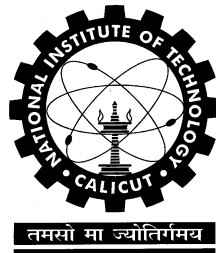


**Master of Business Administration**  
(MBA)

**CURRICULUM AND SYLLABI**

(Applicable from 2023 admission onwards)



**School of Management Studies**  
**NATIONAL INSTITUTE OF TECHNOLOGY CALICUT**  
Kozhikode - 673601, KERALA, INDIA

## CURRICULUM

**Total credits for completing MBA are 85.**

### COURSE CATEGORIES AND CREDIT REQUIREMENTS:

The structure of MBA programme shall have the following Course Categories:

Sl. No.	Course Category	Minimum Credits
1.	Programme Core (PC)	52
2.	Programme Electives (PE)	24
3.	Institute Elective (IE)	2
4.	Summer Internship	1
5.	Projects	6

The effort to be put in by the student is indicated in the tables below as follows:

**L:** Lecture (One unit is of 50 minute duration)

**T:** Tutorial (One unit is of 50 minute duration)

**P:** Practical (One unit is of one hour duration)

**O:** Outside the class effort / self-study (One unit is of one hour duration)

## PROGRAMME STRUCTURE

### MBA CURRICULUM 2023

#### Semester I

Sl. No.	Course Code	Course Title	L	T	P	O	Credits	Category
1.	MS6101E	Financial and Management Accounting	3	0	0	6	3	PC
2.	MS6102E	Marketing Management: Theory and Practice	3	0	0	6	3	PC
3.	MS6103E	Organisational Behaviour	3	0	0	6	3	PC
4.	MS6104E	Information Systems	3	0	0	6	3	PC
5.	MS6105E	Microeconomics	2	0	0	4	2	PC
6.	MS6106E	Decision Models in Management	3	0	0	6	3	PC
7.	MS6107E	Business Statistics	3	0	0	6	3	PC
8.	MS6108E	Business Communication	2	0	0	4	2	PC
<b>Total</b>							<b>22</b>	

**Semester II**

Sl. No.	Course Code	Course Title	L	T	P	O	Credits	Category
1.	MS6111E	Operations Management	3	0	0	6	3	PC
2.	MS6112E	Corporate Finance: Theory and Practice	3	0	0	6	3	PC
3.	MS6113E	Managing People in Organisations	3	0	0	6	3	PC
4.	MS6114E	Business Law	2	0	0	4	2	PC
5.	MS6115E	Corporate Ethics and Governance	3	0	0	6	3	PC
6.	MS6116E	Competition and Strategy	3	0	0	6	3	PC
7.	MS6117E	Business Research Methodology	3	0	0	6	3	PC
8.	MS6118E	Data Science for Business	2	0	0	4	2	PC
<b>Total</b>							<b>22</b>	

**SEMESTER BREAK**

COURSE CODE	TITLE OF THE COURSE	L	T	P	O	C	CATEGORY
MS6191E	Summer Internship Project	0	0	0	2	1	Summer Internship
<b>Total</b>						<b>1</b>	

**Semester III**

Sl. No.	Course Code	Course Title	L	T	P	O	Credits	Category
1.	MS7101E	Organisational Structure and Design	2	0	0	4	2	PC
2.	MS7102E	Macro Economics	3	0	0	6	3	PC
3.	MS7192E	Business Research Project-I	0	0	3	6	3	
4.		Elective	3	0	0	6	3	PE
5.		Elective	3	0	0	6	3	PE
6.		Elective	3	0	0	6	3	PE
7.		Elective	3	0	0	6	3	PE
8.		Institute Elective	2	0	0	4	2	IE
<b>Total</b>							<b>22</b>	

**Semester IV**

Sl. No.	Course Code	Course Title	L	T	P	O	Credits	Category
1.	MS7111E	International Business	3	0	0	6	3	PC
2.	MS7193E	Business Research Project-II	0	0	3	6	3	
3.		Elective	3	0	0	6	3	PE
4.		Elective	3	0	0	6	3	PE
5.		Elective	3	0	0	6	3	PE
6.		Elective	3	0	0	6	3	PE
<b>Total</b>							<b>18</b>	

**List of Electives**

Sl. No.	Course Code	Course Title	L	T	P	O	Credits
1	MS7120E	Discrete Systems Simulation	3	0	0	6	3
2	MS7121E	Advanced Operations Research	3	0	0	6	3
3	MS7122E	Quality Control and Management	3	0	0	6	3
4	MS7123E	Supply Chain Analytics	3	0	0	6	3
5	MS7124E	Project Management	3	0	0	6	3
6	MS7125E	Lean Systems and Six Sigma	3	0	0	6	3
7	MS7126E	Manufacturing Systems Management	3	0	0	6	3
8	MS7127E	Health Care Operations Analytics	3	0	0	6	3
9	MS7128E	Heuristics for Decision Making	3	0	0	6	3
10	MS7129E	Advanced Supply Chain Modelling	3	0	0	6	3
11	MS7130E	Investment Analysis and Portfolio Management	3	0	0	6	3
12	MS7131E	Managing Financial Services and Institutions	3	0	0	6	3
13	MS7132E	Derivatives and Risk Management	3	0	0	6	3
14	MS7133E	Strategic Financial Decision Making and Analysis	3	0	0	6	3
15	MS7134E	Global Financial Strategies and Investment Management	3	0	0	6	3
16	MS7135E	Advanced Corporate Tax Strategy and Compliance	3	0	0	6	3
17	MS7136E	Financial Analytics	3	0	0	6	3
18	MS7137E	Corporate Transactions and Restructuring for Value Creation	3	0	0	6	3
19	MS7138E	Financial Modelling	3	0	0	6	3
20	MS7139E	Financial Econometrics	3	0	0	6	3
21	MS7140E	Digital and Social Media Marketing	3	0	0	6	3
22	MS7141E	Marketing of Services	3	0	0	6	3
23	MS7142E	Product and Brand Management	3	0	0	6	3
24	MS7143E	Strategic Sales Management	3	0	0	6	3
25	MS7144E	Quantitative Research in Marketing Decisions	3	0	0	6	3
26	MS7145E	Marketing to the Bottom of the Pyramid	3	0	0	6	3
27	MS7146E	Integrated Marketing Communications	3	0	0	6	3
28	MS7147E	Customer Relationship Management	3	0	0	6	3
29	MS7148E	Retail and Mall Management	3	0	0	6	3
30	MS7150E	Industrial Relations and Labour Laws	3	0	0	6	3
31	MS7151E	Human Resource Analytics	3	0	0	6	3
32	MS7152E	Individual and Organisational Transformation	3	0	0	6	3
33	MS7153E	Learning and Development	3	0	0	6	3
34	MS7154E	Talent and Performance Management	3	0	0	6	3
35	MS7155E	Total Rewards and Employee Recognition	3	0	0	6	3

36	MS7156E	Organisational Development and Sustainability	3	0	0	6	3
37	MS7157E	Employer Branding and Organisational Communication	3	0	0	6	3
38	MS7158E	Employee Happiness and Wellbeing	3	0	0	6	3
39	MS7159E	Leadership and Team Effectiveness	3	0	0	6	3
40	MS7160E	Artificial Intelligence and Big Data In Business	3	0	0	6	3
41	MS7161E	Business Analytics and Intelligence	3	0	0	6	3
42	MS7162E	Data Management and Visualisation	3	0	0	6	3
43	MS7163E	Digital Transformation	3	0	0	6	3
44	MS7164E	Enterprise Resource Planning	3	0	0	6	3
45	MS7165E	Information Security and Risk Management	3	0	0	6	3
46	MS7166E	Knowledge Management	3	0	0	6	3
47	MS7167E	Social Network Analytics	3	0	0	6	3
48	MS7168E	Society, Ethics and Analytics	3	0	0	6	3
49	MS7169E	Systems Modelling and Simulation	3	0	0	6	3
50	MS7170E	Business Models	3	0	0	6	3
51	MS7171E	Digital Platforms	3	0	0	6	3
52	MS7172E	Corporate Strategy	3	0	0	6	3
53	MS7173E	Inclusive Business Models	3	0	0	6	3
54	MS7174E	Healthcare Management	3	0	0	6	3
55	MS7175E	Consulting Toolbox	3	0	0	6	3
56	MS7176E	Strategic Policy Planning	3	0	0	6	3
57	MS7177E	Business and Markets: Evolutionary Perspective	3	0	0	6	3
58	MS7180E	Understanding Culture and Leadership in Films	3	0	0	6	3
59	MS7196E	Cognitive and Social Psychology	3	0	0	6	3

**List of Institute Electives**

Sl. No.	Course Code	Course Title	L	T	P	O	Credits
1.	MS6174E	Technical Communication and Writing	2	1	0	3	2
2	IE6001E	Entrepreneurship Development	2	0	0	4	2

**MS6101E FINANCIAL AND MANAGEMENT ACCOUNTING**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Analyse and apply theoretical and practical perspectives of financial accounting in both Indian and international contexts.
- CO2: Apply standard techniques and theoretical principles of financial accounting to address business problems in accordance with international standards.
- CO3: Differentiate between cost and management accounting issues and employ standard techniques and theoretical principles to solve them in accordance with industry standards.
- CO4: Formulate strategic and operational accounting frameworks for businesses at various levels, integrating fundamental accounting principles.

**Introduction to Accounting,**

Overview of financial accounting process, Fundamental accounting postulates, Accounting terminology and concepts, Accounting principles and theories, Recording business transactions, Journals and their importance, Subsidiary books of accounts or special journals, Ledger and its role in organizing financial data, Balancing ledger accounts and preparing trial balance, Preparation of financial statements: Profit and Loss statement and Balance Sheet.

**Chart of Accounts and Financial Statement Analysis**

Designing the chart of accounts, Preparing trading and profit and loss accounts, Accounting for non-trading concerns, Income and expenditure statement analysis, Adjusting entries and their significance, Closing entries to finalize accounting periods, Opening entries for new accounting periods, Financial statement analysis techniques, Common sized statements and their interpretation, Ratio analysis for assessing financial performance, Trend percentages to analyse financial trends, Utilizing published annual reports for analysis, Regulatory framework of financial reporting in India, International Financial Reporting Standards (Ind-AS) and their impact.

**Cost Accounting and Decision Making**

Introduction to cost accounting principles, Understanding cost elements, Overhead cost analysis and classification, Production overheads: Collection, apportionment, and absorption, Fixed, variable, and semi-variable overhead costs, Cost control reports for overhead cost management, Administration, selling, and distribution overheads analysis, Treatment of miscellaneous items in cost accounting, Unit costing and preparation of cost sheet, Job and process costing methods, Determining cost accounting in job, batch, and contract scenarios, Treatment of normal and abnormal losses and gains, Introduction to marginal costing and decision making concepts, Marginal cost versus absorption costing, Cost-volume-profit analysis for breakeven analysis, Differential cost analysis and relevant cost analysis, Applications of cost analysis in management decision making.

**References:**

1. Narayanaswamy, R. (2022). *Financial Accounting: A Managerial Perspective* (7th ed.). Prentice-Hall of India.
2. Anthony, R. N., Reece, J. S., & Urwin, R. D. (1989). *Accounting Principles* (6th ed.). Tata McGraw Hill.

3. Bhattacharya, S. K., Dearden, S., & Venkatesh, S. (2009). *Accounting for Management: Text and Cases* (3rd ed.). Vikas Publishing House Pvt. Ltd.
4. Bhattacharyya, A. K. (2005). *Principles and Practice of Cost Accounting* (3rd ed.). Prentice-Hall of India.
5. Meigs, R. F., Williams, J. R., Haka, S. F., & Bettner, M. S. (2015). *Financial Accounting* (15th ed.). McGraw-Hill Education.
6. Horngren, C. T., Sundem, G. L., Elliott, J. A., & Philbrick, D. R. (2018). *Introduction to Financial Accounting* (12th ed.). Pearson.
7. Warren, C. S., Reeve, J. M., & Duchac, J. (2019). *Financial and Managerial Accounting* (14th ed.). Cengage Learning.

**MS6102E MARKETING MANAGEMENT: THEORY AND PRACTICE**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture sessions: 39**

**Course Outcomes:**

CO1: Test key Marketing ideas and phenomena especially, the core theme of delivering benefits to customers.

CO2: Assess the relevance of Segmenting, Targeting and Positioning.

CO3: Propose a framework of the marketing mix elements and explore product-related decisions.

CO4: Devise a disciplined approach to the analysis of marketing problems and to the design of solutions.

**Marketing Planning and Strategy**

Core marketing concepts – company orientation to marketing place – shaping, delivering and communicating market offering - Marketing environment – customer – customer analysis, Customer Life Time Value Analysis, customer satisfaction, customer profitability, customer relationship management, consumer behaviour - Segmentation – Targeting – Positioning segmentation – levels of market segmentation – segmenting consumer market – segmenting business market – targeting – developing and communicating a positioning, Strategy – POP & POD- PLC

**Creating Value**

Competitive strategy – Challenger, follower & niche - Pricing Decisions -The significance of pricing, pricing objectives, the demand determinant of price - The power of yield management systems - The cost determinants of prices - other determinants of price, setting the right price- The legality and ethics of price strategy-product line pricing - pricing during difficult economic times.

**Communicating and Delivering Value**

Promotion and communication strategies - Integrated Marketing Communications, Advertising and Public Relations – Effects of Advertising - Major types of advertising - Major decisions in Advertising – public relations. Sales promotion and Personal selling – objectives of sales promotion - Tools for consumer sales promotion - Tools for trade sales promotion – Steps in selling process - Impact of technology on personal selling.

**References:**

1. Kotler, P., Keller, K. L., Ang, S. H., Tan, C. T., & Leong, S. M. (2018). *Marketing Management: An Asian Perspective*. London: Pearson.
2. Viswanath, N. S. (2010). *Marketing Management: Global Perspective Indian Context*. DHARANA-Bhavan's International Journal of Business, 64-66.



**MS6103E ORGANISATIONAL BEHAVIOUR**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Estimate the importance and requirement of managing employee behaviour in organisation.
- CO2: Distinguish and channelise the behaviour of employee as an individual with respect to personality, perception, motivation, and learning.
- CO3: Contrast the behaviour of employees in groups such as communication, negotiation, conflict resolution and leadership.
- CO4: Estimate the behaviour of employees in organisations such as change adaptability, self-development, organisation culture.

**Fundamentals of Organisational Behaviour and Individual Behaviour**

Functions of management, Organising as a function of management - Disciplines of behavioural science, Contributing disciplines of organisational behaviour - Foundations of individual behaviour, Self and identity, Locus of Control - Personality determinants, Personality theories, Personality traits relevant to organisational behaviour - Values and ethics, Attitudes and attitude formation, Attitude and behaviour - organisational commitment - Perception: Attribution Theory stereotyping. Decision making in an Organisation - Motivation and motivation theory, Content and Process theories of motivation, Job characteristics, Creating jobs that motivate, Job enlargement, Job rotation, Job enrichment, Scheduling to motivate, Using rewards to motivate.

**Group Dynamics in Organisations**

Learning and performance management: Classical conditioning, Operant conditioning, social learning theory - Coaching, counselling and monitoring, Directive and non-directive counseling - Stress and well-being at work, Preventive stress management - Foundations of group behaviour: Defining and classifying groups, Stages of group development. Group properties, Group decision making - Work teams, improving team effectiveness, Team building and team based work - Communication: Process and functions, Interpersonal communication, Verbal and non-verbal communication, Organisational communication, Barriers to communication.

**Leadership and Organisational Design**

Leadership: Trait, behavioural and contingency theories, Leadership decision making, Trust and leadership - Mentoring, power and influence, Political behaviour - Conflict in Organisations, Process and management, Negotiation - Foundations of Organisational structure, Centralisation and decentralisation - Common Organisational designs, New design options, Organisational designs and employee behaviour- Organisational culture, Organisational change, Change and employee behaviour, Resistance to change, Approaches to managing Organisational change.

**References:**

1. Robbins, S. P . (2018) *Organizational Behaviour* (18<sup>th</sup> ed) Pearson Education.
2. Luthans, F. (2016) *Organizational Behaviour* (13<sup>th</sup> ed) McGraw Hill.
3. Greenberg, J. (2012) *Behaviour in Organizations* (10<sup>th</sup> ed) Pearson.
4. Daft, R. L. (2004) *Organisational Theory, Change and Design* (4<sup>th</sup> ed) Cengage Learning,
5. Nelson, D. L. & Quick, J. C. (2012) : *Organisational Behaviour- Science, Real World and You* (8<sup>th</sup> ed), Cengage Learning.

**MS6104E INFORMATION SYSTEMS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

CO1: Negotiate the impact of information systems in business and organisation.

CO2: Integrate the social, legal, ethical, and security aspects of the design and development of information systems in organisations.

CO3: Correlate advances in information technology and systems to manage value in business and organisation.

**Fundamentals of Information Systems**

Systems - Data, Information, Knowledge, and Wisdom (DIKW) Pyramid - Business Processes - Information Systems (IS), Types of IS - IS in global business and organisational strategy, IS and decision making - Evolution of Technology and Business - Collaboration and Open innovation - Social and Ethical Issues in Information Systems.

**Information Systems in Enterprises**

Information Technology (IT) Infrastructure and Emerging Technologies - Database and Information Management - Telecommunications and Networking - Enterprise Systems: Supply Chain and Logistics Management, Business Analytics, Customer Relationship Management, Knowledge Management, Project Management, Security Management.

**Technology and Information Systems**

Social Networks - E-business and E-commerce, Phygital business - Technology: Big Data Analytics, Machine Learning, Artificial Intelligence, Blockchain, Social Computing, Distributed Computing, Mobile Computing, Cloud Computing - Building Information Systems - Protecting Information Assets - Managing Global Systems.

**References:**

1. Laudon, K., & Laudon, J. (2021). *Management Information Systems: Managing the Digital Firm* (17th ed). Pearson.
2. R. Kelly Rainer, Brad Prince, & Casey G. Cegielski. (2014). *Introduction to Information Systems* (5th ed). Wiley.
3. Rainer, R. K., Prince, B., & Watson, H. J. (2017). *Management Information Systems: Moving Business Forward* (4th ed). Wiley.

