4
7.	Developing a positioning statement, positioning focused on behavior, barriers, benefits, competition; repositioning, branding	CO3, CO4	6
8.	Product platform, branding issues	CO2, CO3	5
9	Pricing – monetary and non-monetary incentives and dis-incentives, pricing of tangible objects and services	CO2, CO3	4
10	Managing distribution channels	CO2, CO3	4
11	Promotion – creative brief, pretesting, messenger strategy	CO3	4
12	Plan for monitoring and implementation, metrics to measure, cost, ethical evaluation of the plan; budgets and funding sources	CO3, CO4, CO5	6

Text Books:

1. Nancy Lee, Philip Kotler. Social Marketing: Influencing Behaviors for Good. 4e. Sage Publications
2. Philip Kotler, Ned Roberto, Nancy Lee. Social Marketing: Improving the Quality of Life.2e. Sage Publications

Semester IV - Operations

Semester IV - Operations Specialization Outline

Elective Courses - Operations Specialization (Any 2)					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
1	Elective	Operations Strategies	4	40	**IA**
2	Elective	Operations Applications and Cases	4	40	**IA**
3	Elective	Lean Management	4	40	**IA**
4	Elective	Demand Forecasting and Inventory Management	4	40	**IA**
5	Elective	Productivity Enhancement in Operations Management	4	40	**IA**

***IA – Internal Assessment; UA – University Assessment**

Elective Course 1: Operations Strategies

Course Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1: Remember / Recall fundamental principles of operations strategy and competitive advantage

CO2: Understand frameworks for formulating and implementing operations strategies

CO3: Apply operations strategy tools in real-world business scenarios

CO4: Analyse the impact of strategic decisions on operational performance

CO5: Critically evaluate operations strategies for various industries

CO6: Create new relevant strategies in evolving business environment

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Foundations of Operations Strategy Definition & Scope of Operations Strategy, Competitive Priorities in Operations, Role of Operations in Corporate Strategy	CO1, CO2	3
2	Strategic Alignment & Value Chain Analysis Integrating Operations & Business Strategy, Value Chain Analysis & Competitive Advantage (Suggested Case Study: Amul's Value Chain Excellence)	CO2, CO3	3

3	Capacity Strategy & Long-Term Planning Capacity Planning: Long-Term & Short-Term, Economies of Scale & Scope (Suggested Case Study: Reliance Jio's Telecom Expansion Strategy)	CO2, CO3	3
4	Process Design & Continuous Improvement Process Choice & Layout Strategies,	CO3, CO4	3
5	Process Design & Continuous Improvement Lean Systems & Continuous Improvement (Suggested Case Study: Toyota Kirloskar's Lean Manufacturing in India)	CO3, CO4	3
6	Manufacturing & Service Strategies Make-to-Stock vs. Make-to-Order, Agile & Flexible Manufacturing (Suggested Case Study: Tata Steel's Agile Manufacturing Approach)	CO3, CO4	3
7	Customer Value Models, its components, concept, and strategy	CO3, CO4	3
8	Technology & Innovation in Operations Strategy Role of Technology in Operations Strategy, Industry 4.0 & Smart Manufacturing (Suggested Case Study: L&T's Digital Transformation in Manufacturing)	CO3, CO4	3
9	Risk & Resilience in Operations Managing Disruptions in Operations,	CO4, CO5	3

10	Risk & Resilience in Operations Risk Mitigation Frameworks (Suggested Case Study: Tata Motors' Risk Management during Supply Chain Disruptions)	CO4, CO5	3
11	Sustainable Operations Strategy Green Supply Chains, Circular Economy in Operations (Suggested Case Study: ITC's Sustainability Initiatives)	CO5	3
12	Value Strategies and Value Operations	CO4, CO5	3
13	Performance & Productivity Metrics in Operations Balanced Scorecard & Productivity KPIs, Overall Equipment Effectiveness (OEE) (Suggested Case Study: Infosys' Balanced Scorecard Approach)	CO4, CO5	3
14	Value Chain in Global Operations, Framework for Operations Measurement		3
15	Industry-Specific Operations Strategies Strategies in Retail, Healthcare, and Manufacturing industries Case Studies from Leading Companies (Suggested Case Study: Apollo Hospitals' Healthcare Operations Strategy.)	CO3, CO4	3