**MS6105E MICROECONOMICS**

**Prerequisites: Nil**

L	T	P	O	C
2	0	0	4	2

**Total Lecture sessions: 26**

**Course Outcomes:**

- CO1: Analyse the core concepts of value and welfare of firms and society.
- CO2: Apply economic reasoning to firm behaviour and functioning of the market.
- CO3: Evaluate cost behaviour, pricing policies and profit planning of firms.
- CO4: Analyse the market structure and dynamics of optimal allocation.

**General Foundations of Economics and Market Forces**

Introduction to Economics: Economic issues and concepts- Scarcity, choice and resource allocation- Opportunity cost- discounting- production possibility frontier, flow of income and expenditure, Demand and supply framework: Types of demand- determinants of demand- shifts and changes in demand, supply: shifts in supply- simultaneous shifts in demand and supply- price ceiling -price floor, Elasticity of demand (price, income and cross price elasticity) and business decision making: Effect of government intervention in the form of taxes/subsidies/ price restriction on the market and the implications of consumer/producer welfare.

**Theories of Consumption, Production and Cost Output Relationship**

Consumer's choice and behaviour: Theory of diminishing marginal utility- the paradox of value- network externalities, consumer's surplus, Theories of production: Production function: Law of variable proportions- returns to scale, Cost concepts- short run cost and output relationship- break even analysis- long run cost output relationship- economies and diseconomies of scale and scope, Producer's surplus- Evaluating gains and losses from government policies, Consumer's and producer's surplus, Deadweight loss.

**Market: Models, Equilibrium, Failure and Strategies**

Market structure: Competitive market- perfect competition, imperfect competition (Monopoly, Monopolistic competition and Oligopoly) and barriers to entry- Determination of output, pricing and profit maximisation in different markets; Pricing strategies: Price discrimination; Game Theory- Prisoner's Dilemma- Dominant strategy- Maximin- Minimax- Saddle point- Nash Equilibrium; Market failure: Externalities and public goods.

**References:**

1. Pindyck, R.S., & Rubinfeld, D.L., (2017). *Microeconomics* (9<sup>th</sup> ed), Pearson.
3. Samuelson, P.A., & Nordhaus, L.D. (2010). *Economics* (19<sup>th</sup> ed), Tata McGraw Hill.
4. Mankiw, G.N. (2016). *Principles of Microeconomics* (8<sup>th</sup> ed), Cengage Publications.
5. Perloff, J.M. (2015). *Microeconomics* (7<sup>th</sup> ed), Pearson.
6. Koutsoyiannis, M. (2023). *Modern Microeconomics* (2<sup>nd</sup> ed), Bloomsbury Academic.

**MS6106E DECISION MODELS IN MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Design the fundamental concepts of modeling decision problems in management and develop linear models from the verbal description of the real-life managerial situations.
- CO2: Analyse the decision models using graphical and analytical methods, evaluate the solution and conduct post-optimal analysis utilizing optimization software.
- CO3: Formulate and solve integer programming, transportation, assignment and network models, and acquire capability in applying and using queueing models for day to day problems.
- CO4: Contrast decisions under uncertainty, risk, competition and multiple criteria.

**Advanced Mathematical Programming**

Decision Problems: Structure and model formulation - Linear Programming (LP): Formulation, Solution methods, Graphical method, Simplex Tableau method, Duality, Sensitivity Analysis, Post-Optimal Analysis - Integer Linear Programming (ILP): Pure ILP, Pure Binary ILP, Mixed ILP, LP relaxation for ILP, Solution methods for Pure ILP and Mixed ILP: Branch-and-Bound method and Gomory’s cutting plane method, Solution methods for Pure Binary ILP: Additive algorithm - Dynamic Programming

**Network Analysis and Queueing Models**

Transportation Problem: North-West Corner rule, Least Cost method, Vogel’s Approximation method, Stepping Stone method, UV (or Modified Distribution Index method) method – Trans shipment Problem - Assignment Problem: Hungarian Algorithm - Network Problems: Shortest Path Problem, Minimal Spanning Tree Problem, Maximal Flow Problem - Travelling Salesman Problem: Model Formulation and Heuristic methods - Vehicle Routing Problem: Model Formulation and Heuristic methods - Chinese Postman Problem - Queueing Models: Single-server model and Multi(Parallel)-server model.

**Decision Analysis, Game Theory and Goal Programming**

Decision analysis: Decision making under risk, Decision Analysis with Sample information, Decision tree, Decision making under uncertainty - Utility and Decision making - Game theory: Two-person zero-sum games, Games with mixed strategies, Graphical solution procedure - Multi-criteria decisions models: Formulation and solution of goal programming problems, Scoring models, Analytic hierarchy process.

**References:**

1. Anderson, D. R., Sweeney, D. J., Williams, T. A., Camm, J. D., & Cochran, J. J. (2012). *Quantitative Methods for Business*. Cengage Learning.
2. Balakrishnan, N., Render, B., & Stair, R. M. (2007). *Managerial Decision Modeling with Spreadsheets*. Upper Saddle River: Pearson/Prentice Hall.
3. Panneerselvam, R. (2009). *Operations Research* (2nd ed). PHI Learning.
4. Ravindran, A., Phillips, D. T., & Solberg, J. J. (1987). *Operations Research: Principles and Practice*. John Wiley & Sons.
5. Sarker, R. A., & Newton, C. S. (2007). *Optimization Modelling: A Practical Approach*. CRC press..
6. Srinivasan, G. (2017). *Operations Research: Principles and Applications*. PHI Learning.
7. Taha, H. A. (2008). *Operations Research: An Introduction* (8th ed.). Pearson, Dorling Kindersley (India).
8. Winston, W. L. (2022). *Operations Research: Applications and Algorithms*. Cengage Learning.

**MS6107E BUSINESS STATISTICS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Integrate the principles of data collection, organising and description.
- CO2: Evaluate business problems with appropriate probability distributions and statistical terms to make better decisions.
- CO3: Differentiate between various statistical tests and apply an appropriate test in the context of the problem.
- CO4: Integrate critical and integrative thinking in order to communicate the results of the analysis clearly

**Introduction to Statistics**

Data-scales of measurement, cross-sectional and time series data, organizing and visualizing data - Measures of Statistics, Numerical description of data, Exploratory data analysis, Cross tabulations and scatter diagrams. Probability distributions - Introduction to probability and random variables - Discrete Distributions, Continuous Distributions - Sampling–sampling techniques, central limit theorem - Sampling distributions - mean and proportion. Introducing statistical packages – working with statistical packages. Statistical hypothesis testing, Statistical inference, confidence interval estimation for the mean and proportion.

**Testing of Hypothesis**

Hypothesis testing for single populations – about a population mean, variance and proportion. Two Populations – about difference in two means of independent and dependent samples, about two population proportions, about two variances. Tests of goodness of fit and independence. Analysis of variance and design of experiments: Introduction to design of experiments. Fundamental assumptions of analysis of variance, classification of ANOVA – one-way and two-way classification, Fixed/random effects model. Multiple comparison procedures – Tukey’s Honestly Significant Difference test and Tukey-Kramer procedure.

**Parametric and Non Parametric Tests**

Simple linear regression – model, least squares method, coefficient of determination, testing for significance. Multiple linear regression – model, least squares method, multiple coefficient of determination, testing for significance. Non-Parametric Statistics: Mann-Whitney U Test, Wilcoxon Matched-pairs signed rank test, Kruskal - Wallis test, Friedman test, Spearman’s Rank Correlation.

**References:**

1. Anderson, D. R., Sweeney, D. J., Williams, T. A., Camm, J. D., & Cochran, J. J. (2016). *Statistics for business & economics*. Cengage Learning.
2. Black, K. (2009). *Business statistics. Contemporary decision making*, Wiley India Pvt Ltd; Fifth edition.
3. Levine, D. M., Stephan, D. F., & Szabat, K. A. (2017). *Statistics for Managers Using Microsoft Excel*, Pearson, USA.
4. Levin, R. I., & Rubin, D. S. (2021). *Statistics for management*, Pearson Education. Eighth Edition

## MS6108E BUSINESS COMMUNICATION

**Prerequisites: Nil**

L	T	P	O	C
2	0	0	4	2

**Total Lecture sessions: 26**

### Course Outcomes:

- CO1: Distinguish methods to resolve barriers in communication.
- CO2: Express confidence in sharing ideas in formal business interactions.
- CO3: Design methods for effective intercultural and cross-cultural communication.
- CO4: Interpret communication in business interactions.

### Introduction to Business Communication

Introduction to Communication: Formal and Informal Communication, Verbal and Non-verbal Communication - 7 C's of Effective Communication: Completeness, Conciseness, Consideration, Clarity, Concreteness, Courtesy, Correctness - Barriers in Communication - Business Communication & Types: Upward, Lateral, External Communication - Importance of Business Communication: Democratization, Motivation, Relationships, Job Satisfaction, Productivity, Avoiding Conflicts

### Oral Communication

Fundamentals of Oral Communication - Public Speaking for Leadership - Professional Presentations - Professional Meetings and Group Discussions - Story-Telling for Success - Cross-Cultural and Inter cultural Communication

### Written Communication

Introduction to Effective Written Communication and Business Correspondence - Letters, Emails, Memorandums, Business Reports and Summaries.

### References:

1. Bovee, C. L., Thill, J. V., & Raina, R. L. (2018). *Business Communication Today* (14<sup>th</sup> ed.). Pearson Education India.
2. Raman, M., & Singh, P. (2012). *Business Communication* (2nd ed.). Oxford University Press.
3. Sweeney, S. (2003). *English for Business Communication* (Student ed.). Cambridge University Press.

**MS6111E OPERATIONS MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand what is operation, operations management, its strategies and design of operations.
- CO2: Illustrate different basic demand forecasting models and study their accuracy with forecast error.
- CO3: Appraise different layouts from the perspective of various performance measures.
- CO4: Apply production planning and control techniques and eventually plan production schedule.
- CO5: Analyse and control the inventory in operations scenario.

**Operations Concepts and Demand Forecasting**

Operations Management: Introduction, Input-Output Model, Systems Perspective, Functions, Challenges – Operations Strategy: Relevance and Formulation – Operations Design: Manufacturing and Services – Types of Production Systems – Types of Layouts - Demand Forecasting: Time series forecasting, Moving averages, Exponential smoothing, Measuring forecast error, Regression and correlation analysis, Multiple regression analysis, Trend adjustment, Seasonal variations in data, Forecasting in the service sector, Using software in forecasting

**Production Planning and Inventory Control**

Capacity: Definition, Measures, Time horizon in capacity planning, capacity planning framework, capacity augmentation alternatives, Decision tree for capacity planning - Capacity Requirements Planning (CRP) – Aggregate Production Planning (APP) – Master Production Schedule (MPS) – Materials Requirements Planning (MRP) – Manufacturing Requirements Planning (MRP II) – Distribution Requirement Planning (DRP) – Enterprises Resources Planning (ERP) – Resources Planning in Services - Inventory planning for dependent items: MRP - Inventory planning for independent items: Economic Order Quantity model, Economic Production Quantity model, sensitivity analysis - Quantity discount models - Probabilistic models and safety stock - Economic order interval - Selective inventory control

**Operations Scheduling and Operational Control**

Scheduling: Concepts, Performance measures, Key results in Single-Machine Scheduling, Flow shop scheduling, Job shop scheduling, Open shop scheduling and Batch shop scheduling – Assembly Line Balancing - Operational control – Input-Output control, Issues in mass production systems – Theory of Constraints for Operations planning and control – Just-In-Time (JIT) Manufacturing: Concepts, Planning and control in JIT

**References:**

1. Chase, R. B., Shankar, R., & Jacobs, F. R. (2015). *Operations and Supply Chain Management* (14th ed.). Tata McGraw Hill.
2. Heizer, J., Render, B., & Munson, C. (2008). *Operations Management*. Prentice-Hall.
3. Krajewski, L. J., & Ritzman, L. P. (1999). *Operations Management: Strategy and Analysis*. Prentice-Hall.
4. Mahadevan, B. (2015). *Operations management: Theory and Practice*. Pearson Education.
5. Narasimhan, S. L., McLeavey, D. W., & Billington, P. (2002). *Production Planning and Inventory Control*. Prentice-Hall.
6. Panneerselvam, R. (2012). *Production and Operations Management*. Prentice-Hall.

**MS6112E CORPORATE FINANCE: THEORY AND PRACTICE**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Distinguish theoretical and practical perspective of financial management and its practices in Indian and international perspective.
- CO2: Analyse the complex finance problems of an organisation and recommend ideal solution for those problems.
- CO3: Solve financial management business problems using the standard techniques and theoretical principles as per the international standards.
- CO4: Integrate strategic and operational financial management frameworks for any business from the entry level to the advanced level using standard practices.

**Introduction to Financial Management**

Management of Finance, Finance- Functions of Finance, Scope of Financial Management-Objectives of Financial Management, Organisation of Finance Function, Emerging Role of Finance Managers in India. Shareholder's equity: Different forms of capital. Securities premium, Additional paid in capital, Redemption of preference shares, Buy back of equity shares, Statement of Cash flows, Direct and indirect method. Sources of Finance: Long-term Sources of Finance, Capital Markets-Primary Market and Stock Exchange Functions Equity/Ordinary Shares-Term Loans, Debentures/Bonds and Securitisation-Hybrid Financing/Instruments-Preference Share Capital-Convertible Debentures/Bonds-Warrants. Lease Financing and Hire-purchase Finance, Venture Capital Financing.

**Time Value of Money**

Rationale, Techniques-Practical Applications of Compounding and Present Value Techniques-Payback and Discounted Payback Methods, NPV, IRR, Profitability Index Methods-Project Selection under Capital Rationing-Inflation and Capital Budgeting, Long Term Financing Decision-Capital Budgeting-Principles and Techniques, -Nature-Data requirement, Evaluation Techniques-Capital Budgeting Practices in India. Risk in Capital Budgeting. Dividend decisions: Theories and approaches.

**Current Assets Management:**

Working Capital Management-Nature of Working Capital-Planning of Working Capital-Management of Working Capital in India, Inventory Management-Objectives and Techniques, Working Capital Financing-Definition and Mechanism, Capital Structure Design and Approaches, Operating, Financial and Combined Leverage- Total Risk. Capital Structure, Cost of Capital and Valuation-Capital Structure Theories-Net Income Approach-Net Operating Income (NOI) Approach-Modigliani-Miller (MM) Approach-Traditional Approach-Designing Capital Structure-Different Aspects of Capital Structure-Capital Structure Practices in India.

**References:**

1. Chandra, P. (2011). *Financial Management* (8th ed.). Tata McGraw Hill.
2. Khan, M. Y., & Jain, P. K. (2007). *Financial Management: Text, Theory and Cases* (4th ed.). Tata McGraw Hill.
3. Horne, V. (2002). *Financial Management and Policy* (12th ed.). Prentice-Hall of India.
4. Breally, R. A., Myers, S., Allen, F., & Mohanty, P. (2017). *Principles of Corporate Finance* (11th ed.). Tata McGraw Hill.
5. Jordan, B. D., Westerfield, R., & Ross, S. (2012). *Fundamentals of Corporate Finance* (10th ed.). Tata McGraw Hill.
6. Damodaran, A. (2017). *Corporate Finance* (2nd ed.). John Wiley & Sons.
7. Pandey, I. M. (2017). *Financial Management* (11th ed.). Vikas Publishing House Pvt. Ltd.



## MS6113E MANAGING PEOPLE IN ORGANISATIONS

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

### **Course Outcomes:**

- CO1: Acquire awareness on the evolution, current issues, practices and trends of human resource management and their effective management in organisations.
- CO2: Apply an understanding of human resource management functions and practices including manpower planning, recruitment, selection methods, training, and performance appraisal.
- CO3: Conduct job analysis and job evaluation, develop job descriptions, talent development, performance management, industrial relations and determine compensation policies.
- CO4: Design training, engagement, compensation programs to suit the changing scenario of people demographics and expectations in an Indian and global context

### **Evolution and Maturity of People Management in Organisations**

Introduction: Concept, Nature and Scope of HRM. Growth and Development of HRM in India - Emerging Trends of HRM in a globalised economy - Contemporary Issues in HRM: Outsourcing, BPO and Call Centres, Globalisation, Mergers and Acquisitions - Organisational objectives, functions, relationships, Organisational structure of formal and Organisations - Strategic HRM, Scope and objectives of Talent Management- Analytics and AI in HRM, HR Information System, Technology based HRM

### **Employee Lifecycle in Organisations**

Human Resource planning: Manpower forecasting process and techniques, job analysis and job design - Sourcing, recruiting yield, recruitment channels, recruitment budgeting, - selection, psychometrics, assessment centers, offer letter generation, onboarding and orientation - Training and development, nature of training, objectives in training, types of training, requirements of effective training conventional training techniques, management development, evaluating training effectiveness - Performance appraisal: Traditional performance appraisal systems, appraisal programs, continuous appraisal methods - Career management.

### **Functions of People Management in Organisations**

Compensation: Managing Basic Remuneration and Incentives, Factors affecting compensation policy - equity and compensation - comparable value, job evaluation, job evaluating systems - Total Rewards, Employee Benefits - Employee Relations, Employee Engagement - Empowering Employees, Promotions-Basis of Promotions. Transfers, Separations and Rightsizing - Labour Laws and Industrial Relations, trade unions, dispute resolution, employee discipline - Employee Welfare: Safe and Healthy Environment, Mental health - Evaluating HRM Effectiveness - International HRM, expatriation and repatriation - future of HRM.

### **References:**

1. Armstrong, M & Taylor, S (2020) *Armstrong's Handbook of Human Resource Management Practice*, 15th ed, Kogan Page.
2. G. Dessler, G & Varkkey, B (2019) *Human Resource Management*, 16th ed. Person Education,
3. Noe, R. A; Gerhart,B; Wright, P & Hollenbeck, J. R (2021) *Fundamentals of Human Resource Management*, 8th ed, McGraw Hill.
4. Verhulst, S. L.; DeCenzo, D. A. & Yadav, R. S. (2021), *Human Resource Management*, 13th ed. Wiley.