16	Behavioral & Cultural Aspects of Operations Strategy Change Management in Operations	CO3, CO4	3
17	Behavioral & Cultural Aspects of Operations Strategy Organizational Culture & Strategy (Suggested Case Study: Hindustan Unilever's Change Management Strategy.)	CO3, CO4	3
18	Global Operations Strategy Offshoring & Nearshoring Strategies, Global Sourcing & Expansion (Suggested Case Study: Mahindra's Global Sourcing Strategy)	CO3, CO5	3
19	Implementing Operations Strategy Performance Metrics & KPIs, Balanced Scorecard & Strategy Execution (Suggested Case Study: Hindustan Unilever's Execution of Operations Strategy)	CO5	3
20	Project & Case Studies Projects to be prepared by students - based on the modules discussed. Presentations of Projects / Case Studies by Students	CO4, CO5	3

Textbooks:

1. "Productivity Techniques" by *Uday Salunkhe & Gondhalekar*
2. "Production & Operations Management" by *K. Aswathappa & Shridhara Bhat*
3. "Smart Manufacturing & Industry 4.0" by *Vikram Sharma*

Reference Books:

1. "Operations Strategy & Business Performance" by *Rajesh Kumar*
2. "Global Supply Chain Strategies" by *P. Gopalakrishnan*
3. "Organizational Behavior & Performance" by *Udai Pareek*
4. "Retail Operations Management" by *Pradhan*
5. "Service Operations Management" by *Johnston & Clark*
6. Operations, Strategy and Technology: Pursuing competitive Edge: Robert Hayes, Gary Pisano, David Upton and Steven C (Wiely)
7. Operations Strategy: Nigel Slack and Micheal Lewis (Prentice Hall)
8. Operations Strategy and management: Jan A. Van Mieghe
9. Operations Strategy by David Wilters published by plagrave macmillan.

Elective Course 2: Operations Applications and Cases

Course Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1: Recall key concepts of Operations Management, including resource planning and process analysis

CO2: Understand Manufacturing Resource Planning (MRP-I & II) and inventory management techniques using excel

CO3: Apply workforce planning, aggregate planning, and scheduling techniques to optimize resource utilization

CO4: Analyze investment decisions, plant operations, maintenance, and asset replacement strategies through financial modeling on Excel

CO5: Evaluate cost estimation models for tendering, bidding, and financial feasibility in procurement and project management

CO6: Design and create operations management frameworks for service industries (insurance, BPO/KPO, entertainment) to enhance efficiency and reduce costs

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Operations Management in Complex Situations Introductionto operations management in volatile, uncertain, complex, and ambiguous (VUCA) environments.	CO1, CO2	3
2	Introduction to Resource Planning: Resource allocation. Types of resource Optimising resource in Lean Manufacturing set up.	CO3	3

3	Workforce Planning Workforce allocation model. Labor optimization and shift planning. Case study: Workforce planning in service & manufacturing industries	CO4	3
4	Aggregate Planning: Level and Chase Planning, Production smoothing, Backordering and stockout	CO3	3
5	Production & Retail Applications: Manufacturing Resource Planning (MRP-I & II) concepts. Practical implementation of MRP on Excel	CO4	3
6	Demand forecasting lead time calculations. Retail operations: Inventory management, SKU optimization.	CO4	3
7	Supply Chain: Sustainability and Resilience Demand Driven supply Chain Circular Supply Chains Implementing reuse, recycling, and remanufacturing strategies. Carbon Footprint Reduction Measuring and minimizing emissions across the supply chain.	CO3, CO4	3

8	Sustainable Logistics and Transportation Optimizing routes and adopting green transport modes. Reducing waste through eco-friendly packaging. Handling product returns and end-of-life management sustainably. Tracking sustainability KPIs and preparing reports. Adhering to global sustainability frameworks (e.g., ISO 14001, E SG).	CO5, CO6	3
9	Quality Management: Identifying and mitigating risk (cases of healthcare, Construction and financial firms can be discussed) Implementing cloud based QMS for real time monitoring (Success stories of pharmaceutical and food industries may be discussed)	CO5	3
10	Maintenance Strategies Predictive Maintenance (PdM) Using sensors and data analytics to predict failures before they happen Preventive Maintenance (PM) Scheduled maintenance to avoid unexpected breakdowns. Condition-Based Maintenance (CBM) Reliability-Centered Maintenance (RCM)	CO1, CO2, CO3	3
11	Breakdown Analysis: Advanced Failure Prediction Techniques Failure Trend Analysis	CO4	3

	Identifying long-term patterns in equipment breakdown. Breakdown Cost Analysis Evaluating the financial impact of downtime and repair.		
12	Plant Operations Investment planning & asset replacement strategies. Maintenance & Robotic Process Automation (RPA) in operations	CO2, CO3	3
13	Financial evaluation of operations: Cost-benefit analysis & optimal replacement periods (Excel models)	CO4, CO5	3
14	Tendering Importance of Tendering in Operations Tender Lifecycle: From Invitation to Contract Award E-Tendering Platforms and Digital Procurement Case Study: Implementation of E-Tendering in Public Sector Projects may be taken	CO3, CO4	3
15	Bidding Bidding Process in procurement and projects. Bid Evaluation Criteria: Technical, Financial, and Compliance Scores Case Study: Bid preparation using Excel for cost evaluation	CO5, CO6	3

16	Contract Management Contract Management in Procurement Exploring the processes involved in managing contracts within procurement, Focusing on contract life cycle, performance metrics, and compliance monitoring.	CO3, CO4	3
17	Negotiation: Understanding the role of negotiation in procurement, from supplier selection to finalizing contracts. Techniques for achieving win-win outcomes, managing vendor relationships, and handling price negotiations.	CO2, CO3	3
18	Risk Management in Procurement and Contract Identifying Risks in Supplier Selection and Contracts Contingency Planning for Supplier Failures Case Study: Managing Supplier Risks During Global Disruptions	CO4, CO5	3
19	Applications in Service Industries Operations in insurance, BPO/KPO, and entertainment sectors. Application of operations principles in service sector digital transformation. · Case study: Process optimization in a BPO/KPO environment.	CO3, CO4	3
20	Digital Transformation in Operations Integrating AI, IoT, and RPA for Smart Operations.	CO3	3

	Digital Twin Technology for Operations Optimization		

Textbooks:

1. Operations Management" by Nigel Slack, Alistair Brandon-Jones, and Robert Johnston
2. Operations Management: Processes and Supply Chains" by Lee J. Krajewski, Manoj K. Malhotra, and Larry P. Edition: 12th (Pearson)
3. Operations and Supply Chain Management" by F. Robert Jacobs and Richard B. Chase
4. Edition: 15th (McGraw Hill)

Reference Books:

1. Production and Operations Analysis" by Steven Nahmias and Tava Lennon Olsen
2. Supply Chain Management: Strategy, Planning, and Operation" by Sunil Chopra and Peter Meindl
3. Service Operations Management: Improving Service Delivery" by Robert Johnston and Graham Clark

Elective Course 3: Lean Management

Course Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1: Define and recall fundamental concepts of Lean Management.

CO2: Explain key principles and philosophies of Lean.

CO3: Utilize Lean tools and techniques in practical scenarios.

CO4: Examine waste reduction strategies and process improvements.

CO5: Assess Lean implementation effectiveness in organizations.

CO6: Develop Lean-based solutions for operational efficiency.

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Introduction to Lean Management: History, Principles, and Benefits	CO1, CO2	3
2	The Five Lean Principles: Value, Value Stream, Flow, Pull, Perfection	CO2, CO3	3
3	The Toyota Production System (TPS)	CO1, CO2	3
4	Types of Waste (Muda, Mura, Muri) and Waste Elimination Techniques	CO3, CO4	3
5	Lean Tools: 5S, Kaizen, Kanban, Andon, Heijunka	CO3, CO4	3
6	Value Stream Mapping (VSM) and Process Flow Analysis	CO3, CO4	3
7	Lean Metrics and Performance Measurement	CO4, CO5	3

8	Lean in Manufacturing vs. Lean in Services	CO2, CO4	3
9	Just-in-Time (JIT) Production and Inventory Management	CO3, CO4	3
10	Lean and Six Sigma Integration	CO3, CO5	3
11	Gemba Walks and Continuous Improvement (PDCA Cycle)	CO3, CO4	3
12	Lean Leadership and Organizational Culture	CO4, CO5	3
13	Lean Implementation Challenges and Case Studies	CO5	3
14	Lean in Supply Chain and Logistics	CO3, CO4	3
15	Lean Startups and Lean Thinking in Business	CO3, CO5	3
16	Digital Transformation and Lean 4.0	CO4, CO5	3
17	Sustainability and Green Lean	CO4, CO5	3
18	Lean in Healthcare and Service Industries	CO4, CO5	3
19	Lean Project Management and Agile Methodologies	CO3, CO5	3
20	Future of Lean Management and Emerging Trends	CO5, CO6	3

Textbooks:

1. Liker, J. K. (2004). The Toyota Way: 14 Management Principles from the World's Greatest Manufacturer (1st ed.). McGraw-Hill.

2. Womack, J. P., & Jones, D. T. (2003). Lean Thinking: Banish Waste and Create Wealth in Your Corporation (2nd ed.). Free Press.
3. Rother, M., & Shook, J. (1999). Learning to See: Value Stream Mapping to Add Value and Eliminate MUDA (1st ed.). Lean Enterprise Institute.