**MS6114E BUSINESS LAW**

**Prerequisites: Nil**

L	T	P	O	C
2	0	0	4	2

**Total Lecture sessions: 26**

**Course Outcomes:**

- CO1: Analyse the scope of the law in the legal environment of business
- CO2: Appraise the nature of contracts and the implications of IPR in business activities
- CO3: Estimate the legal matters related to establishing and winding up a company
- CO4: Critique laws relating to consumer protection and market competition

**Business and Legal environment**

Laws of contract, The Indian Contract Act, Offer, acceptance, Consideration, Performance of contract, Discharge and breach of contract, Quasi contracts, Special Contracts, indemnity and guarantee, Bailment, contract of agency, Indian Partnership Act, Law of Insurance, Competition Act, Intellectual property laws, Types of IPR laws

**Company Law**

Nature and characteristics, Classification of companies, Formation- Memorandum and Articles of Association, Prospectus- Power- duties and liabilities of Directors- winding up of companies- Company management, Industrial Law, The Factories Act, The Trade Unions Act, The Industrial Disputes Act

**Other Laws:**

The Consumer Protection Act, Objects, Consumer Dispute- Complaint - Unfair Trade Practices - Restrictive Trade Practices- Rights of Consumers-Consumer Disputes Redressal Agencies, FEMA – 1999, Competition Act – 2002 (MRTP), Consumer Protection Law: Consumer protection act 1986, consumer, person, goods, services, trader, manufacturer, consumer dispute, complaint, The Information Technology Act-2000 and 2002-Digital Signature - Digital Signature Certificate- Electronic Governance- Electronic Records- Certifying Authorities- Penalty & Adjudication - Introduction to Cyber Laws - Cybercrimes.

**References:**

1. Ashwathappa, K. (2014). Essentials of Business Environment (12th ed). HIMALAYA Publishing House.
2. Garg, K., Sareen, V., Sharma, M., & Chawla, R. (2014). *Mercantile Law* (15th rev.ed). Kalyani Publishers (15th rev.ed).
3. Kapoor, N. D. (2020). Elements of mercantile law: Including company law and industrial law. Sultan Chand & Sons.
4. Pathak, A. (2013). *Legal Aspects of Business*. McGraw Hill Education.
5. Sheth, T. (2011). *Business law*. Pearson.

**MS6115E CORPORATE ETHICS AND GOVERNANCE**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture sessions: 39**

**Course Outcomes:**

CO1: Estimate different viewpoints on business-government relations.

CO2: Formulate vocabulary, imagery and analysis of corporate social responsibility practices in India.

CO3: Criticise and differentiate ethical and unethical practices in business, and analyse the gravity of

**Introduction-Studying business, government and society**

Society and formation of states, Global focus. The business environment, Legal issues and business, Business power Critics of business, Markets and non-market conditions, Markets and management beyond markets, Ethical questions in business, Business in the political process, Government-business relationship, Regulatory process and reforms, Globalisation

**Corporate Governance**

Insider trading, outsider trading, committees on corporate governance, Cadbury committee-London stock exchange, Kumaramangalam Birla Committee-SEBI, the role of independent directors-non-executive directors, corporate governance in the banking sector. Basel I, II & III, BIS reforms, RBI initiatives, Indian banking sector, Business Ethics: Corporate ethics-Concept and Importance –benefits of corporate ethics-corporate philosophy and culture-managing ethics and legal compliance-case analysis, Corporate crimes-company and society relations, corporate social challenges-corporate accountability-business and ecology-case analysis.

**Corporate social responsibility**

Building Blocks of CSR / Sustainability, Sustainable responsible business , Overview of CSR/Sustainability, The Triple Bottom-line Approach, Philanthropy – Conventional and Strategic, Environmental issues, Social issues, Labour and related issues, Ethical and Governance issues, Human Rights – UN Compact, charter, Standards and Codes, Engaging the stakeholder, Global Reporting Initiative Guideline G-3, NGO and CSR, Programmes for the neighbourhood, Markets at the BOP, Communication, Dilemmas, Dow Jones Sustainability Index / FTSE4GOOD Index, ISO 26000, Kyoto protocol. Business Ethics

**References:**

1. Amaeshi, K., Nnodim, P., & Osuji, O. (2013). *Corporate social responsibility, entrepreneurship, and innovation*. Routledge.
2. Fernando, A. C. (2019). *Business ethics and corporate governance*. Dorling Kindersley (India), licensees of Pearson Education in South Asia.
3. Prahalad, C. K. (2006). *The fortune at the bottom of the pyramid*. Wharton School Publishing
4. Steiner, J. F., & Steiner, G. A. (2011). *Business government and society: A managerial perspective*. McGraw-Hill India.
5. Willard, B. (2005). *The next sustainability wave: building boardroom buy-in*. New Society Publishers

## MS6116E COMPETITION AND STRATEGY

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture sessions: 39**

### Course Outcomes:

- CO1: Assess the strategic decisions that organisations make and have an ability to engage in strategic planning and strategy formulation and implementation.
- CO2: Integrate and apply knowledge gained in basic courses to the formulation and implementation of strategy from holistic and multi-functional perspectives.
- CO3: Analyse and evaluate critically real life company situations and develop creative solutions, using a strategic management perspective.
- CO4: Facilitate credible business analysis in a team setting.

### Strategic Management Processes and Concepts

Strategic Analysis – concept of strategy, Strategy formulation – mission, business definition, objectives – environmental appraisal – organisation appraisal – Strategic management process and concepts, value of vision, mission and corporate objectives, the role of corporate governance and stakeholder management, coherence in strategic direction. External analysis: Porter's Five Forces model, the general environment, the competitive environment, the national environments, and creating the environmentally aware organisation. Internal analysis: value chain analysis, resource-based view of a firm, evaluation of firm performance, the balanced scorecard

### Strategic Alternatives

Strategic alternatives – growth, diversification, merger, disinvestment strategies – strategic choice – BCG analysis, competitor analysis- The nature of Competitive Advantages and Strategic Formulation-Nature of competitive advantages and sustainability. Different levels of strategy. Low cost, differentiation and focus strategies. Factors affecting a nation's competitiveness. International expansion. International, multidomestic, global and transnational strategies.

### Strategy Implementation

Strategy implementation – activating strategies, organisation structure, functional plans and policies, corporate culture. Strategy evaluation – technique of strategic evaluation and control. Creating value and diversification, outsourcing, acquisitions, internal new ventures, international strategic alliances, and restructuring. Horizontal and vertical integration. Implementation Strategic leadership, creating a learning organisation and an ethical organisation. Strategic control and corporate governance. Creating effective organisational designs. Managing innovation and fostering corporate entrepreneurship.

### References:

1. Grant, Robert M (2021). *Contemporary strategy analysis*. John Wiley & Sons.
2. Kim, W Chan and Renée Mauborgne (2015), *Blue Ocean Strategy: How to Create Uncontested Market Space and Make The Competition Irrelevant*, Harvard Business Press, 2015.
3. Porter, Michael(2014), *Competitive Strategy: Techniques For Analysing Industries And Competitors*, The Free Press.

**MS6117E BUSINESS RESEARCH METHODS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Devise research design for a business problem.
- CO2: Evaluate appropriate statistical tool among various alternatives to model the data.
- CO3: Design the analytical model for finding business solutions.
- CO4: Develop hands on experience on the statistical software package for analysing data.

**Research Process and problem formulation**

Research methodology- Understanding the language of research – Concepts, constructs, operational definitions, variables, propositions, hypotheses, theories, and models - Research process- Literature review -Types of research- Exploratory, Explanatory, Causal, Descriptive and Explanatory research, Problem identification and formulation - Research question – Research hypothesis – Measurement issues - Methods of data collection- Types of data- Primary data- Scales of measurement: Nominal, ordinal, interval and ratio scales.

**Research Design**

Sources and collection of data- Observation method- Interview method– Questionnaire Survey design - Experiments- Secondary data, Research design- Qualitative and Quantitative Research, Mixed research, Alternative Research designs: cross sectional, longitudinal, causal research design; Case study design versus Action research, Variables: Dependent, Independent, Moderating, Mediating, Intervening, Extraneous types, Basic analysis for research: Editing, Coding and tabulation, Sampling Steps and characteristics of sampling design- Sampling: concepts of Population, Sample, Sampling Frame, - Sample size and its determination - Types of sampling distributions - Sampling error.

**Data Analysis and Reporting**

Computer packages for data analysis.-SPSS, Exploratory data analysis, Descriptive Statistics, Measures of central tendency, Measures of dispersion, Skewness, Kurtosis, Various statistical distributions, Testing of hypothesis and Inferential statistics. Bivariate analysis for association among variables, Correlation and regression, ANOVA versus, means test and t test, Choice of bivariate methods under various distributions and scales of data, Graphical Methods. Meaning of Interpretation - Precaution in Interpretation - Significance of Report Writing -Different Steps in Writing Report - Layout of the Research Report - Types of Reports -Mechanics of Writing a Research Report - Computer Applications

**Reference:**

1. Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business Research Methods*. Cengage learning.
2. Malhotra, N. K., & Dash, S. J. M. R. (2010). An Applied Orientation. *Marketing Research*,
3. Cooper, D. R., Schindler, P. S., Cooper, D. R., & Schindler, P. S. (2003). *Business Research Methods*.

**MS6118E DATA SCIENCE FOR BUSINESS**

**Prerequisites: Nil**

L	T	P	O	C
2	0	0	4	2

**Total Lecture Sessions: 26**

**Course Outcomes:**

- CO1: Conclude the benefits that data science brings to the business problems.
- CO2: Illustrate the steps of a data-driven decision framework.
- CO3: Appraise the relation between data science tasks, software tools, and hardware tools.
- CO4: Create a set of ethical tenets to guide data work at their organisations.

**Fundamentals of Data Science**

Data Science, Engineering, Data-Driven Decision-Making, Data Science Process, Big Data, Data Mining, Data Analytic Thinking, Business problems and Data Science solutions, Data Science and Business Strategy, Introduction to Data Science tools, Ethics and Data Science

**Data in Business**

Data preparation and Data cleaning, Data Visualisation, Multi-dimensional data and visualisation, Data visualisation tools, Exploratory data analysis, Handling large data, Introduction to Big Data Analysis, Database management, NoSQL, Introduction to Big Data Tools

**Techniques and Tools in Data Science**

Machine learning and Data Science, Text Mining, Decision Trees, Classification, Applications of Data Science, Data privacy and ethics, and data protection.

**References:**

1. Cielen, D., Meysman, A. D. B., & Ali, M. (2016). *Introducing Data Science*. Dreamtech Press.
2. Grus, J. (2019). *Data Science from Scratch: First Principles with Python* (2nd edition). O'Reilly.
3. Hastie, T., Tibshirani, R., & Friedman, J. (2009). *The Elements of Statistical Learning*. Springer. <https://doi.org/10.1007/978-0-387-84858-7>
4. James, G., Witten, D., Hastie, T., & Tibshirani, R. (2013). *An Introduction to Statistical Learning* (Vol. 103). Springer, New York. <https://doi.org/10.1007/978-1-4614-7138-7>
5. Provost, F., & Fawcett, T. (2013). *Data Science for Business: What You Need to Know about Data Mining and Data-Analytic Thinking* (1st edition). O'Reilly Media.
6. Zumel, N., & Mount, J. (2014). *Practical Data Science with R* (1st edition). Manning Publications.

## MS6191E SUMMER INTERNSHIP PROJECT

L	T	P	O	C
0	0	0	2	1

### Course Outcomes:

CO1: Analyse the practical working of an organisation in the corporate/ industrial sector.

CO2: Formulate appropriate model for the given problem on the perspective of the organisation.

CO3: Critique the current practices and generate appropriate solutions and infer the theoretical relevance of the solution applied for the problem.

CO4: Justify the aptness of the solution identified for the problem within the organisation.

### Course Summary

The summer internship project is a business project undertaken by the students after the second semester examinations during their summer break (May – June). The project is intended to acquire practical experience during the course of study in any organisation of high repute as per the students' choice. The major objective of the summer internship is to gain a first-hand understanding about the real-world business environment. The domain of the internship may be based on the students' area of interest. An internal guide from the Institute and an external guide (where the student undergoes internship) are to be chosen. During the internship, students are expected to find an apt solution, applying the theoretical principles which were studied during the first two semesters of their graduation programme, for a real-world problem of the organisation that they have been working for. A presentation is required at the beginning of the third semester on the objective, approach, solution and recommendation followed by submission of report detailing the aspects of the project.

## MS7101E ORGANISATIONAL STRUCTURE AND DESIGN

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

### **Course Outcomes:**

CO1: Analyse the relationship between organisation and its external environment

CO2: Invent ideas of design, structure and culture which create organisations.

CO3: Distinguish the contemporary issue in organisational theory including measuring effectiveness, change and conflict management.

### **Organisational Effectiveness and Value Creation**

Overview of organisational theories-Value Creation in organisations-Organisational effectiveness; importance and approaches-Agency perspective-Role of ethics in organisations-Organisation and environment-Resource Dependence Theory - Strategies for managing resource dependence-Transaction Cost Theory.

### **Elements of Organisational Design**

Organisational Design-Dimensions of organisational design-Organisational configuration; Mintzerberg's types; Generic designs; Mechanistic and Organic-Fundamental of organising; key elements of structure; Determinants of structure; Functional Structure, Divisional Structure, Matrix, Contemporary structures-Organisation and strategy; Role of Strategy in Structure-Framework for Selecting Strategy & Design; Porter model of competitive strategies, Miles' and Snow's strategy typology-Managing organisational culture; Edgar Schein's model of culture.

### **Organisational Change and Conflict**

Organisational change; forces for and resistance to change-Lewin's Force-Field Theory- Types of change; Evolutionary & Revolutionary-Managing change-Decision Making; Models and biases-organisational Conflict; Pondy's Model of organisational Conflict-Conflict Resolution Strategies-organisational Power & Politics

### **References:**

1. Daft R. L. Murphy J. & Willmott H. (2010). *Organization Theory and Design*. Cengage Learning EMEA.
2. Jones G. R. (2013). *Organizational Theory Design and Change* (7th ed.). Pearson.
3. Robbins S. P. (1990). *Organization Theory : Structure Design and Applications* (3rd ed.). Prentice Hall.



## MS7102E MACRO ECONOMICS

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

### **Course Outcomes:**

- CO1: Analyse causes and consequences of unemployment, inflation and economic growth.  
CO2: Anticipate the causes of business cycles and be able to critically think macro economic policies.  
CO3: Analyse the determinants of the relative strengths of fiscal and monetary policy for affecting gross domestic product.  
CO4: Estimate the determinants of long-term economic growth, including the role of saving and investment on the rate of growth.

### **Introduction to Macro Economics**

Difference between Micro and Macro Economics, macroeconomic aggregates, national income accounting, factors determining national income, and applications of national income statistics.

### **National Income Equilibrium**

Concepts of equilibrium, consumption and savings, investment theory, factors influencing investment, determination of equilibrium, Keynesian theory of employment, consumption function, and investment multiplier.

### **Inflation, Business Cycles, and Monetary Policies**

Types of inflation, business cycles, fiscal and monetary policies, monetary system, banking in India, development banks, role of Reserve Bank of India, money market, capital market, and fundamental analysis of stock markets.

### **References:**

1. Dornbusch, R., Fischer, S., & Startz, R. (2012). *Macroeconomics* (10th ed.). Tata McGraw-Hill.
2. Froyen, R. T. (2013). *Macroeconomics: Theories and Policies* (10th ed.). Pearson.
3. Mankiw, G. N. (2016). *Principles of Macroeconomics* (8th ed.). Cengage.
4. Blanchard, O. J. (2017). *Macroeconomics* (7th ed.). Pearson.
5. Romer, D. (2018). *Advanced Macroeconomics* (5th ed.). McGraw-Hill Education.
6. Abel, A. B., Bernanke, B. S., & Croushore, D. (2020). *Macroeconomics* (10th ed.). Pearson.

**MS7192E BUSINESS RESEARCH PROJECT-I**

**Prerequisites: Nil**

L	T	P	O	C
0	0	0	6	3

**Course Outcomes:**

- CO1: Integrate knowledge of the diverse technical and managerial aspects of the problem identified in research.
- CO2: Estimate the problem and check the relevance of the problem in the current business scenario.
- CO3: Formulate a comprehensive review of literature available and to identify the methodological and conceptual background of any study.
- CO4: Critique the progress of the research in an impressive and convincing way for further evaluation and guidance.

The Business Research Project - I is a practical business research project in the third semester of the MBA programme after a successful completion of the summer internship project. The project is intended to enhance the research aptitude among the MBA students. The project carries three credits in the third semester, and is also carried forward to the fourth semester as Business Research Project-II. The problem identification, review of current literature and identifying methodological and conceptual background of the study are done in the third semester, and the evaluation is conducted based on the draft submission and presentation during the semester against its three credits.

**MS6174E TECHNICAL COMMUNICATION AND WRITING**

**Pre-requisites: NIL**

L	T	P	O	C
2	1	0	3	2

**Total Lecture Sessions: 26**

**Course Outcomes:**

- CO1: Apply effective communication strategies for different professional and industry needs.
- CO2: Collaborate on various writing projects for academic and technical purposes.
- CO3: Combine attributes of critical thinking for improving technical documentation.
- CO4: Adapt technical writing styles to different platforms.

**Technical Communication**

Process(es) and Types of Speaking and Writing for Professional Purposes - Technical Writing: Introduction, Definition, Scope and Characteristics - Audience Analysis - Conciseness and Coherences - Critical Thinking - Accuracy and Reliability - Ethical Consideration in Writing - Presentation Skills - Professional Grooming - Poster Presentations

**Grammar, Punctuation and Stylistics**

Constituent Structure of Sentences - Functional Roles of Elements in a Sentence - Thematic Structures and Interpretations - Clarity - Verb Tense and Mood - Active and Passive Structures - Reporting Verbs and Reported Tense - Formatting of Technical Documents - Incorporating Visuals Elements – Proofreading

**Technical Documentation**

Types of Technical Documents: Reports, Proposals, Cover Letters - Manuals and Instructions - Online Documentation - Product Documentation - Collaborative Writing: Tools and Software - Version Control Document Management - Self Editing, Peer Review and Feedback Processes

**References:**

1. Foley, M., & Hall, D. (2018). *Longman advanced learner's grammar, a self-study reference & practice book with answers*. Pearson Education Limited.
2. Gerson, S. J., & Gerson, S. M. (2009). *Technical writing: Process and product*. Pearson.
3. Kirkwood, H. M. A., & M., M. C. M. I. (2013). *Hallidays introduction to functional grammar* (4th ed.). Hodder Education.
4. Markel, M. (2012). *Technical Communication* (10th ed.). Palgrave Macmillan.
5. Tuhovsky, I. (2019). *Communication skills training: A practical guide to improving your social intelligence, presentation, Persuasion and public speaking skills*. Rupa Publications India.
6. Williams, R. (2014). *The Non-designer's Design Book*. Peachpit Press.

## IE6001E ENTREPRENEURSHIP DEVELOPMENT

**Pre-requisites: NIL**

L	T	P	O	C
2	0	0	4	2

**Total Lecture Sessions: 26**

### Course Outcomes:

- CO1: Describe the various strategies and techniques used in business planning and scaling ventures.  
CO2: Apply critical thinking and analytical skills to assess the feasibility and viability of business ideas.  
CO3: Evaluate and select appropriate business models, financial strategies, marketing approaches, and operational plans for startup ventures.  
CO4: Assess the performance and effectiveness of entrepreneurial strategies and actions through the use of relevant metrics and indicators.

### Entrepreneurial Mindset and Opportunity Identification

Introduction to Entrepreneurship Development - Evolution of entrepreneurship, Entrepreneurial mindset, Economic development, Opportunity Recognition and Evaluation - Market gaps - Market potential, Feasibility analysis - Innovation and Creativity in Entrepreneurship - Innovation and entrepreneurship, Creativity techniques, Intellectual property management. Case studies.

### Business Planning and Execution

Business Model Development and Validation - Effective business models, Value proposition testing, Lean startup methodologies - Financial Management and Funding Strategies - Marketing and Sales Strategies - Market analysis, Marketing strategies, Sales techniques - Operations and Resource Management - Operational planning and management, Supply chain and logistics, Case studies.

### Growth and Scaling Strategies

Growth Strategies and Expansion - Sustainable growth strategies, Market expansion, Franchising and partnerships - Managing Entrepreneurial Risks and Challenges - Risk identification and mitigation, Crisis management, Ethical considerations - Leadership and Team Development - Effective communication - Entrepreneurial Ecosystem and Global Perspectives - Entrepreneurial ecosystem, Case studies.

### References:

- 1.Kaplan, J. M., Warren, A. C., & Murthy V. (Indian Adoption) (2022). Patterns of entrepreneurship management. John Wiley & Sons.
- 2.Kuratko, D. F. (2016). Entrepreneurship: Theory, process, and practice. Cengage learning.
- 3.Barringer, B. R. (2015). Entrepreneurship: Successfully launching new ventures. Pearson Education India
- 4.Rajiv Shah, Zhijie Gao, Harini Mittal, Innovation, Entrepreneurship, and the Economy in the US, China, and India, 2014, Academic Press
5. Sundar,K.(2022). Entrepreneurship Development, 2<sup>nd</sup> Ed , Vijaya Nickol Imprints, Chennai
6. E. Gordon,Dr. K. Natarajan., (2017).Entrepreneurship Development, 6<sup>th</sup> Ed, Himalya Publishers,Delhi
7. Debasish Biswas, Chanchal Dey,Entrepreneurship Development in India, 2021, Taylor & Francis.

## MS7111E INTERNATIONAL BUSINESS

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture sessions: 39**

### Course Outcomes:

CO1: Differentiate between theoretical and practical perspective of doing business internationally and make suitable judgements

CO2: Evaluate international business environment and scenario of individual countries

CO3: Construct strategic and operational frameworks for entry into international business and understand its implications

CO4: Analyse the legal structure, environmental, political, cultural, geographical environment of any nation so as to advice the business in making right decisions

### Introduction to International Business

Nature and scope of international business, reasons and benefits, modes of entry, internationalization process, environmental factors, trade agreements, and registration formalities.

### International Finance

Foreign exchange markets and dealings, exchange rates and determinants, foreign exchange exposure, FEMA regulations, international economic organisations, and international financial systems.

### Globalization and Liberalisation

Global trading environment, tariff and non-tariff barriers, international financial environment, foreign investments, international economic institutions and agreements, regional trading blocs, and trade barriers analysis.

### References:

1. Hill, C. W. L. (2020). *Global Business Today*. McGraw Hill.
2. Bhattacharya, B. (1996). *Going International: Response Strategies of the Indian Sector*. Wheeler Publishing.
3. Danoes, J. D., & Radebaugh, L. H. (1998). *International Business: Environment and Operations* (8th ed.). Addison Wesley.
4. Griffin, R. W., & Pustay, M. W. (1999). *International Business: A Managerial Perspective*. Addison Wesley.
5. Paul, J. (2010). *Business Environment: Text and Cases*. Tata McGraw Hill.
6. Jain, K. S., & Jain, A. V. (2017). *Foreign Trade - Theory, Procedures, Practices & Documentation*. Himalaya Publishing House.

**MS7193E BUSINESS RESEARCH PROJECT- II**

**Prerequisites: MS7192E**

L	T	P	O	C
0	0	0	6	3

**Course Outcomes:**

- CO1: Integrate knowledge of the diverse technical and managerial aspects of the problem identified in research.
- CO2: Estimate the problem and check the relevance of the problem in the current business scenario.
- CO3: Formulate a comprehensive review of literature available and to identify the methodological and conceptual background of any study.
- CO4: Critique the progress of the research in an impressive and convincing way for further evaluation and guidance.

The Business Research Project – II is a practical business research project in the fourth semester of the MBA programme after a successful completion of the Business Research Project- I. The project is intended to enhance the research aptitude among the MBA students. The course is evaluated in the semester in two phases and based on the relevant methodologies applied by the students and their learning in hands on application of methodologies and tools in their respective research problems. The course is also evaluated for their project dissertation based on their articulation skills and writing.

**MS7120E DISCRETE SYSTEMS SIMULATION**

**Prerequisites:** MS6111E Operations Management

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

CO1: Develop simulation models for real life systems.

CO2: Generate pseudo random numbers and random variates for selected probability distributions.

CO3: Ability to test the statistical stability of random variates.

CO4: Ability to simulate queueing systems, inventory systems, production systems, material-handling systems, and health care systems using discrete-event system simulation.

**Fundamentals of Simulation and Random Numbers**

Simulation: Introduction, Areas of Applications, Advantages and Disadvantages – Systems and Systems Environment – System Components – Discrete and Continuous Systems – Model of a System – Types of Models – Steps in Simulation Study – Discrete-Event System Simulation Concepts: Event scheduling/Time Advance algorithm – Random numbers: Manual, Table, Algorithms; Methods of generation of pseudo random numbers; Mid-Square, Mid-Product, Constant Multiplier, Additive-congruential and Multiplicative-congruential methods.

**Generation and Testing of Random Variates, and Simulation Data analysis**

Random Variate generation for standard distributions: Uniform, Exponential, Poisson, Binomial, Normal, Gamma – Testing of Random Variates – Development of models using High-level languages - Simulation Example: Single-server queueing model, Monte-Carlo Simulation - Steps in design of Simulation experiments - Input Data Modelling: Data Collection, Identifying the distribution with data, Parameter Estimation, Goodness-of-Fit tests, Selecting Input models without data, Multivariate and Time-series input models – Verification and Validation of Simulation models: Face validity, Validation of model assumptions, Validation Input-Output transformations, Using historical input data, Turing test – Output Analysis: For terminating simulations, For Steady-state simulations.

**Simulation Examples and Case Studies**

Simulation of parallel server queueing systems, material-handling systems, production systems, inventory systems, health Care systems, and various business processes etc.

**References:**

1. Banks, J., Corson J. S., Nelson, B. L., Nicol D. M., & Shahabudeen, P. (2012). *Discrete event system simulation* (5th ed.). Pearson Education India.
2. Narsingh, D. (2010). *System simulation with digital computer*. Prentice Hall India Learning Pvt. Ltd.
3. Law, A. M. (2015). *Simulation modelling and analysis*. Tata McGraw Hill.
4. Kelton, D., Sadowski, R. P., & Zupick, N. B. (2014). *Simulation with Arena*. McGraw Hill.

**MS7121E ADVANCED OPERATIONS RESEARCH**

**Prerequisites:** MS6111D Decision Models in Management

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the relationship between the continuous and the discrete optimization.
- CO2: Apply general methods in the modelling of discrete optimisation problems.
- CO3: Develop knowledge on P class and NP class optimisation and decision problems.
- CO4: Learn decomposition principle and column generation method for difficult to solve discrete optimisation problems.

**Formulations**

Optimality and Relaxation - Linear Programming Relaxation – Integer Programming (IP) – Formulating IPs and Binary IPs – Automatic Problem Preprocessing for Binary IPs – Combinatorial Explosion – Mixed Integer Formulations – Alternative Formulations – Good and Ideal Formulations – Propositional Logic – Cardinality Formulas – 0-1 Linear Inequalities – Cardinality Rules – Mixing Logical and Continuous Variables – Additional Global constraints - Combinatorial Relaxations – Lagrangian Relaxation – Primal Bounds: Greedy and Local search.

**Well-solved Problems, Problem Reductions and Complexity**

Properties of Easy Problems – Integer Programs with Totally Unimodular Matrices – Complexity – Decision Problems and Classes: NP (Non-deterministic Polynomial problems) and P (Polynomial problems) – Polynomial Reduction and the Class NP-Complete – Consequences of  $P = NP$  or  $P \neq NP$  – Optimization and Separation.

**Decomposition and Column Generation Methods**

Decomposition Principle – Dantzig-Wolfe decomposition Technique: Master Problem and Sub-problem – Application of the Revised Simplex method – Calculation and Use of Lower Bounds – Examples: Initialization step, Inequality constraints, Equality constraints, Unbounded region, Bounded region, Economic Interpretation – Duality and relationship with other decomposition procedures.

**References:**

1. Appa, G. M., Pitsoulis, L., & Williams, H. P. (Eds.). (2006). *Handbook on modelling for discrete optimization* (Vol. 88). Springer Science & Business Media.
2. Bazaraa, M. S., Jarvis, J. J., & Sherali, H. D. (2014). *Linear programming and network flows* (2nd ed.). Wiley India.
3. Hillier, F. S., & Lieberman, G. J. (2005). *Introduction to operations research: Concepts and cases* (8th ed.). Tata McGraw Hill Education.
4. Hoogeveen, H., Van Norden, L., & van de Velde, S. (2006). Lower bounds for minimizing total completion time in a two-machine flow shop. *Journal of Scheduling*, 9(6), 559-568.
5. Kumar, S. S., Rajendran, C., & Leisten, R. (2021). Bounding strategies for obtaining a lower bound for N-job and M-machine flowshop scheduling problem with objective of minimising the total flowtime of jobs. *International Journal of Operational Research*, 41(2), 244-269.
6. Papadimitriou, C. H., & Steiglitz, K. (2000). *Combinatorial optimization: Algorithms and complexity*. Dover Publications Inc.



**MS7122E QUALITY CONTROL AND MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture sessions: 39**

**Course Outcomes:**

- CO1: Understand the basics of various quality concepts, evolution of quality management, and quality principles, philosophies and practices.
- CO2: Apply statistical quality controls to improve quality in process and service oriented firms.
- CO3: Understand and analyse the process capability study.
- CO4: Apply quality tools and techniques to enhance firm's quality performance.
- CO5: Create awareness of Quality Management Systems.

**Quality: Fundamentals and Concepts**

Quality: Concepts, Need, Evolution, Definition, Perspective – Total quality concept: Design, Inputs, Process and Output – Attitude and involvement of top management – Customer focus – Customer perception – Customer retention – Dimensions of product and services quality – Costs of quality – Economics of quality – Quality loss function - Concepts of Quality circle – Japan's 5S principles and 8D methodology

**Statistical Quality Control**

Chance and assignable causes of process variation - Control Charts for variables; X, R, S charts - Control Charts for attributes; p, np, c and u charts – Warning and modified control limits – Control chart for individual measurements – Multi-Vari chart – X charts with linear trend – Chart for moving averages and ranges – Cumulative-sum and exponentially weighted moving average control charts – Process stability – Process capability analysis with Histogram/Probability-plots/Control chart – Gauge capability studies – Specification limits setting – Acceptance sampling: Fundamental, Operating Characteristics (OC) curve – Sampling plans for attributes: Simple, Double, Multiple, and Sequential – Sampling plans for variables – MIL-STD-105D, MIL-STD-414E and IS2500 standards – Reliability concepts: Definition, Reliability in series and parallel, Product-life characteristics curve – Total Productive Maintenance (TPM) – Terotechnology – Business Process Improvement

**Quality Tools, Techniques and Management Systems**

7 traditional tools of quality – Failure Mode Effect Analysis (FMEA): Reliability, Failure-rate, FMEA stages, Design, Process, and Documentation – Quality Function Deployment (QFD): Benefits, House of quality – Taguchi's technique: Quality loss function, parameter design, tolerance design, and signal-to-noise ratio – Quality Management Systems: IS/ISO 9004:2000 – Documentation guidelines for performance improvements – Quality Audits - QS 9000 – ISO 14000 concepts – Total Quality Management (TQM): Culture, Framework, Benefits, Awareness, and Obstacles – Employee involvement: Motivation, Empowerment, Team and Teamwork, Recognition and Reward, and Performance Appraisal

**References:**

1. Besterfield, D. H., Besterfield-Michna, C., Besterfield, G. H., Besterfield-Sacre, M., Urdgwareshe, H., & Urdgwareshe, R. (2018). *Total quality management* (5th ed.). Pearson Education.
2. Indian standard – Quality Management Systems – Guidelines for Performance Improvement (5th Revision), Bureau of Indian standards, New Delhi.
3. Krishnaiah, K. (2014). *Applied statistical quality control and improvement*. Prentice-Hall India.
4. Montgomery, D. C. (2008). *Introduction to statistical quality control* (4th ed.). Wiley India Pvt. Ltd.
5. Panneerselvam, R., & Sivasankaran, P. (2014). *Quality management*. Prentice-Hall Learning.

**MS7123E SUPPLY CHAIN ANALYTICS**

**Prerequisites:** MS6111E Operations Management, MS6106E Decision Models in Management

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the fundamentals of supply chain analytics.
- CO2: Understand how supply chain optimization brings value to the enterprise.
- CO3: Understand network models in transportation.
- CO4: Design warehouse models to enrich performance of supply chains.
- CO5: Explore models and strategies in inventory management.
- CO6: Formulate models to analyse large scale supply chain systems.

**Fundamentals of Supply Chain Analytics**

Analytics: Introduction, predictive, descriptive and prescriptive analytics – Data driven supply chains: Basics, transforming supply chains, Barriers to implementation, road map – Multi Criteria Decision Making models: Data Envelopment Analysis (DEA), Fuzzy Logic techniques, Analytical Network Process (ANP), Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS); Application in Supply Chain Management

**Network, Transportation and Routing Models**

Basics of Graphs – Shortest Path Problem: Algorithms and Formulation - Minimal Spanning Tree Problem: Algorithm and Formulation – Maximal Flow Problem: Augmenting Path Algorithm and Formulation – Minimum Cost Flow Problem: Formulation – Network Simplex Method – Multistage Transportation and Transshipment Problems – Set Covering Problem – Set Partitioning Problem – Travelling Salesperson Problem and variants: Formulation and Heuristics – Advanced Vehicle Routing Problem and variants: Formulation and Heuristics – Scheduling Algorithms: Deficit function approach and Linking algorithms

**Warehousing and Inventory Decisions**

Warehouse location models: P-Median methods, Guided Linear programming approach, Balmer-Wolfe method – Greedy Drop heuristic – Dynamic location models, Space Determination and Layout methods – Inventory aggregation models, Dynamic Lot Sizing Methods – Multi-Echelon Inventory models – Aggregate Inventory Systems – Risk Analysis in Supply Chain - Measuring transit risks - Supply risks – Delivery Risks – Strategies for Risk Pooling

**References:**

1. Mathirajan, M., Rajendran, C., Sadagopan, S., Ravindran, A., & Balasubramanian, P. (2016). *Analytics in operations/supply chain management*. I. K. International Publishing House Pvt. Ltd.
2. Nagurney, A., Yu, M., Masoumi, A. H., & Nagurney, L. S. (2013). *Networks against time: Supply chain analytics for perishable products*. Springer.
3. Plenert, G. J. (2014). *Supply Chain Optimization through Segmentation and Analytics*. CRC Press, Taylor and Francis Group.
4. Sanders, N. R. (2014). *Big data driven supply chain management: A framework for implementing analytics and turning information into intelligence*. Pearson Education.
5. Sawik, T. (2011). *Scheduling in supply chains using mixed integer programming*. John Wiley & Sons, New Jersey.
6. Watson, M., Lewis, S., Cacioppi, P., & Jayaraman, J. (2013). *Supply Chain Network Design: Applying Optimization and Analytics to the global supply chain*. Pearson Education.

**MS7124E PROJECT MANAGEMENT**

**Prerequisites:** MS6106E Decision Models in Management

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Evaluate projects from business and social perspectives.
- CO2: Build the network and relate the time-cost trade off.
- CO3: Optimise the network based on different performance measures based on distance and flow.
- CO4: Outline the operation of projects under resource-constrained environment and closing the projects.

**Project Planning and Implementation**

Project Planning: Introduction to project management, Cost of project - Social cost benefit analysis - UNIDO approach - Net benefit in terms of economic prices - Measurement of impact on distribution - Savings impact and its value - Income distribution impact - Adjustment for merit and demerit - Goods Little Mirrless approach - Shadow prices - Project Implementation: Development of project network, Dummy activities, Activity on node networks, Cyclic network, Forward pass and Backward pass computations - Algorithm for critical path - Total slacks, free slacks and their interpretations.