Reference Books:

1. Dennis, P. (2007). Lean Production Simplified: A Plain-Language Guide to the World's Most Powerful Production System (2nd ed.). CRC Press.
2. Modig, N., & Åhlström, P. (2012). This Is Lean: Resolving the Efficiency Paradox (1st ed.). Rheologica Publishing.
3. Black, J. T. (2008). Lean Manufacturing Systems and Cell Design (1st ed.). CRC Press
4. Bicheno, J., & Holweg, M. (2016). The Lean Toolbox: The Essential Guide to Lean Transformation (5th ed.). PICSIE Books.

Elective Course 4: Demand Forecasting and Inventory Management

Course Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1: Remember the importance of demand forecasting in businesses

CO2: Understand key concepts and techniques of demand forecasting

CO3: Apply forecasting models to real-world business scenarios

CO4: Analyze different inventory management techniques and models

CO5: Evaluate the impact of demand forecasting on supply chain efficiency

CO6: Develop and implement inventory management strategies to optimize stock levels, minimize costs, and prevent stockouts or overstocking

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Introduction to Demand Forecasting: Concept & Importance of Demand Forecasting Qualitative vs. Quantitative Forecasting Factors affecting forecasting accuracy	CO1	3
2	Case studies on demand planning	CO4, CO5	3
3	Forecasting Techniques Time Series Analysis Moving Averages, weighted Averages, Exponential Smoothing	CO1, CO2	3
4	Regression Analysis & ARIMA Models	CO1, CO2	3
5	Measurement of Forecasting Accuracy with different parameters like MAD, MSE, MAPE and Tracking signal	CO1, CO2	3

6	Inventory Management Basics Types of Inventory Functions & Costs of Inventory Just-in-Time (JIT) and Lean Inventory Practices	CO3	3
7	Inventory Control Techniques ABC, VED, FSN, and HML Analysis Numerical on ABC analysis Case study	CO3, CO4	3
8	Safety Stock & Service Level Determination Continuous vs. Periodic Review Systems	CO1, CO2	3
9	Fixed order interval system, Inventory problem formulation and solution under constraints, Numerical problems.	CO3, CO4	3
10	Dynamic Inventory Problems under Certainty: Fixed Order Size System (EOQ and its variants)	CO1	3
11	Economic Production Quantity (EPQ)	CO2, CO4	3
12	Dynamic Inventory Problems under Risk: Types of inventory control systems with known stock-out costs and service levels	CO3, CO4	3
13	Approximate and exact methods for safety stock determination, Numerical problems.	CO3, CO4	3
14	Probabilistic models and safety stock Numerical on the same.	CO3, CO4	3

15	Demand-Supply Coordination & Technology Demand-Supply Matching Strategies	CO4, CO5	3
16	Role of ERP and Supply Chain Analytics	CO2	3
17	Technology Adoption: IoT, Blockchain, AI in Inventory & Forecasting	CO4, CO5	3
18	Industry Applications & Case Studies Inventory Strategies in Retail, Manufacturing, and E-commerce	CO5	3
19	Demand Forecasting Failures & Lessons Learned	CO5	3
20	Sustainability in Inventory Management Case study on sustainable practices	CO5	3

Textbooks:

1. Operations management By. B. Mahadevan
2. Production and Operations Management – Norman Gaither
3. Production & Operations Management – Kanishka Bedi (Oxford Publications)

Reference Books:

1. Tersine, R J, Principles of Inventory and Materials Management, PTR Prentice Hall.
2. Modern Production Management – William Smith McGrawHill
3. Starr, M K and Miller,D W, Inventory Control: Theory and Practice, Prentice Hall.
4. Silver, E A, Pyke, D F and Peterson, R, Inventory Management and Production Planning and Scheduling, John Wiley.

Elective Course 5: Productivity Enhancement in Operations Management

Course Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1: Remember / Recall the fundamental concepts and principles of productivity in operations.

CO2: Understand various frameworks and models for productivity enhancement.

CO3: Apply productivity improvement techniques in real-world operational scenarios.

CO4: Analyse the impact of different productivity enhancement strategies on operations.

CO5: Critically evaluate productivity measurement tools and their effectiveness.