**Network Analysis of Projects**

Time-cost Trade off Procedure: Schedule related project costs, Time cost trade off, Lowest cost schedule - PERT Network: Three time estimates for activities, Estimation of mean and variance of activity times, Event oriented algorithm for critical path, Probability of meeting a schedule date - Network Analysis: Algorithms for shortest route problems;Dijkstra's, Flyod's, Pollacks, and Dantzig's algorithms, Algorithms for minimal spanning tree; Kruskal's algorithm and Prim's algorithm, Algorithms for maximal flow problems; Ford and Fulkerson's algorithm(Labelling method), Maximum flow minimum cut explanation.

**Formulations**

Linear Programming Formulation of Network Problems: A flow network interpretation for determination of critical paths, Time cost trade off and maximal flow, Chance constrained linear programming for probabilistic durations of activities in PERT network - Project Scheduling with Limited Resources: Complexity of project scheduling with limited resources, Leveling the demands on key resources, A simple heuristic program for resource allocation - Integer programming formulation - Project Review and Administrative Aspects: Initial review, Performance evaluation, Abandonment analysis, Project organisation, Matrix organisation, Project control, Variance analysis approach, Performance analysis.

**References:**

1. Chandra, P. (2014). *Projects: Planning, analysis, selection, financing, implementation, and review* (8th ed.). McGraw Hill Education.
2. Griffin, R. W. (2008). *Management: Principles and applications*, Cengage Learning.
3. Moder, J. V. & Phillips, C. R. E. (1964). *Project management with CPM and PERT* (2nd ed.). Van Nostrand Reinhold Company.
4. Ramesh, G. (2017). *Managing global software projects*. McGraw Hill.
5. Ravindran, A., Phillips, D. T., & Solberg, J. J. (1987). *Operations research: Principles and practice* (2nd ed.). John Wiley & Sons.
6. Weist, J. D., & Levy, F. K. (1994). *A management guide to PERT/CPM*. Prentice Hall India.

**MS7125E LEAN SYSTEMS AND SIX SIGMA**

**Pre-requisites:** MS6111E Operations Management

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand what is Lean and Six Sigma and their role in the globalized competitive business
- CO2: Understand the importance of integrating Lean principles and Six Sigma concepts and the integration process
- CO3: Acquire knowledge on planning the resources needed to undertake and select suitable Lean Six Sigma projects
- CO4: Ability to understand the process of institutionalizing the Lean Six Sigma effort and design for Lean Six Sigma
- CO5: Understand the effect and performance of small lots in production systems along with the need for levelling for lean production systems design
- CO6: Design of pull production control system and synchronized-cum-balanced production system for mixed model production

**Integrating Lean Concepts with Six Sigma**

Lean: Introduction, Definition, Purpose, Features, Need, Elements, Principles, Metrics – Top seven wastes – Lean Management Philosophy – Creating a Lean enterprise – Hidden time traps – Six Sigma: Definition, Origin, Concepts, Critical success factors – Lean Six Sigma: Evolution, Synergy, Features, Laws, Key elements, Model, Benefits – DMAIC: Process and Tools – Institutionalizing Lean Six sigma: Design Velocity improvement, Creating Cycle time base line, Valuing projects, Projects Gating – Reducing product line complexity – Design for Lean Six Sigma – Theory of Inventive Problem Solving (TRIZ)

**Elements of Lean Production**

Small-Lot Production: Lot-size Basics, Lot sizing; Lot-size Reduction, Facilitating Small Lot Size - Setup-Time reduction: Setup-Reduction Methodology, Techniques for Setup-Reduction; Setup-Reduction Projects - Pull Production Systems: Pull Systems and Push Systems, Conditions for Pull Production Systems, How to achieve Pull Production - Mechanisms for Signal and Control: Two-card pull production system, Signal Kanban, CONWIP - Workcells and Cellular Manufacturing: Cell layout and Capacity Measures, Design of Workcells, Worker Assignment, Implementation Issues

**Lean Production Planning and Control**

Scheduling for Smooth Flow: Production Leveling, Levelling the Master Production Schedule, Level Scheduling in Pull Production: Mixed model production (Heijunka); Production planning and scheduling in environment like make-to-stock, assemble-to-order, make-to-order - Synchronising and Balancing Process: Synchronisation; Bottleneck Scheduling; Balancing; Adapting to Schedule changes - Planning and Control in Pull Production: Centralised Planning and Control System; Decentralised planning and Control system; Adapting MRP-Based Production Planning and Control System to Pull production – Scheduling performance measures to reduce flow variability: Squared Completion Time Differences Variability

**References:**

1. Askin, R. G., & Goldberg, J. B. (2007). *Design and analysis of lean production systems*. Wiley Student Edition.
2. Nicholas, J. (2001). *Competitive manufacturing management: Continuous improvement, lean production, and customer-focused qualities*. Tata McGraw Hill.

3. Nicholas, J. (2010). *Lean production for competitive advantage: A comprehensive guide to lean methodologies and management practices*. CRC press.
4. Korgaonker, M. G. (2000). *Just-in-time manufacturing*. Macmillan Publishers India.
5. Morgan, J., & Brenig-Jones, M. (2016). *Lean six sigma for dummies*. John Wiley & Sons Ltd.
6. George, M. L., Rowlands, D., Price, M., & Maxey, J. (2003). *What is lean six sigma*. McGraw Hill.
7. Pyzdek, T. (2008). *The six sigma handbook* (5th ed.). Tata McGraw Hill.
8. Leisten, R., & Rajendran, C. (2015). Variability of completion time differences in permutation flow shop scheduling. *Computers & Operations Research*, 54, 155-167.

**MS7126E MANUFACTURING SYSTEMS MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the characteristics of modern production system.
- CO2: Develop an understanding on the application of group technology in a manufacturing industry with emphasise on manufacturing system configuring, FMS and process planning.
- CO3: Design a cellular manufacturing system.
- CO4: Formulate and solve mathematical models for cellular manufacturing system design using analytical and heuristic methods.

**Group Technology**

Introduction: Characteristics of modern production system, Ways of configuring manufacturing system - Group Technology (GT): Role of GT in Computer Aided Manufacturing (CAM), Features of GT, Cellular Manufacturing, Role of similarity in GT, Composite part, Coding and classification, Similarity coefficient based clustering, Key machine approach, Binary ordering algorithm, Production flow analysis.

**Cellular Manufacturing Systems**

Models for Cellular Manufacturing System (CMS) Design: CMS design factors, Mathematical programming approaches, Model for dynamic part population, Solution procedure using genetic algorithm - Cellular Manufacturing: Focused factory, pull production: Conveyance Kanban, Two-card pull system, Building blocks of workcell, Linked cell, Different types of cells, Cycle time, Workcell design; Worker assignment; Incentive plans; Issues in implementing cellular manufacturing.

**Flexible Manufacturing Systems**

Process Planning: Process planning for parts and assemblies, Manual process planning; Computer aided process planning (CAPP), Approaches to process planning; Process Planning systems; Variant process planning: Development stages, Family formation, search algorithm - Flexible Manufacturing System (FMS): Types of automation, Flexibility, Types of FMS, FMS Layout configuration, Automated work-piece flow, Material handling, and machining; Performance measures, Bottleneck model, Extended bottleneck model, Sizing of FMS

**References:**

1. Askin, R. G., & Standridge, C. R. (1993). *Modelling and analysis of manufacturing systems*. John Wiley & Sons, Inc.
2. Nicholas, J. (2001). *Competitive manufacturing management: Continuous improvement, lean production, and customer-focused qualities*. Tata McGraw Hill.
3. Groover, M. P. (2001). *Automation, production systems, and computer-integrated manufacturing* (2nd ed.). Prentice Hall India.
4. Singh, N., & Rajamani, D. (1996). *Cellular manufacturing systems: Design, planning and control*. Chapman and Hall.
5. Burbidge, J. L. (1991). Production flow analysis for planning group technology. *Journal of Operations Management*, 10(1), 5-27.
6. Wicks, E. M., & Reasor, R. J. (1999). Designing cellular manufacturing systems with dynamic part populations. *IIE transactions*, 31(1), 11-20.

**MS7127E HEALTH CARE OPERATIONS ANALYTICS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understanding the basics of Health care operations management.
- CO2: Acquire knowledge on current barriers in healthcare management and how data analytics can provide potential solutions.
- CO3: Application of Machine Learning and Deep Learning algorithms for data analysis.
- CO4: Evaluate the need of healthcare data analysis.

**Health Care Operations Management**

Health Care Operations: Challenges, Opportunities, Performance Improvement History, Evidence-Based Medicine and Pay-for Performance – Setting Goals and Executing Strategy: Strategy and Balanced Scorecard, Project Management – Performance Improvement: Tools for Problem Solving and Decision Making, Using Data and Statistical Tools for Operations Improvement, Quality Management with focus on Six Sigma, Application of Lean concepts, Simulation – Applications to Contemporary Health Care Operations Issues: Process Improvement and Patient Flow, Scheduling, Capacity Management, Supply Chain Management – Operational Excellence: Holding the Gains

**Health Care on Machine Learning**

Health Care Analysis Parameters on Medical Care systems – Health Care Policy – Standardized code sets – Data formats – Machine Learning Foundations: Tree like reasoning, Probabilistic reasoning and Bayes Theorem, Weighted sum approach – Machine Learning pipeline – Pre-processing – Visualization – Feature Selection – Training model parameter – Evaluation model: Sensitivity specificity, Positive Predictive value, Negative Predictive value, False Positive Rate, Accuracy, Receiver Operating Characteristics Curve, Precision Recall curves, Valued target variables

**Health Care and Deep Learning**

Internet of Things – Smart sensors – Decision Support System – Matrix block Cipher system – Semantic Framework Analysis – Histogram bin shifting and Rc6 Encryption – Clinical Prediction Models – Visual Analytics for Health Care – Introduction on Deep Learning – Deep Feed Forward network, Convolutional Neural Nets, Recurrent Neural Nets for sequences – Biomedical Image and Signal Analysis – Natural Language Processing and Data Mining for Clinical Data – Mobile Imaging and Analytics – Clinical Decision Support system – Predicting Mortality for Cardiology practice – Smart Ambulance system using Internet of Things – Hospital Acquired Conditions program – Health Care and Emerging Technologies – Electrocardiogram Data Analysis

**References:**

1. McLaughlin, D. B., & Hay, J. M. (2008). *Healthcare operations management*. AUPHA Press.
2. Reddy, C. K. & Aggarwal, C. C. (2015). *Health care data analytics* (1st ed.). CRC press.
3. Kumar, V. (2018). *Health care analysis made simple*. Packt Publishing.
4. Dey, N. Ashour, A., Fong, S. J., & Bhatl, C. (2018). *Health care data analysis and management* (1st ed.). Academic Press.
5. Jang, H. & Lee, E. K. (2016). *Health care analysis: From data to knowledge to health care improvement* (1st ed.). Wiley Publishing.
6. Kulkarni, A. J., Siarry, P., Singh, P. K., Abraham, A., Zhang, M., Zomaya, A., & Baki, F. (Eds.). (2020). *Big data analytics in healthcare*. Springer.

**MS7128E HEURISTICS FOR DECISION MAKING**

**Pre-requisites:** MS6106E Decision Models in Management

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Acquire knowledge on decision problems and its classes.
- CO2: Know about basics of development of heuristics for decision problems.
- CO3: Design of local-search based heuristics, branch-and-bound algorithm and dynamic programming for combinatorial problems.
- CO4: Learn about the design, development, application and benchmarking of heuristic and metaheuristics for various decision problems.

**Problems, Algorithms and Complexity**

Combinatorial Search Problems: Sub-classes; Optimization problem; Decision Problem – Computational Complexity: P-class, NP-class, NP-hard problems, NP-complete, Problem Reductions - Algorithms: Exact, Heuristic, and Approximation – Complexity of Algorithms: Time complexity, Volume complexity, Time complexity Function, Polynomial time algorithm, Exponential time algorithm, Deterministic Turing Machine (DTM), Non-Deterministic Turing Machine (NDTM), Polynomial Transformation – Special Case in Simplex algorithm: Rules for entering variable; Largest Coefficient rule, Largest Increase rule, First Positive rule and Random rule

**Search-Based Heuristics**

Complete Enumeration Solution Space – Types of Solutions for Optimization Problems: Feasible solution, Optimal solution – Solution Encoding - Generation of Initial Solutions - Solution Search: Deterministic search, Randomized search – Mechanisms for Solution Modification for Solution Search: Insertion, Swap and Pairwise Interchange – Design of insertion-based, swap-based, and pairwise interchange-based Local Search Procedures – Development of Heuristics using Local Search Procedures – Branch and Bound algorithm – Dynamic Programming – Development of Simple and Complex Heuristics for Combinatorial problems like Traveling Salesman Problem, Scheduling Problems and Total Covering Problem – Overview of Sorting algorithms

**Metaheuristic Search Concepts**

Metaheuristics: Definition, Design, Algorithmic view, Problem related Aspects, Intensification/Diversification, Taxonomy; Solution Construction-based, Solution Modification-based, Solution Recombination-based – Greedy Randomized Adaptive Search Procedure (GRASP) – Genetic Algorithm (GA) – Simulated Annealing (SA) – Tabu Search (TS) – Ant Colony Optimization (ACO) – Particle Swarm Optimization (PSO) – Applications of GA, SA, TS, ACO, PSO for scheduling and routing problems – Benchmarking of Heuristics and Metaheuristics – Overview of other Metaheuristic algorithms: Shuffled Frog-Leaping algorithm, Artificial Bee Colony optimization algorithm, Cuckoo Search algorithm, and Electromagnetism algorithm

**References:**

1. Blazewicz, J., Ecker, K., Pesch, E., Schmidt, G., & Weglarz, J. (2019). *Handbook on scheduling*. Cham: Springer International Publishing.
2. Zäpfel, G., Braune, R., & Bögl, M. (2010). *Metaheuristic search concepts: A tutorial with applications to production and logistics*. Springer.



3. Panneerselvam, R. (2016). *Design and analysis of algorithms*. PHI Learning.
4. Papadimitriou, C. H., & Steiglitz, K. (2000). *Combinatorial optimization: Algorithms and complexity*. Dover Publications Inc.
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6. Rao, S. S. (2009). *Engineering optimization: Theory and practice* (4th ed.). John Wiley and Sons, Inc.
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8. Rajendran, C., & Ziegler, H. (2004). Ant-colony algorithms for permutation flowshop scheduling to minimize makespan/total flowtime of jobs. *European Journal of Operational Research*, 155(2), 426-438.
9. Bhattacharjee, K. K., & Sarmah, S. P. (2014). Shuffled frog leaping algorithm and its application to 0/1 knapsack problem. *Applied soft computing*, 19, 252-263.
10. Pan, Q. K., Tasgetiren, M. F., Suganthan, P. N., & Chua, T. J. (2011). A discrete artificial bee colony algorithm for the lot-streaming flow shop scheduling problem. *Information sciences*, 181(12), 2455-2468.
11. Marichelvam, M. K., Prabaharan, T., & Yang, X. S. (2014). Improved cuckoo search algorithm for hybrid flow shop scheduling problems to minimize makespan. *Applied Soft Computing*, 19, 93-101.
12. Khalili, M., & Tavakkoli-Moghaddam, R. (2012). A multi-objective electromagnetism algorithm for a bi-objective flowshop scheduling problem. *Journal of Manufacturing Systems*, 31(2), 232-239.

**MS7129E ADVANCED SUPPLY CHAIN MODELLING**

**Prerequisites:** MS6106E Decision Models in Management, MS6111E Operations Management

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Build strategic and operational frameworks to analyse supply chains.
- CO2: Design a supply chain network.
- CO3: Understand inventory control models and develop inventory control systems under deterministic and constrained scenarios.
- CO4: Develop inventory control systems under probabilistic scenarios.
- CO5: Understand the methods to achieve coordination in Supply chains.

**Supply Chains Basics**

Supply Chain: Fundamentals, Understanding, Performance, Drivers – Aggregate Planning in Supply Chains - Planning Supply and Demand: Managing Predictable Variability – Cycle Inventory – Safety Inventory – Determining optimal level of Product Availability – Transportation: Role, Factors, Modes, Design options, Trade-offs, Routing and Scheduling – Network Design: Role, Factors, Framework, Mathematical Models for Facility and Capacity Allocation – Information Technology in Supply Chain: Role, Importance, Uses – Sustainability Processes and Practices: Sustainability Practices and Greening of Supply Chain

**Inventory Models**

Managing inventory in supply chain, inventory costs - supply chain performance evaluation - Bullwhip effect - Information and supply chain trade-offs - Independent demand systems (Deterministic models): Inventory problem classification, Selective control techniques; Independent Demand Systems, Fixed order size system, Deterministic models, Economic order quantity, Economic production quantity, Quantity discounts, Sensitivity, Economic Production Quantity for multiple items, Periodic order interval systems - Inventory system constraints: Inventory control systems under multiple items, Inventory problems with constraints, Exchange curve (Optimal policy curve) - Independent demand systems (Probabilistic models): Single order quantities, Payoff matrix, Expected value criterion - Mathematical formulation of discrete and continuous cases - Dynamic Order Quantities - Fixed order size system - Periodic order interval systems - Mathematical modelling under known stock out costs and service levels

**Coordination in Supply Chain**

Coordination in a Supply Chain: Lack of Coordination, Bullwhip Effect, Effect of Lack of Coordination on Performance, Obstacles to Coordination, Managerial Levers to Achieve Coordination – Building Strategic Partnerships and Trust within Supply Chains – Coordinated Scheduling in Supply Chains: Medium-term Production Scheduling, Short-term Machine Assignment and Scheduling - Coordinated Scheduling in Supply Chains with a Single Supplier: Hierarchical and Integrated Approach – Coordinated Scheduling in Supply Chains with Assignment of Orders to Suppliers: Conditions for Feasibility of Customers Due Dates, Hierarchical and Integrated Approach, Selected Multi-Objective Solution Approaches - Coordinated Scheduling in Supply Chains without Assignment of Orders to Suppliers: Hierarchical and Integrated Approach, Selected Bi-Objective Solution Approaches

**References:**

1. Chopra, S., Meindl, P., & Kalra, D. V. (2016). *Supply chain management: Strategy, planning and operation* (6th ed.). Pearson Education.