CO 6: Create new approaches towards improving processes, materials and overall productivity

Unit/ Module	Content	CO Mapping	Hours Assigned
1	Introduction to Productivity & Measurement Definition, Scope & Importance of Productivity in Operations, Key Drivers of Productivity, Productivity Metrics & KPIs, Benchmarking Best Practices	CO1, CO2	3
2	Lean Thinking, Waste Elimination & Process Improvement Principles of Lean Management & 7 Wastes, Tools for Process Improvement (Suggested Case Study: Lean Implementation at Tata Motors – Reducing Waste & Improving Efficiency)	CO2, CO3	3

3	Six Sigma: DMAIC & DMADV Frameworks,	CO2, CO3	3
4	Total Quality Management (TQM) & Continuous Improvement Principles of TQM & Kaizen, PDCA Cycle (Suggested Case Study: TQM & Kaizen at Maruti Suzuki – Driving Quality Excellence)	CO2, CO4	3
5	Statistical Process Control (SPC)	CO2, CO4	3
6	Industrial Engineering & Ergonomics Role of Industrial Engineering in Productivity, Job & Work System Design, Organizational structure and morphology Work Design & Ergonomic Considerations (Suggested Case Study: Ergonomic Work System Design at Tata Steel – Enhancing Worker Productivity & Safety)	CO3, CO5	3
7	Work Study and Time and Motion Study – Method Engineering and Process Flow	CO3, CO4	3
8	Smart Manufacturing, Automation & Industry 4.0 Automation & AI in Productivity Enhancement, Digital Twins & IoT in Manufacturing	CO3, CO4	3
9	Smart Manufacturing, Automation & Industry 4.0 – its Application using a Case Study Suggested Case Study: Smart Manufacturing & Industry 4.0 at Mahindra & Mahindra – Enhancing Productivity through Automation & AI	CO3, CO4	3

10	Sustainable Productivity & Green Manufacturing Green Manufacturing & Sustainable Operations, Carbon Footprint Reduction in Operations (Suggested Case Study: Green Manufacturing at Tata Motors – Reducing Carbon Footprint through Sustainable Operations)	CO4, CO5	3
11	Supply Chain, Logistics & Productivity Productivity in Warehousing & Transportation,	CO3, CO4	3
12	Supply Chain, Logistics & Productivity Logistics Optimization Techniques (Suggested Case Study: Logistics Optimization at Flipkart – Enhancing Warehouse & Transportation Productivity)	CO3, CO4	3
13	IT, Digital Tools & Data-Driven Productivity ERP, MES & Other Digital Productivity Tools, Data-Driven Decision Making for Productivity (Suggested Case Study: IT-Driven Productivity Enhancement at Marico – Implementing ERP & Data Analytics for Operational Efficiency)	CO3, CO5	3
14	Operation Strategy and Competitiveness Strategy Design Process, Service Strategy Capacity Capabilities, Productivity Measures (Suggested Case Study: Southwest Airlines)	CO3, CO5	3
15	Agile & Flexible Operations Agile Manufacturing & Lean-Agnostic Approaches, Flexibility & Responsiveness in Operations	CO4, CO5	3

16	Behavioural Aspects & Organizational Productivity Employee Motivation & Productivity, Organizational Culture & Performance (Suggested Case Study: Employee Motivation & Productivity at Infosys)	CO2, CO3	3
17	Productivity in Service Operations Service Blueprinting & Efficiency Improvement,	CO3, CO5	3
18	Productivity in Service Operations Strategies for Service Excellence (Suggested Case Study: Service Efficiency Improvement at Apollo Hospitals)	CO3, CO5	3
19	Productivity & Performance Metrics Balanced Scorecard & Productivity KPIs, OEE (Overall Equipment Effectiveness)	CO2, CO5	3
20	Project & Case Studies Projects to be prepared by students based on the modules discussed. Presentations of Projects / Case Studies by Students	CO4, CO5	3

Textbooks:

1. "Production & Operations Management" by K. Aswathappa
2. "Productivity Techniques" by Uday Salunkhe & Gondhalekar

Reference Books:

1. "Performance Management Systems" by A. Sahay
2. "Agile Manufacturing" by Gunasekaran
3. "ERP Systems & Productivity" by Vinod Garg

Semester IV - System & Digital Business

Semester IV - System and Digital Business Specialization Outline

Elective Courses - Marketing Specialization (Any 2)					
Sr. No.	**Course Type**	**Course**	**Number of Credits**	**Number of 90 minutes sessions**	**IA / UA***
1	Elective	**Information System Security and Audit**	4	40	**IA**
2	Elective	**IT Governance, Compliance and Cyber Laws**	4	40	**IA**
3	Elective	**T Consulting & Managing for Business**	4	40	**IA**
4	Elective	**System Applications and Negotiations -Case Study**	4	40	**IA**
5	Elective	**IoT, Cloud Computing, and Virtualization for Business**	4	40	**IA**

***IA – Internal Assessment; UA – University Assessment**

Elective Course 1: Information System Security and Audit

Course Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1: I**dentify** the need for information security and audit, and classify organizational information assets.

CO2: E**xplain** systems audit concepts and apply knowledge of auditor roles and ERP integration.

CO3: **Analyse** system maintenance processes, including data flow, access control, and confidentiality.

CO4: **Evaluate** security threats, disaster recovery plans, and internal controls.

CO5: **Compare** audit certifications and assess the impact of systems audit on organizational integrity.

CO6: **Desig**n audit approaches using emerging technologies and evaluate their effectiveness.

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Introduction to Information Security and Audit** Need and importance of Information Security in organizations, Role and significance of Information Audit, Identification and classification of Information Assets, Overview of Information Security Risks, Strategies for managing Information Security risks	CO1	5
2	**Systems Audit – Concepts and Practices** Concept and objectives of Systems Audit, Emerging trends in Systems Audit, Time and cost effectiveness of audit processes, Competent authorities and legal framework, Roles and responsibilities of Systems Auditors viz Internal Systems Auditor and External Systems Auditor. Prerequisites and planning for	CO2	6

	Systems Audit, Role of ERP systems in enabling Systems Audit		
3	**System and Infrastructure Maintenance** Review of information flow: inputs, processing, validation, and outputs, Review and management of systems in the organization, Change and modification controls, Authorization and approval mechanisms, Maintenance and disposal processes, Master file review and update procedures, Logical vs physical access controls, ensuring confidentiality and data protection, Differentiating physical records vs system records	CO3	5
4	**Security Administration and Operations Audit** Types of information security threats, Physical threats, System-based threats. Disaster Recovery Planning (DRP) and Business Continuity, Information integrity and validation controls, Role of management in Information Security Operations, Ensuring secure and compliant information processing, Internal checks and controls within Information Systems, Auditing of system operations and administration	CO4,C05	5
5	**Global and Indian Perspectives on Systems Audit** Overview of global and Indian certifications in Systems Audit, CISA, DISA, ISO 27001, CISSP, CIA, etc. Institutions and organizations providing certifications, Linkages between traditional and systems audits, Adoption of systems audits across industries, Case studies: Successful audits and failure stories, the role of systems audit in improving transparency.	CO4,CO5	4
6	**Emerging Trends and Professional Opportunities** Growing demand and skill gaps in systems auditing, Link between systems audit and fraud reduction, Use of advanced IT (AI, Blockchain, Cloud) in audits, Automation in audit and continuous auditing techniques, Future trends in Information Systems	CO5,CO6	5

	Security and Audit, Career pathways in Information Security and Auditing		
7	**Emerging Trends in Information System Security and Audit with related case studies**	CO4,CO5, C06	

Textbooks

1. Auditing in a Computerized Environment by Mohan Bhatia. Tata McGraw-Hill.
2. Contemporary Auditing by Kamal Gupta. Tata McGraw-Hill.
3. Analysis and Design of Information Systems by V. Rajaraman. Prentice Hall of India

Elective Course 2: IT Governance, Compliance and Cyber Laws

Course Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1: Explain the purpose and structure of IT Governance frameworks like COBIT and ITIL.

CO2: Analyze and compare different governance standards and compliance frameworks.

CO3: Apply IT governance principles to organizational scenarios.

CO4: Evaluate legal and regulatory compliance requirements, including SOX and IT Act.

CO5: Interpret key components of cyber laws including data privacy, IPR, and cybersecurity.

CO6: Develop IT governance and compliance strategies that align with cyber laws.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to IT Governance and COBIT Framework- Need for IT Governance- COBIT as an umbrella framework- COBIT Domains and KPAs- Implementing COBIT- COBIT from an audit perspective	CO1, CO3	4
2	Governance Frameworks and Standards- Importance of IT governance and compliance- Overview of standards: COBIT, ISO 27000, ITIL/ITSM- Comparison of frameworks	CO1, CO2	4
3	Compliance Regulations and Acts- Indian IT Act- Sarbanes-Oxley (SOX)- Graham-Leach-Bliley Act (GLBA)- RBI & Banking regulations- Basel III (for banks)	CO2, CO4	4

4	Cybersecurity Standards and Best Practices- BS 7799 / ISO 27001- ITIL/ITSM revisited- NIST Framework- Industry-specific regulations and guidelines	CO2, CO3	4
5	Cyber Laws – Key Areas- Cybercrime Laws (Hacking, Identity Theft)- Data Protection and Privacy (GDPR, CCPA)- Intellectual Property Laws- Electronic Transaction Laws with case studies	CO4,CO5,CO6	4
6	Cyber Laws – Important Global Regulations- GDPR (EU)- CCPA (California)- CFAA & DMCA (USA)- EU Cybersecurity Act- Compliance strategy development	CO4, CO5, CO6	4
7	**Emerging Trends in IT Governance, Compliance and Cyber Laws with related case studies**	CO4,CO5, C06	6