2. Sople, V. V. (2011). *Supply chain management*. Pearson Education.
3. Sawik, T. (2011). *Scheduling in supply chains using mixed integer programming*. John Wiley & Sons, New Jersey.
4. Tersine, R. J. (1994). *Principles of inventory and materials management* (4th ed.). Prentice-Hall Inc., New Jersey.
5. Starr, M. K., & Miller, D. W. (1986). *Inventory control: Theory and practice*. Prentice-Hall India, New Delhi.
6. Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2005). *Designing and managing the supply chain: Concepts, strategies, and cases*. Tata McGraw-Hill.

**MS7130E INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Apply fundamental investment analysis techniques.
- CO2: Construct and manage investment portfolios.
- CO3: Evaluate and select investment instruments.
- CO4: Understand investment market dynamics and behavioural factors.

**Investment Analysis**

Introduction to Investment Analysis, The role of financial markets in investment analysis, Types of financial markets; Financial Statement Analysis - Overview of financial statements, Ratio analysis, Earnings quality analysis; Equity Valuation - Introduction to equity valuation, Discounted Cash Flow (DCF) analysis, Relative valuation; Fixed Income Analysis - Introduction to fixed income analysis, Yield curves and term structure, Credit analysis; Alternative Investments - Introduction to alternative investments, Real estate analysis, Private equity and venture capital

**Portfolio Management**

Introduction to Portfolio Management, Overview of portfolio management, Asset allocation, Diversification; Portfolio Risk Management - Portfolio risk management techniques, Hedging, Risk budgeting; Portfolio Construction, Portfolio optimization, Portfolio rebalancing, Passive versus active management; Performance Evaluation and Attribution - Measuring portfolio performance, Attribution analysis, Benchmarking

**Advanced Investment Analysis**

Behavioural Finance, Introduction to behavioural finance, Biases and heuristics, Implications for investment analysis; Quantitative Investment Strategies - Overview of quantitative investment strategies, Factor investing, Algorithmic trading; Global Investing - Introduction to global investing, Currency risk management, Political risk analysis; ESG Investing - Introduction to ESG investing, ESG analysis, ESG integration; Capstone Project - Final project on investment analysis and portfolio management.

**References:**

1. Bodie, Z., Kane, A., & Marcus, A. J. (2014). *Investments* (10th ed.). McGraw-Hill Education.
2. Reilly, F. K., & Brown, K. C. (2011). *Investment Analysis and Portfolio Management* (10th ed.). Cengage Learning.
3. Fabozzi, F. J., & Markowitz, H. M. (2011). *The Theory and Practice of Investment Management: Asset Allocation, Valuation, Portfolio Construction, and Strategies* (2nd ed.). Wiley.
4. Elton, E. J., Gruber, M. J., Brown, S. J., & Goetzmann, W. N. (2014). *Modern Portfolio Theory and Investment Analysis* (9th ed.). Wiley.
5. Malkiel, B. G., & Saha, A. (2019). *A Random Walk Down Wall Street: The Time-Tested Strategy for Successful Investing* (12th ed.). W. W. Norton & Company.
6. Sharpe, W. F., Alexander, G. J., & Bailey, J. V. (2019). *Investments* (11th ed.). Prentice Hall.
7. Fabozzi, F. J., & Peterson, P. P. (2003). *Financial Management and Analysis* (2nd ed.). Wiley.

## MS7131E MANAGING FINANCIAL SERVICES AND INSTITUTIONS

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture sessions: 39**

**Course Outcomes:**

- CO1: Understand the financial services industry.
- CO2: Evaluate financial services products and offerings.
- CO3: Manage financial institutions' operations and risk.
- CO4: Analyse emerging trends and challenges in financial services.

### **Overview of Financial Services and Institutions**

Introduction to Financial Services and Institutions, The role of financial services and institutions in the economy, The evolution of financial services and institutions; The Regulatory Framework - Regulatory agencies and their roles, Regulatory issues affecting financial services and institutions; Financial Intermediation - Overview of financial intermediaries, Types of financial intermediaries, Functions of financial intermediaries; Financial Markets - Overview of financial markets, Types of financial markets, Functions of financial markets

### **Management of Financial Services and Institutions**

Bank Management, Overview of banking, Bank management functions, Bank regulations; Insurance Management- Overview of insurance, Insurance management functions, Insurance regulations; Investment Management- Overview of investment management, Investment management functions, Investment regulations; Risk Management - Overview of risk management, Types of risks faced by financial services and institutions, Techniques for measuring and managing risk; Marketing Financial Services - Overview of marketing financial services, Marketing strategies for financial services and institutions, Consumer behaviour in financial services

### **Contemporary Issues in Financial Services and Institutions**

Fintech and Digital Disruption, Overview of fintech, Disruption of traditional financial services and institutions, Opportunities and challenges of fintech; Globalization and Financial Services, Overview of globalization in financial services, Impact of globalization on financial services and institutions, Strategies for international expansion; Corporate Governance and Ethics - Overview of corporate governance, Importance of ethics in financial services and institutions, Ethical dilemmas and issues in financial services; Financial Services and Society - Overview of financial services and society, The role of financial services in social welfare, Issues of financial inclusion and exclusion; Capstone Project - Final project on managing financial services and institutions

### **References:**

1. Mishkin, F. S., & Eakins, S. G. (2015). *Financial Markets and Institutions* (8th ed.). Pearson.
2. Saunders, A., & Cornett, M. (2018). *Financial Institutions Management: A Risk Management Approach* (9th ed.). McGraw-Hill Education.
3. Rose, P. S., & Hudgins, S. C. (2018). *Bank Management & Financial Services* (10th ed.). McGraw-Hill Education.
4. Fabozzi, F. J., & Modigliani, F. (2009). *Capital Markets: Institutions, Instruments, and Risk Management* (4th ed.). Pearson.
5. Mishkin, F. S., Eakins, S. G., & Strahan, P. E. (2016). *Financial Markets and Institutions* (9th ed.). Pearson.

6. Saunders, A., Cornett, M., & McGraw, P. (2014). *Financial Institutions Management: A Risk Management Approach* (8th ed.). McGraw-Hill Education.
7. Rose, P. S., Hudgins, S. C., & Marquis, M. H. (2018). *Bank Management & Financial Services* (9th ed.). McGraw-Hill Education.

**MS7132E DERIVATIVES AND RISK MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the fundamentals of derivatives.
- CO2: Evaluate and implement risk management strategies.
- CO3: Analyse derivative pricing models and strategies.
- CO4: Evaluate regulatory and ethical considerations in derivatives trading.

**Derivatives Markets and Instruments**

Introduction to Derivatives Markets and Instruments, Overview of derivatives, Types of derivatives instruments, Market participants; Forward Contracts and Futures - Forward contracts, Futures contracts, Hedging with futures; Options - Introduction to options, Types of options, Pricing options; Swaps - Introduction to swaps, Types of swaps, Pricing swaps

**Derivatives Trading and Risk Management**

Trading Strategies, Overview of trading strategies, Hedging with derivatives, Speculating with derivatives; Derivatives Market Regulation - Overview of derivatives market regulation, Role of regulatory agencies, Compliance and legal issues; Credit Risk Management - Overview of credit risk, Credit risk management techniques, Credit derivatives; Interest Rate Risk Management - Overview of interest rate risk, Interest rate risk management techniques, Interest rate derivatives; Currency Risk Management - Overview of currency risk, Currency risk management techniques, Currency derivatives

**Advanced Derivatives and Risk Management**

Exotic Options, Introduction to exotic options, Barrier options, Asian options; Structured Products - Introduction to structured products, Structured products types, Structured product pricing; Portfolio Risk Management - Overview of portfolio risk management, Value-at-Risk (VaR), Stress testing; Alternative Risk Transfer - Overview of alternative risk transfer, Insurance-linked securities, Catastrophe bonds; Capstone Project - Final project on derivatives and risk management.

**References:**

1. Chance, D. M., & Brooks, R. (2019). *Introduction to Derivatives and Risk Management* (10th ed.). Cengage Learning.
2. McDonald, R. L. (2014). *Derivatives Markets* (3rd ed.). Pearson.
3. Hull, J. C. (2017). *Options, Futures, and Other Derivatives* (10th ed.). Pearson.
4. Kolb, R. W. (2015). *Futures, Options, and Swaps* (5th ed.). Wiley.
5. Tuckman, B., & Serrat, A. (2011). *Fixed Income Securities: Tools for Today's Markets* (3rd ed.). Wiley.
6. Chance, D. M. (2016). *Analysis of Derivatives for the CFA Program* (3rd ed.). CFA Institute.
7. SSS Kumar, (2011). *Financial Derivatives*,(1<sup>st</sup> ed.). PHI.

**MS7133E STRATEGIC FINANCIAL DECISION MAKING AND ANALYSIS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture sessions: 39**

**Course Outcomes:**

CO1: Analyse financial statements and assess company performance.

CO2: Formulate financial strategies aligned with organisational goals.

CO3: Assess and manage financial risks.

CO4: Evaluate mergers, acquisitions, and corporate restructuring.

**Financial Analysis and Planning**

Introduction to Strategic Financial Management, Overview of financial management, Financial goals and objectives; Financial Statement Analysis - Financial statement analysis techniques, Ratio analysis, Limitations of financial statement analysis; Forecasting Financial Statements - Forecasting techniques, Pro forma financial statements, Sensitivity analysis; Financial Planning and Budgeting - Overview of financial planning, Budgeting process, Capital budgeting

**Financial Decision Making**

Investment Decisions, Investment decision criteria, Capital budgeting techniques, Risk analysis in investment decisions; Financing Decisions - Financing decision criteria, Capital structure, Cost of capital; Dividend Decisions - Dividend policy, Dividend decision criteria, Share repurchase; Working Capital Management - Overview of working capital management, Working capital cycle, Working capital financing

**Financial Strategy and Risk Management**

Financial Strategy, Overview of financial strategy, Growth strategies, Mergers and acquisitions; International Financial Management - Overview of international financial management, Foreign exchange risk management, International capital budgeting; Corporate Risk Management - Overview of corporate risk management, Types of risks faced by corporations, Risk management techniques; Financial Ethics and Corporate Governance - Overview of financial ethics, Corporate governance, Role of the board of directors; Financial Innovation and Emerging Technologies - Overview of financial innovation, Emerging financial technologies, Impact on financial management; Capstone Project - Final project on strategic financial management.

**References:**

1. Ross, S. A., Westerfield, R. W., Jordan, B. D., & Roberts, G. S. (2018). *Fundamentals of Corporate Finance* (12th ed.). McGraw-Hill Education.
2. Van Horne, J. C., Wachowicz, J. M., Bhaduri, S. N., & Bhattacharya, S. (2020). *Fundamentals of Financial Management* (15th ed.). Pearson.
3. Moyer, R. C., McGuigan, J. R., Rao, R. P., & Kretlow, W. J. (2020). *Contemporary Financial Management* (15th ed.). Cengage Learning.
4. Gitman, L. J., & Zutter, C. J. (2018). *Principles of Managerial Finance* (15th ed.). Pearson.
5. Brealey, R. A., Myers, S. C., & Allen, F. (2017). *Principles of Corporate Finance* (12th ed.). McGraw-Hill Education.
6. Berk, J., & DeMarzo, P. (2017). *Corporate Finance* (4th ed.). Pearson.
7. Brigham, E. F., & Ehrhardt, M. C. (2016). *Financial Management: Theory and Practice* (15th ed.). Cengage Learning.



**MS7134E GLOBAL FINANCIAL STRATEGIES AND INVESTMENT MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Analyse global financial markets and exchange rate dynamics.
- CO2: Evaluate international investment opportunities and strategies.
- CO3: Understand international corporate finance and capital structure.
- CO4: Evaluate international financial risk management strategies.

**International Financial Markets**

Introduction to International Finance, Overview of international finance, International financial markets; Foreign Exchange Markets - Currency exchange rates, Exchange rate regimes, Currency risk management; International Financial Institutions - Overview of international financial institutions, International Monetary Fund (IMF), World Bank; International Financial Regulations - Overview of international financial regulations, Basel Accords, International financial reporting standards (IFRS)

**International Investment Management**

International Portfolio Diversification, Portfolio diversification, International portfolio diversification, Risk management techniques; International Capital Budgeting - Overview of international capital budgeting, Factors affecting international capital budgeting, Techniques for international capital budgeting; International Equity and Debt Financing - Overview of international equity and debt financing, Cross-listing and dual-listing, International bond issuances; Sovereign Risk Analysis - Overview of sovereign risk analysis, Political risk analysis, Country risk analysis

**International Investment Strategies and Emerging Markets**

International Investment Strategies, Overview of international investment strategies, Active and passive investment strategies, Value and growth investing; Emerging Market Investments - Overview of emerging market investments, Characteristics of emerging markets, Emerging market investment strategies; International Mergers and Acquisitions - Overview of international mergers and acquisitions, Cross-border M&A, Due diligence in international M&A; International Corporate Social Responsibility - Overview of international corporate social responsibility, Environmental, social, and governance (ESG) considerations, Stakeholder management; Future of International Finance and Investment Management - Overview of the future of international finance and investment management, Trends in technology and innovation, Impact of geopolitical events; Capstone Project - Final project on international finance and investment management

**References:**

1. Eun, C. S., & Resnick, B. G. (2020). *International Financial Management* (9th ed.). McGraw-Hill Education.
2. Madura, J., & Fox, R. (2020). *International Financial Management* (3rd ed.). Cengage Learning.
3. Bekaert, G., & Hodrick, R. (2021). *International Financial Management* (4th ed.). Pearson.
4. Levi, M. (2019). *International Finance: Theory into Practice* (6th ed.). Routledge.
5. Pilbeam, K. (2020). *International Finance* (6th ed.). Red Globe Press.
6. Solnik, B., & McLeavey, D. W. (2019). *International Investments* (10th ed.). Pearson.
7. Sharan, V. (2018). *International Financial Management* (5th ed.). PHI Learning Pvt. Ltd.

**MS7135E ADVANCED CORPORATE TAX STRATEGY AND COMPLIANCE**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture sessions: 39**

**Course Outcomes:**

- CO1: Understand the fundamentals of corporate taxation.
- CO2: Apply tax planning strategies to optimize corporate tax liability.
- CO3: Evaluate tax implications of business decisions and transactions.
- CO4: Understand tax compliance and reporting requirements.

**Introduction to Corporate Taxation**

Overview of corporate taxation, Taxation of different types of business entities; Corporate Tax Law - Overview of corporate tax law, Taxation of income, expenses, and deductions, Taxation of capital gains and losses; Taxation of International Business - Overview of international taxation, Tax treaties and agreements, Transfer pricing; Taxation of Mergers and Acquisitions - Overview of taxation of M&A, Taxable versus tax-free M&A, Tax implications for buyers and sellers

**Tax Planning and Compliance**

Tax Planning Strategies, Overview of tax planning, Tax planning strategies, Tax-efficient financing; Tax Compliance and Reporting - Overview of tax compliance, Tax filing requirements, Tax audits and penalties; Taxation of Employee Compensation - Overview of employee compensation, Taxation of wages and salaries, Stock options and other forms of compensation; Taxation of Business Transactions - Overview of taxation of business transactions, Tax implications of financing decisions, Tax implications of leasing

**Taxation and Business Strategy**

Overview of taxation and business strategy, Tax considerations in business strategy, Tax implications of business decisions; State and Local Taxation - Overview of state and local taxation, Nexus and tax jurisdiction, State and local tax planning strategies; Taxation and Corporate Social Responsibility - Overview of taxation and corporate social responsibility, Ethical considerations in tax planning, Corporate social responsibility reporting; Emerging Tax Issues - Overview of emerging tax issues, Digital taxation, Environmental taxation; International Tax Planning - Overview of international tax planning, Tax planning for multinational corporations, Global tax planning strategies; Capstone Project - Final project on corporate tax planning and taxation.

**References:**

1. Ahuja, G. K. (2020). *Systematic Approach to Tax Laws* (33rd ed.). Bharat Law House.
2. Singhania, V., & Singhania, M. (2020). *Students Guide to Income Tax Including GST* (62nd ed.). Taxmann Publications.
3. Tandon, V. K. (2020). *Master Guide to Income Tax Act* (61st ed.). Wolters Kluwer.
4. Bhagwati, A., & Bhagwati, A. (2021). *Corporate Tax Planning & Business Tax Procedures* (4th ed.). Taxmann Publications.
5. Joshi, V. (2020). *Handbook on Corporate Tax Including Tax Planning with Case Studies* (9th ed.). Bloomsbury Professional India.
6. Agarwal, P., & Garg, M. (2020). *Corporate Tax Laws* (6th ed.). LexisNexis.
7. Kamath, M. V. (2020). *Master Guide to Corporate Taxation* (29th ed.). Taxmann Publications.

**MS7136E FINANCIAL ANALYTICS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Utilise analytical tools and techniques to analyse financial data.
- CO2: Apply financial analytics to assess and predict financial performance.
- CO3: Identify and manage financial risks through data-driven analysis.
- CO4: Communicate financial insights derived from analytics effectively.

**Introduction to Financial Analytics**

Overview of Financial Analytics, Definition and importance of financial analytics, Overview of financial analytics tools and techniques, Definitions of financial analytics in various industries; Data Analytics Fundamentals - Introduction to data analytics, Data management and data cleaning techniques, Exploratory data analysis; Financial Data Sources and Collection - Overview of financial data sources, Data collection techniques, Cleaning and organizing financial data; Data Visualization Techniques - Overview of data visualization, Creating effective visualizations, Dashboard design

**Advanced Financial Analytics Techniques**

Forecasting Techniques, Overview of forecasting techniques, Time-series analysis, Regression analysis; Predictive Analytics - Overview of predictive analytics, Machine learning techniques, Predictive modeling in finance; Risk Analytics - Overview of risk analytics, Value at Risk (VaR) modeling, Credit risk modeling; Portfolio Analytics - Overview of portfolio analytics, Portfolio optimization, Performance attribution

**Financial Analytics in Practice**

Case Studies in Financial Analytics, Real-world case studies of financial analytics, Analysis of success and failure factors; Industry-Specific Financial Analytics - Overview of industry-specific financial analytics, Examples from various industries such as banking, insurance, and investment management; Ethics and Compliance in Financial Analytics - Overview of ethical considerations in financial analytics, Compliance with regulations and industry standards, Protecting sensitive financial information; Capstone Project - Final project on financial analytics.