Textbooks

1. Enterprise Governance of Information Technology: Achieving Alignment and Value, Featuring COBIT 5 by Steven De Haes and Wim Van Grembergen. Springer, 2015.
2. Strategies for Information Technology Governance by Wim Van Grembergen. IGI Publishing, 2003
3.
4. “COBIT 2019 Framework: Introduction and Methodology” ISACA, Core textbook for understanding COBIT Framework
5. “Information Security Governance: Guidance for Information Security Managers” by W. Krag Brotby, Auerbach Publications
6. “IT Governance: How Top Performers Manage IT Decision Rights for Superior Results” by Peter Weill & Jeanne W. Ross, Harvard Business Review Press
7. “Cyber Law: The Indian Perspective” by Pavan Duggal, Universal Law Publishing
8. “Information Technology Law and Practice” by Vakul Sharma, Universal Law Publishing

Reference Books

1. “The Law of Cyber Crimes and Information Technology Law” by S.V. Joga Rao, Wadhwa & Co.
2. “Managing Information Security” by John R. Vacca, Syngress

3. “The Complete Guide to IT Service Management” by Addie Schwartz, IT Governance Publishing
4. “Understanding SOX and Internal Controls for the IT Professional” by Chris Davis & Mike Schiller, Syngress
5. “GDPR: A Practical Guide” by Suzanne Dibble, Suzanne Dibble Publishing

Elective Course 3: IT Consulting & Managing for Business

Course Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1 – To **Understand** the role, scope, and fundamental principles of IT consulting in business.

CO2 – To **Analyse** and apply IT consulting frameworks, methodologies, and best practices.

CO3 – To **Develop** strategies for managing and scaling a technology business effectively.

CO4 – To **Assess** governance, risk, compliance, and ethical considerations in IT consulting.

CO5 – To **Explore** emerging technologies and their impact on IT consulting and digital business transformation.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Fundamentals of IT Consulting – Overview, engagement models, skills, challenges with examples and case studies.	CO1, CO2	4
2	IT Consulting Frameworks and Methodologies – ITIL, Agile, project management, software advisory.	CO2, CO3	4
3	Managing and Scaling a Technology Business – Business models, finance, innovation, CRM.	CO3	4
4	Governance, Risk, and Compliance in IT Consulting – IT governance, risk management, legal compliance.	CO4,CO5	4
5	Emerging Technologies and Digital Business Transformation – AI, Block chain, cloud computing, digital transformation with case studies	CO4, CO5	4

6	IT Consulting Project and Strategy Execution – Proposal development, execution, success measurement.	CO2, CO3, CO4	4
7	Emerging Trends in IT Consulting & Managing for Business with related case studies	CO4,CO5, C06	6

Textbook:

1. R. P. S. Sengar, IT Consulting and Management, Laxmi Publications
2. V. K. Jain, Managing Information Technology in Business, PHI Learning
3. Amit Bhatnagar, IT Consulting: Managing IT for Business Success, Pearson Education India
4. M. K. Gupta, Information Technology for Managers, McGraw-Hill Education India

Reference Books:

1. **Amit Tiwari**, *IT Consulting: Strategies, Models, and Business Solutions*, Wiley India
2. **S. K. Gupta**, *IT Governance and Management*, PHI Learning
3. **V. K. Jain**, *Information Technology and Management*, Tata McGraw-Hill Education
4. **Shailendra Singh**, *Essentials of IT for Managers*, Oxford University Press India
5. **P.K Suri** , IT AND Digital Transformation for Business Managers, S Chand Publishing

Elective Course 4 System Applications and Negotiations -Case Study

Course Credits: 4; Duration: 60 Hours

Course Outcomes:

CO1 **Understand** the importance, scope and applications areas of iinformation systems for business

CO2 **Explore the** applications areas of information technology/information system for business

CO3 **Analyze** the applications areas of information system across the functions and sector

CO4 **Assess** the various techniques of negotiations for successful technology implementation.

CO5 **Evaluate** the practical applications areas of information technology & information system across the various functions and sectors of the industry

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Importance, scope and need of case study and applications** areas of information technology and information systems for business	CO1,CO2,CO3	4
2	**Applications areas of System across the various functions** of management: Marketing, Finance, Human Resource, Manufacturing and Operations, Supply Chain Management, Logistic, Customer Relationship Management and also as per various different functions of the organizations.	CO2,CO3	4
3	**Significance, need, scope, techniques of negotiations**	CO4	4