**References:**

1. Damodaran, A. (2020). *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* (4th ed.). Wiley.
2. Subramanian, R. (2018). *Financial Statement Analysis and Reporting* (3rd ed.). Pearson.
3. Bodie, Z., Kane, A., & Marcus, A. J. (2020). *Investments* (11th ed.). McGraw-Hill Education.
4. Chen, J. (2018). *Financial Risk Management: Applications in Market, Credit, Asset, and Liability Management and Firmwide Risk* (2nd ed.). Pearson.
5. Capon, N., & Hulbert, J. M. (2019). *Managing Investment Portfolios: A Dynamic Process* (4th ed.). CFA Institute Research Foundation.
6. Hillier, D., Ross, S. A., Westerfield, R., Jaffe, J., & Jordan, B. (2019). *Corporate Finance* (4th ed.). McGraw-Hill Education.
7. Koopman, S. J., Shephard, N., & Creal, D. (2020). *Financial Econometrics: A Concise Introduction to Statistical Models for Finance* (2nd ed.). Wiley.

**MS7137E CORPORATE TRANSACTIONS AND RESTRUCTURING FOR VALUE CREATION**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the strategic rationale behind mergers, acquisitions, and restructurings.
- CO2: Evaluate the financial aspects of mergers, acquisitions, and restructurings.
- CO3: Analyse legal, regulatory, and ethical considerations in mergers, acquisitions, and restructurings.
- CO4: Develop skills in managing post-merger integration and restructuring processes.

**Foundations of Mergers, Acquisitions, and Restructurings**

Introduction to Mergers and Acquisitions, Definition and types of mergers and acquisitions, Motivations for mergers and acquisitions, Key players and their roles; Mergers and Acquisitions Process - Overview of the merger and acquisition process, Stages of the merger and acquisition process, Due diligence process; Valuation Techniques for Mergers and Acquisitions - Overview of valuation techniques for mergers and acquisitions, Discounted cash flow (DCF) analysis, Comparable company analysis (CCA); Financing for Mergers and Acquisitions - Overview of financing options for mergers and acquisitions, Debt financing, Equity financing

**Advanced Topics in Mergers, Acquisitions, and Restructurings**

Leveraged Buyouts (LBOs), Overview of leveraged buyouts, Motivations for LBOs, Valuation techniques for LBOs; Restructurings and Bankruptcy - Overview of restructurings and bankruptcy, Types of restructuring, Bankruptcy process; Cross-border Mergers and Acquisitions - Overview of cross-border mergers and acquisitions, Differences in regulations and culture, Challenges and opportunities; Legal and Regulatory Issues in Mergers and Acquisitions - Overview of legal and regulatory issues in mergers and acquisitions, Antitrust regulations, Securities laws and regulations

**Mergers, Acquisitions, and Restructurings in Practice**

Case Studies in Mergers and Acquisitions, Real-world case studies of mergers and acquisitions, Analysis of success and failure factors; Negotiation and Deal Structuring - Overview of negotiation and deal structuring techniques, Tactics and strategies, Ethics and fairness in negotiation; Post-Merger Integration - Overview of post-merger integration, Challenges and opportunities, Best practices; Capstone Project - Final project on mergers, acquisitions, and restructuring.

**References:**

1. Weston, J. F., Mitchell, M. L., & Mulherin, J. H. (2015). *Takeovers, Restructuring, and Corporate Governance* (5th ed.). Pearson.
2. Gaughan, P. A. (2018). *Mergers, Acquisitions, and Corporate Restructurings* (8th ed.). Wiley.
3. DePamphilis, D. (2013). *Mergers, Acquisitions, and Other Restructuring Activities: An Integrated Approach to Process, Tools, Cases, and Solutions* (7th ed.). Academic Press.
4. Bruner, R. F. (2018). *Applied Mergers and Acquisitions* (5th ed.). Wiley.
5. Krishnamurti, C., & Vishwanath, S. R. (2016). *Mergers, Acquisitions, and Corporate Actions: Text and Cases* (2nd ed.). Sage Publications India.
6. Chatterjee, S. (2016). *Merger and Acquisition: Concepts, Strategies, and Practices* (3rd ed.). PHI Learning Pvt. Ltd.
7. Ahuja, G. K. (2020). *Mergers and Acquisitions: Law and Finance* (4th ed.). Bharat Law House.

**MS7138E FINANCIAL MODELING**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Develop proficiency in building comprehensive financial models.
- CO2: Apply financial modeling techniques to analyse business scenarios and make informed decisions.
- CO3: Interpret and communicate financial results derived from financial models.
- CO4: Understand the limitations and assumptions of financial models and apply critical thinking.

**Introduction to Financial Modeling**

Definition and types of financial modeling, Basic financial concepts and principles, Excel basics for financial modeling; Forecasting Techniques - Overview of forecasting techniques, Time-series analysis, Regression analysis; Financial Statements and Projections - Overview of financial statements, Income statement, balance sheet, and cash flow statement, Forecasting financial statements; Sensitivity and Scenario Analysis - Overview of sensitivity and scenario analysis, One-way and two-way sensitivity analysis, Scenario analysis

**Advanced Financial Modeling Techniques**

Monte Carlo Simulation, Overview of Monte Carlo simulation, Probability distributions, Building a Monte Carlo model in Excel; Optimization Modeling - Overview of optimization modeling, Linear programming, Nonlinear programming; Valuation Modeling - Overview of valuation modeling, Discounted cash flow (DCF) analysis, Comparable company analysis (CCA); Factor models of Fama and French Real Options Analysis - Overview of real options analysis, Types of real options, Building a real options model in Excel

**Financial Modeling in Practice**

Case Studies in Financial Modeling, Real-world case studies of financial modeling, Analysis of success and failure factors; Industry-Specific Financial Modeling - Overview of industry-specific financial modeling, Examples from various industries such as healthcare, real estate, and energy; Risk Management and Sensitivity Analysis - Overview of risk management in financial modeling, Sensitivity analysis and stress testing, Risk-adjusted return on investment (RAROC); Capstone Project - Final project on financial modelling.

**References:**

1. Benninga, S. (2014). *Financial Modeling* (4th ed.). MIT Press.
2. Simon, B., & Blume, L. (2014). *Mathematics for Economists: An Introductory Textbook* (4th ed.). W. W. Norton & Company.
3. Daves, P. R. (2014). *Financial Modeling and Valuation: A Practical Guide to Investment Banking and Private Equity* (3rd ed.). Wiley.
4. Pennathur, A. K., & Lele, A. (2013). *Financial Modeling and Analysis* (2nd ed.). CRC Press.
5. Powell, J. G. (2013). *Financial Modeling: A Comprehensive Guide to Building Financial Models, Analyzing Valuations, and Creating Investment Strategies* (2nd ed.). Wiley.
6. Ho, T. S. Y., & Lee, S. B. (2020). *The Oxford Guide to Financial Modeling: Applications for Capital Markets, Corporate Finance, Risk Management, and Financial Institutions*. Oxford University Press.
7. Charnes, J., & Kinney, W. (2013). *Financial Modeling with Crystal Ball and Excel* (2nd ed.). Wiley.

**MS7139E FINANCIAL ECONOMETRICS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Analyse financial time series data using appropriate econometric techniques.
- CO2: Evaluate asset pricing models and their empirical implications.
- CO3: Apply risk analysis techniques to assess and manage financial risks.
- CO4: Communicate econometric analysis effectively through written reports and presentations.

**Introduction to Financial Econometrics**

Overview of financial econometrics and its applications, Review of statistical concepts and probability theory, Introduction to statistical software for econometric analysis, Regression Analysis and Model Selection, Simple and multiple regression analysis, Hypothesis testing and model diagnostics, Model selection techniques, Time Series Analysis, Stationarity and non-stationarity, Autocorrelation and partial autocorrelation functions, ARMA and ARIMA models for financial time series, Volatility Modeling, Volatility measures and concepts, ARCH, GARCH, and EGARCH models, Volatility forecasting and applications

**Asset Pricing Models**

Capital Asset Pricing Model (CAPM), Fama-French Three-Factor Model, Extensions and empirical applications, Risk Analysis and Value at Risk (VaR), Risk measures: standard deviation, beta, VaR, Historical simulation and parametric methods, Backtesting and evaluation of VaR models, Panel Data Analysis, Panel data models and fixed effects, Random effects and mixed-effects models, Applications in finance research, eek 8: Cointegration and Error Correction Models, Cointegration theory and testing, Engle-Granger two-step procedure, Error correction models in finance. Advanced Time Series Models, Vector Autoregressive (VAR) models, Granger causality and impulse response analysis, Forecasting with VAR models,

**Nonlinear Models and Regime Switching**

Nonlinear time series models (ARCH-M, Threshold models), Regime switching models and applications, Machine Learning in Finance, Introduction to machine learning algorithms, Predictive modeling in finance, Applications in investment and risk management, High-Frequency Data Analysis, Introduction to high-frequency data, .Modeling intraday volatility and jumps, Market microstructure models, Multivariate GARCH Models, Introduction to multivariate GARCH models, Dynamic conditional correlation (DCC) models, Applications in portfolio risk management, Case studies and applications in financial econometrics

**References:**

1. Brooks, C. (2019). *Introductory Econometrics for Finance* (4th ed.). Cambridge University Press.
2. Enders, W. (2015). *Applied Econometric Time Series* (4th ed.). Wiley.
3. Greene, W. H. (2018). *Econometric Analysis* (8th ed.). Pearson.
4. Hamilton, J. D. (2021). *Time Series Analysis* (3rd ed.). Princeton University Press.
5. Lütkepohl, H. (2007). *New Introduction to Multiple Time Series Analysis* (2nd ed.). Springer.
6. Ruey S. Tsay. (2010). *Analysis of Financial Time Series* (3rd ed.). Wiley.
7. Stock, J. H., & Watson, M. W. (2019). *Introduction to Econometrics* (4th ed.). Pearson.

**MS7140E DIGITAL AND SOCIAL MEDIA MARKETING**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand various types of digital marketing campaigns.
- CO2: Measure the effectiveness of SEO and other digital marketing campaigns.
- CO3: Track the integrated marketing efforts in digital marketing context.
- CO4: Predict the trend and influence of social media marketing in devising marketing strategy.

**Fundamentals of Digital and Social Media Marketing**

Introduction to Digital and Social Media Marketing - Digital Consumer Behaviour - Social Media Platforms and Strategies - Content Creation and Curation - Search Engine Optimization (SEO) - Paid Advertising

**Advanced Strategies in Digital and Social Media Marketing**

Social Media Engagement and Community Building - Influencer Marketing and Brand Advocacy - Mobile Marketing and Location-Based Advertising - E-commerce and Social Selling - Customer Relationship Management (CRM)- User-generated Content

**Analytics and Optimization in Digital and Social Media Marketing**

Web Analytics and Performance Tracking - Social Media Listening and Sentiment Analysis - Conversion Rate Optimization (CRO) - Data-driven Decision Making - Customer Segmentation and Targeting - Ethical Considerations

**References:**

1. Kingsnorth, S. (2022). Digital marketing strategy: An integrated approach to online marketing, Kogan Page Publishers.
2. D. Ryan, and C. Jones, Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation, 2nd ed. Kogan Page, 2012.
3. Chaffey, D., & Ellis-Chadwick, F. (2019). Digital marketing. Pearson UK.
4. Charlesworth, A. (2014). Digital marketing: A practical approach. Routledge.

**MS7141E MARKETING OF SERVICES**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Analyse customer behaviour in service encounters and demonstrate the ability to design and deliver exceptional customer experiences.
- CO2: Evaluate and enhance service quality and customer satisfaction through the implementation of service improvement initiatives and effective complaint handling processes.
- CO3: Demonstrate proficiency in service innovation, new service development, and the management of service delivery channels to drive customer loyalty, retention, and long-term business success.

**Introduction to Marketing of Services**

Characteristics and Unique Features of Services - Service Marketing Mix (7Ps) - Customer Behaviour in Services - Service Quality and Customer Satisfaction - Managing Service Encounters - Service Innovation and New Service Development

**Service Strategy and Design**

Service Strategy and Positioning - Service Blueprinting and Process Design - Service Pricing and Revenue Management - Service Branding and Communication - Service Recovery and Customer Complaint Handling - Service Culture and Employee Engagement

**Service Delivery and Customer Relationship Management**

Service Delivery Channels and Multichannel Management - Customer Relationship Management (CRM) in Services - Service Performance Measurement and Metrics - Customer Loyalty and Retention Strategies - Service Excellence and Continuous Improvement - Ethical Considerations in Marketing of Services

**References:**

1. Lovelock, C., & Patterson, P. (2015). *Services Marketing*. Pearson Australia.
2. Shanker, R. (2002). *Services marketing*. Excel Books India.
3. Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2006). *Services marketing: Integrating customer focus across the firm*. McGraw-Hill/Irwin.



**MS7142E PRODUCT AND BRAND MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Analyse and evaluate product and brand management strategies using relevant theoretical frameworks and concepts.
- CO2: Apply market research techniques to identify consumer insights and develop effective product and brand positioning strategies.
- CO3: Develop comprehensive brand communication plans that utilize various marketing channels and tactics to build brand awareness and equity.
- CO4: Measure and assess the performance of products and brands using relevant metrics and analytics, and make informed decisions to enhance brand value and achieve business objectives.

**Introduction to Product and Brand Management**

Fundamentals of Product and Brand Management - Product Life Cycle and New Product Development - Brand Equity and Brand Positioning - Consumer Behaviour and Product Adoption - Market Segmentation and Targeting for Products and Brands

**Developing and Managing Successful Products and Brands**

Product and Brand Strategy - Product Portfolio Management - Brand Architecture and Brand Extensions - Packaging and Labeling Strategies - Pricing Strategies for Products and Brands

**Brand Communication and Brand Performance**

Integrated Marketing Communication for Brands - Advertising and Promotion Strategies - Digital Branding and Online Marketing - Brand Metrics and Performance Measurement - Brand Equity Management and Brand Reinforcement

**References:**

1. Verma, H. V. (2006). *Brand Management: Text and cases*. Excel Books India.
2. Kapferer, J. N. (2008). *The new strategic brand management: Creating and sustaining brand equity long term*. Kogan Page Publishers.
3. Loken, B., & Ahluwalia, R. (Eds.). (2023). *Brands and brand management: Contemporary research perspectives*. Psychology Press.
4. Keller, K. L., Parameswaran, M. G., & Jacob, I. (2011). *Strategic brand management: Building, measuring, and managing brand equity*. Pearson Education India.

**MS7143E STRATEGIC SALES MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Apply strategic sales management principles.
- CO2: Analyse and optimize sales performance.
- CO3: Develop and manage key customer relationships.
- CO4: Lead and motivate sales teams.

**Foundations of Strategic Sales Management**

Introduction and Overview of strategic sales management, Role of sales in organisational success, Evolution of sales management practices - Sales Strategy Development - Sales objectives and goals, Sales forecasting and budgeting, Sales force structure and organisation, Sales territory management - Sales Planning and Execution - Sales process and sales funnel management, Sales methodologies and techniques, Sales training and development, Sales performance measurement and evaluation

**Strategic Selling and Key Account Management**

Strategic Selling - Consultative selling approach, Solution selling strategies, Relationship building and trust in sales, Negotiation and closing techniques - Key Account Management, Key account selection and prioritization, Strategic customer relationships, Key account planning and execution, Customer retention and growth strategies - Sales Technology and Tools - Sales force automation and CRM systems, Sales analytics and reporting, Digital tools for sales, Sales enablement strategies

**Sales Leadership and Sales Performance Management**

Sales Leadership - Sales leadership styles and traits, Motivating and inspiring a sales team, Coaching and development of sales professionals, Change management in sales - Sales Performance Management - Sales metrics and KPIs, Sales incentive and compensation plans, Sales force evaluation and performance reviews, Sales team productivity and effectiveness - Ethical and Legal Considerations in Sales - Sales contracts and agreements.

**References:**

1. Ingram, T. N., LaForge, R. W., Avila, R. A., Schwepker Jr, C. H., & Williams, M. R. (2015). *Sales management: Analysis and decision making*. Routledge.
2. Cravens, D. W., Le Meunier-FitzHugh, K., & Piercy, N. F. (Eds.). (2012). *The Oxford handbook of strategic sales and sales management*. OUP Oxford.
3. Homburg, C., Schäfer, H., & Schneider, J. (2012). *Sales excellence: Systematic sales management*. Springer Science & Business Media.

**MS7144E QUANTITATIVE RESEARCH IN MARKETING DECISIONS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Apply appropriate statistical techniques to analyse and interpret marketing data.
- CO2: Evaluate the validity and reliability of research findings in quantitative marketing research.
- CO3: Explore advanced topics and emerging trends in quantitative research for marketing decision making.

**Introduction to Quantitative Research in Marketing Decisions**

Basics of quantitative research methods - Research design and hypothesis formulation, Data collection techniques: surveys and experiments, Sampling methods in quantitative research - Data Analysis and Interpretation - Data preparation and cleaning, Descriptive statistics and data visualization, Inferential statistics: hypothesis testing and significance, Regression analysis and predictive modelling - Ethical considerations in quantitative research, Validity and reliability of research findings, Reporting and interpreting research results

**Advanced Statistical Techniques in Marketing Research**

Multivariate Analysis - Factor analysis and principal component analysis, Cluster analysis and market segmentation, Discriminant analysis for predictive modelling, Structural equation modeling (SEM) for causal relationships - Advanced Regression Analysis - Multiple regression and model building, Moderation and mediation analysis, Logistic regression for categorical outcomes - Experimental Design and Analysis - Randomized controlled trials (RCTs), Analysis of variance (ANOVA).