4	**Applications areas of Systems across the various sectors of the industry:** Manufacturing, Pharmaceuticals and Fine Chemicals, Chemicals & Petro – chemicals, FMCG – home appliances, Food processing, Dairy and dairy products, Mills - paper, pulp, board, textile, Leather - Tanning of leather to making of finished goods, Agricultural Products – grains, jute, cotton, oil seeds, plantation of vegetables, fruits, Heavy industries - automobiles, aircraft, ship building & maintenance, cranes, Constructions – bridges, dams, roads, Power industries – thermal, nuclear, hydro power stations, Merchandising, stockiest, Trading, etc. Insurance, Banking and Finance, Service industry – Hospitals, hotels, Travel and Tourism, transport, Film – manufacturing, distribution, production units, laboratories, editing, exhibitors, Gem and Jewellery – Import of raw export of finished diamond, artificial diamonds, gems and stones.	CO3,CO4,CO5	8
5	**Application areas of systems in Governmen**t **Sector** - Ministries, Departments like defence, police, RTO, passport, visa, customs, central excise, railways, health and other sectors and the IT industry with case studies.	CO4,CO5	4
6	**Emerging Trend**s of System Applications and Negotiations -with related Case Study	CO4,CO5	6

Textbooks

1. **Strategic Management of Information Systems** by Keri Pearlson and Carol Saunders.

Elective Course 5: IoT, Cloud Computing, and Virtualization for Business

Course Credits: 4; Duration: 60 Hours

Course Outcomes:
CO1-To provide an in-depth understanding of IoT, cloud computing, and virtualization with a business perspective.

CO2-To analyse real-world applications of these technologies across different industries.

CO3-To identify business opportunities and challenges in implementing IoT and cloud-based solutions.

CO4-To evaluate cost, security, and efficiency factors in adopting these technologies.

CO5-To develop strategic insights into leveraging IoT, cloud, and virtualization for competitive business advantages.

Unit / Module	Content	CO Mapping	Hours Assigned
1	**Introduction to IoT and Cloud Computing -** Definition and evolution of IoT & cloud computing, Key characteristics & differences from traditional computing, Business drivers behind IoT & cloud adoption, IoT Ecosystem: Sensors, actuators, networks, cloud platforms, IoT network protocols (Wi-Fi, LPWAN, 5G, Bluetooth, Zigbee), Cloud models: IaaS, PaaS, SaaS & deployment strategies	CO1	6
2	**IoT for Business and Industry Applications -** IoT in Industry 4.0 & Smart Manufacturing, IoT in Retail & Customer Engagement, IoT in Healthcare & Smart Cities, IOT use in across the sector	CO2, CO5	5
3	**Cloud Computing for Business Transformation -** Cloud adoption strategies & challenges, Cloud-based business applications (ERP, CRM, HRMS), Hybrid & multi-cloud strategies	CO3, CO4	5

4	**Virtualization Technologies & Business Efficiency -** Fundamentals of virtualization (VMs, containers, hypervisors), Virtualization in cloud computing & VDI, Cost & performance benefits of virtualization, Virtualization challenges & best practices with case studies	CO2, CO3	5
5	**IoT and Cloud Integration for Smart Business -** IoT-Cloud convergence & cloud IoT platforms, Edge & Fog computing for business applications, AI-driven IoT solutions & predictive analytics, IoT & Cloud in supply chains & logistics with case studies	CO3, CO5	5
6	**Emerging Trends, Risks & Future with related case studies-** Future trends: 5G IoT, blockchain, quantum computing, Business risks & security challenges, Sustainability & green computing in IoT & cloud	CO4, CO5	4

Textbooks:

1. *Internet of Things: Principles and Paradigms* | Rajkumar Buyya, Amir Vahid Dastjerdi | Morgan Kaufmann
2. *Internet of Things: A Hands-on Approach* | Arshdeep Bahga, Vijay Madisetti | Universities Press
3. *Cloud Computing: Concepts, Technology & Architecture* | Thomas Erl, Zaigham Mahmood, Ricardo Puttini | Prentice Hall
4. *Cloud Computing* | Dr. Kumar Saurabh | Wiley India

Reference Books:

1. *Virtualization Technologies: A Complete Guide* | Gerardus Blokdyk | Emereo Publishing
2. *Cloud Computing Bible* | Barrie Sosinsky | Wiley
3. *Mastering Cloud Computing: Foundations and Applications Programming* | Rajkumar Buyya, Christian Vecchiola, S. Thamarai Selvi | McGraw Hill Education India
4. *Architecting the Internet of Things* | Dieter Uckelmann, Mark Harrison, Florian Michahelles | Springer
5. *IoT Fundamentals: Networking Technologies, Protocols, and Use Cases for the Internet of Things* | David Hanes, Gonzalo Salgueiro, Patrick Grossetete, Rob Barton, Jerome Henry | Cisco Press