**Advanced Topics in Quantitative Research**

Big Data Analytics - Text mining and sentiment analysis - Advanced Market Research Methods - Conjoint analysis for preference modelling, Choice-based conjoint analysis, Social network analysis and its applications - Emerging Trends in Quantitative Research - Mobile research methods and mobile data collection - Advances in survey research and online panels

**References:**

1. Franses, P. H., & Paap, R. (2001). *Quantitative models in marketing research*. Cambridge University Press.
2. Kolb, B. (2008). *Marketing research: A practical approach*. Sage.

**MS7145E MARKETING TO THE BOTTOM OF THE PYRAMID**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the unique characteristics and challenges of marketing to the Bottom of the Pyramid (BoP) segment.
- CO2: Apply effective market analysis and segmentation techniques to identify and target BoP consumers.
- CO3: Develop marketing strategies and communication approaches tailored to BoP markets
- CO4: Embrace sustainable and inclusive business practices considering the economic development in BoP communities.

**Introduction to Marketing to the Bottom of the Pyramid**

Understanding the Bottom of the Pyramid (BoP) - Definition and characteristics, Socio-economic challenges and opportunities in BoP markets, Importance of inclusive and sustainable business practices - Market research methods for BoP markets, Segmentation strategies, Identifying needs and preferences of BoP customers - Adapting product offerings to meet BoP needs, Affordable pricing strategies and business models, Distribution and logistics considerations in BoP markets

**Marketing Strategies for BoP Markets**

Marketing Communication and Promotion in BoP Markets - Local media and community engagement, Promoting social impact and sustainability initiatives - Building Distribution Networks in BoP Markets - inclusive distribution channels, Partnerships and collaborations with local stakeholders, Overcoming infrastructure and logistical challenges - Building Trust and Relationships with BoP Consumers - cultural sensitivity in BoP marketing, Relationship-building strategies and customer engagement, Leveraging social networks and word-of-mouth marketing

**Sustainable and Inclusive Business Practices in BoP Markets**

Metrics and indicators for measuring social impact - Evaluating the effectiveness of social programs, Reporting and transparency in social impact initiatives - Responsible Supply Chain Management, Ethical sourcing and fair trade practices, Environmental sustainability in the supply chain, Collaboration with local suppliers and producers - Entrepreneurship and Economic Development in BoP Communities, Promoting local entrepreneurship and job creation, Microfinance and inclusive financial services, Capacity building and skills development in BoP communities

**References:**

1. Singh, R. (Ed.). (2018). *Bottom of the pyramid marketing: Making, shaping and developing BOP markets*. Emerald Group Publishing.
2. Saren, M. (Ed.). (2007). *Critical marketing: Defining the field*. Routledge.

**MS7146E INTEGRATED MARKETING COMMUNICATIONS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the communication process and major steps in developing IMC program.
- CO2: Decide media planning and its strategy for scheduling.
- CO3: Identify the major tools and techniques for sales promotion.
- CO4: Measure the effectiveness of PR and other IMC tools.

**Introduction to Integrated Marketing Communications**

Overview of IMC - Definition and key concepts, Evolution and importance of IMC in modern marketing, IMC vs. traditional marketing approaches - IMC Planning Process - Brand Communication Strategy - Consumer Behaviour and Communication - Message Development and Creative Execution - Crafting effective marketing messages, Creative techniques in advertising, Storytelling and emotional appeals in communication, Designing impactful visuals and multimedia content, Testing and refining marketing messages

**Channels and Media in Integrated Marketing Communications**

Traditional Advertising Channels - Print media advertising (newspapers, magazines), Broadcast media advertising (TV, radio), Outdoor and out-of-home advertising, Direct mail advertising, Telemarketing and direct response advertising - Digital and Social Media Advertising - Online display advertising, Search engine marketing (SEM) and search advertising, Social media advertising (Facebook, Instagram, Twitter, etc.), Influencer marketing and sponsored content, Mobile advertising and in-app advertising - Public Relations and Publicity - Direct Marketing and Sales Promotion - Sponsorship and Event Marketing

**IMC Implementation, Evaluation, and Measurement**

Integrated Campaign Management - Media Planning and Buying - IMC Evaluation and Metrics – Key performance indicators (KPIs), Return on investment (ROI) analysis, Tracking and reporting campaign results - IMC Research - Pre-testing and post-testing of marketing communication, Brand tracking and monitoring, Competitor analysis and market intelligence.

**References:**

1. Yeshin, T. (2012). *Integrated Marketing Communications*. Routledge.
2. Broderick, A., & Pickton, D. (2005). *Integrated Marketing Communications*. Pearson Education UK.

**MS7147E CUSTOMER RELATIONSHIP MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

CO1: Apply CRM strategies and techniques to effectively manage customer relationships and enhance customer satisfaction.

CO2: Analyse and interpret customer data to make data-driven decisions in the context of CRM.

CO3: Develop and implement integrated marketing strategies that leverage CRM practices to drive business growth and customer loyalty.

**Introduction to Customer Relationship Management (CRM)**

Definition and key concepts of CRM, Importance of CRM in modern business, Evolution of CRM and its impact on marketing - CRM Strategy Development - Customer-centric business approach, Customer lifetime value (CLV) analysis - Data Management for CRM - CRM software and technology solutions - Customer Segmentation and Targeting high-value customer segments, Personalization strategies in CRM

**Implementing Customer Relationship Management**

Customer Acquisition and Onboarding - Lead generation and prospecting, Conversion optimization techniques - Customer Engagement and Retention - Building customer loyalty and advocacy, Customer engagement strategies, Customer satisfaction measurement and feedback, Customer retention tactics and strategies, Cross-selling and upselling techniques - Multi-Channel Customer Interactions - Omni-channel, Social media engagement and monitoring - CRM Analytics and Performance Measurement - Key performance indicators (KPIs) for CRM

**CRM for Business Growth and Relationship Enhancement**

CRM for Sales and Marketing Alignment - Sales and marketing collaboration, Lead nurturing and sales pipeline management, Marketing automation and CRM integration - Customer Service and Support in CRM - Help desk management and ticketing systems, Service level agreements (SLAs) and escalation processes, Proactive customer service and self-service options - Relationship Building and Loyalty Programs - Referral programs and customer advocacy - CRM in the Digital Era

**References:**

1. Kumar, V., & Reinartz, W. (2018). *Customer Relationship Management*. Springer-Verlag GmbH Germany, part of Springer Nature 2006, 2012, 2018.
2. Raab, G., Ajami, R. A., & Goddard, G. J. (2016). *Customer Relationship Management: A Global Perspective*. CRC Press.

**MS7148E RETAIL AND MALL MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Apply marketing strategies and techniques to enhance retail and mall performance.
- CO2: Demonstrate effective operational and managerial skills in mall operations.
- CO3: Analyse customer behaviour and make informed decisions in retail merchandising and sales management.

**Introduction to Retail and Mall Management**

Overview of Retail Industry - Evolution and Trends in Retail - Types of Retail Formats - Department stores, Supermarkets and hypermarkets, Specialty stores, Discount stores, E-commerce and online retail - Role of Retail and Mall Management - Retail and Mall Marketing Strategies - Customer Behaviour and Consumer Insights in Retail

**Mall Operations and Management**

Mall Design and Layout - Mall architecture and design principles, Floor planning and store layout optimization, Visual aesthetics and customer experience - Tenant Selection and Lease Management - Mall Operations and Maintenance - Mall Security and Safety - Mall Promotion and Events - Retail Analytics and Performance Measurement

**Retail Merchandising and Sales Management**

Merchandising Strategies and Techniques - Assortment Planning and Inventory Management - Visual Merchandising and Store Design - Retail Sales Techniques and Customer Engagement - Pricing and Promotional Strategies - E-commerce and Omni-channel Retailing

**References:**

1. Mathur, U. C. (2010). *Retail Management: Text and Cases*. IK International Pvt Ltd.
2. Vedamani, G. G. (2008). *Retail Management*. Jaico, Ed. 3rd.

**MS7150E: INDUSTRIAL RELATIONS AND LABOUR LAWS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture sessions: 39**

**Course Outcomes:**

- CO1: Critically evaluate the importance of Industrial Relations (IR) in an Indian and Global Scenario.
- CO2: Justify the importance of Trade Unions and evaluate the cause of industrial and individual disputes.
- CO3: Examine the salient features of laws and labour codes relating to industrial relations, occupational health and safety, wages and social security.
- CO4: Contrast the applicability of laws and make decisions from a human resource management perspective.

**Industrial Relations and Trade Unions**

Industrial relations; Overview of Industrial Relations (IR), Meaning and scope of IR, Perspectives/approaches to IR, Major stakeholders of IR - Evolution of IR in India, Emerging scenario of IR in India, Impact of globalization on IR - Management of labour; Business strategies and industrial relations - Formation and the history of International Labour Organisation (ILO) - Trade Unionism; Concepts, Objectives, Structure and the types of trade unions, Problems of trade unions, Trade union movement in India, Trade union Act 1926, Applicability, Registration, Recognition of trade unions, Dealing with trade unions; Theories of Unionism; Union Leadership; Managerial Unionism; Problems of Unions; Role of Trade Union in mergers and acquisitions; Recognition of Unions; Unions and Politics. Management Vs. Union Rights; Unions and Strikes; Unfair Labour Practices; NCL Recommendations; Conflictive pattern of industrial relations - Trade Unions and Government, Bipartite and Tripartite Forums at Industry and National levels; The Role of Trade Unions.

**Industrial Disputes and Dispute Resolution Process**

Industrial dispute and individual dispute; Causes of industrial and individual disputes, Industrial Dispute Act (IDA) 1947, IDA (Amendment) 1982 and 1984 - Settlement of industrial disputes, Dispute resolution methods and machinery, Work committee - Standing Orders Act 1946, Concept of grievance; Nature and causes of grievance; grievance procedures; Handling employee grievances - Industrial indiscipline: An overview of Disciplinary enquiries - Collective bargaining; Concept, Collective bargaining process, Advantages and disadvantages of collective bargaining, Types of collective bargaining contracts, Pre-requisites for collective bargaining, Trends in collective bargaining,

**Labour Legislation and Labour Codes**

Labour Legislations; Evolution and importance of labour legislation in India, Protective legislation; The Factories Act 1948 - Wage Legislations; Minimum Wages Act 1948, Payment of Wages Act 1936, Equal Remuneration Act 1976, Payment of Bonus Act 1965, Payment of Gratuity Act 1972 - Social Security Legislation; Workmen's Compensation Act 1923, Employees' Provident Fund 1952, Employees' State Insurance Act 1948, The Maternity Benefit Act 1961, Unorganized Workers Social Security Act 2008, - Miscellaneous Legislations; Child Labour (Prohibition and Regulation) Act 1986, Contract Labour Act (Regulation and Abolition) 1986, Sexual harassment at workplace, Labour Compliances to be done before setting up a factory - Labour Codes.

**References:**

1. Arun, M; Nambudiri, R & Selvaraj,P (2012). *Industrial Relations and Labour Laws*, Tata McGrawHill.
2. Mishra. S., N.. (2020). *Labour and Industrial Laws*, Central law Publications.
3. Padhi, P. K.. (2019) *Labour and Industrial Laws*. 4th ed. PHI Learning Private Limited.
4. Ratnam, C.S. V & Dhal, M (2017) *Industrial Relations*, 2nd ed. Oxford Publications.
5. Srivastava, S. C, (2020), *Industrial Relations and Labour Laws*, 8th ed. Vikas.



**MS7151E HUMAN RESOURCE ANALYTICS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Formulate metrics for measuring the employee contribution and value proposition
- CO2: Construct operational tool for HR decision making .
- CO3: Develop decision scenarios, hypotheses and data collection and appropriate analysis process.
- CO4: Interpret the results of analysis and offer recommendations and prescriptions for HR decision making situations by interpreting the data.

**HR Metrics & Analytics**

Introduction to HR Analytics - Frameworks in HR Analytics, Talentship framework, LAMP Framework, HCM Framework - Employee Lifecycle in Organisation, PCMM, HR Analytics Maturity Model - HR Audit, - HR Accounting, HR Metrics, Benchmarking - Descriptive, Predictive and Prescriptive Analytics - HRMS, HR Information Systems - Data Analysis Process, Basics of Probability and Statistics, Data Visualization- HR Dashboard - Interpretation and Reporting.

**Functional Analytics - Part 1**

Analytics in: HR Planning - Job Analysis, Manpower demand and supply - Recruitment, Selection, Psychometrics, Onboarding, Orientation, Training, Placement - Performance Evaluation, Internal Branding, Communications, Grievance, Policy - Networking and Collaboration.

**Functional Analytics - Part 2**

Analytics in: Job Evaluation - Compensation, Benefits, Statutory Compliance -Learning and Development, Satisfaction Surveys - Employee Engagement, Turnover Intention, Attrition.

**References:**

1. Doze, I & Al, T (2019) *Data-Driven HR: Creating Value with HR Metrics and HR Analytics*, Irti Intelligence Publishing, Amsterdam
2. Edwards, M R & Edwards, K (2019) *Predictive HR Analytics: Mastering the HR Metric*, (2e) Kogan Page,
3. Gupta, M; Banerjee, P & Pandey, J (2019) *Practical Applications of HR Analytics*, SAGE
4. Fitz-Enz, J (2018) *The New HR Analytics*, Amacom,
5. Ramesh, S & Kuldeep, S (2016) *Wining on HR Analytics: Leveraging Data for Competitive Advantage*, Sage Publications

**MS7152E INDIVIDUAL AND ORGANISATIONAL TRANSFORMATION**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Assess Individual personality, and design strategies for performance sustenance and enhancement through justifiable methods
- CO2: Justify the causes, triggers and spread of change at a micro (individual) level and macro (Organisation) level
- CO3: Develop effective methods for addressing the change and formulate strategies and methods to accommodate the change
- CO4: Generate a standard operating procedure for managing change in an effective manner and channelise it for individual and organisation development

**Understanding and Transforming Individual Employees**

Individual Personality, Personality Theories -, Higgin's Regulatory Focus Theory, Eric Berne's psychoanalytic theory, Transactional Analysis - Self-branding, Impression Management - Emotional Intelligence, Managerial Stances and orientation - Coping with loss, Organisational Citizenship Behaviour,- Managing misbehaviour, workplace stress, job burnout - Boundary Spanning, Collaboration and Networks - Using Internal Social media, soft-skills, Organisation Development - Managing workforce diversity

**Developing and Changing the organisation**

Organisational culture -Organisational climate - Organisation Transformation, concept and characteristics, Importance, imperative and impact of change, Nature of change - TROPICS, Triggers of change, models of change, Force-Field Theory, ADKAR model, 7s Model, Leavitt Model - Types of change, forces of change (external Vs internal) - Types of Changes, Organisation Wide Vs sub System Change, Transformational Vs Incremental Change, Remedial Vs Developmental Changes, Unplanned vs. Planned Changes. Evolutionary and Revolutionary Changes in Organisations.

**Effectuating Change in organisations**

Organisational Politics and Change - Human response to change, Resistance to change - Lewin's model of change implementation, Individual differences in response to change - Role Personal mastery in adapting to change, Kubler-Ross Grief cycle - Change Agents Intervention Strategy model - Learning Organisations.

**References:**

1. Gladding, S. T & Batra, P (2018) *Counseling* (8th ed) Pearson
2. Kotter, J. P. (2012), *Leading Change*, Harvard Business Review Press
3. Paton, R & McCalman, J (2008) *Change Management: A Guide to Effective Implementation*, SAGE
4. R.J. Gareth, R. J. & Mary, M (2018) *Organisational Theory, Design and Change*, (7th ed) Pearson Education
5. Sharma, R (2017), *Change Management and Organisational Transformation*, (2nd ed) McGraw Hill

**MS7153E LEARNING AND DEVELOPMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

CO1: Discover the learning requirement of employees in organisations.

CO2: Design and develop effective L&D programs to suit the organisation's requirements.

CO3: Improve and modify the behaviour of employees for their personal development and the overall development of the organisation.

CO4: Familiarise with the various methods of L&D and utilize the tools and techniques for organisational learning and development.

**Understanding Learning & Development in Organisations**

Need and importance of learning and development in Organisations-Difference between training and learning-A systematic approach to L&D-Strategic role of L&D in an Organisation-Learning and Behaviour Modification-Workplace learning-Roles and L&D-Individual Learning curve-Cycle of L&D resource management-Need Analysis-Adult Learning-Types of L&D-L&D and employee performance

**Designing Effective Learning and Development Programs**

Planning a learning approach-Designing L&D in an Organisation-Competency based L&D-Vocational Education and Training-Training process-Implementing training programs-Types of training; Technical and soft-skill adaptation; Computer Assisted Learning-Integrated Learning Systems-Internal and External training-E-learning-Leveraging MOOC; course plan and content creation; materials for L&D; delivery methods-Distance Learning-Gamification-Audio-Visual Aids-Evaluation of L&D programs-Feedback and Surveys-Learning Management Systems.

**Human Resource Development and Organisational Learning**

Human Resource Development-Cross-cultural orientation-Employee Engagement-Capacity Building, Organisation Development-Knowledge Management-Organisational Learning-Leadership Development-Management Development

**References:**

1. Dessler, G., & Varrkey, B. (2005). *Human Resource Management, 15e*. Pearson Education India.
2. Gold, J., Holden, R., & Iles, P. (2017). *Human resource development: Theory and practice*. Bloomsbury Publishing.
3. Harrison, R. (2005). *Learning and Development*. CIPD publishing.
4. Janakiraman, B. (2007). *Training & Development: Indian Text Edition*. John Wiley & Sons
5. Lynton, R. P., & Pareek, U. (2011). *Training for Development*. SAGE publishing India.

**MS7154E TALENT AND PERFORMANCE MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes**

- CO1: Outline the context of talent development and management in organisations
- CO2: Develop effective and measurable competency models for talent management
- CO3: Identify the components of an efficient performance management system in an organisation, as well as the significance of integrating with other HR systems.
- CO4: Apply skills in framing performance management systems that are compatible with modern

**Understanding Talent Management and Frameworks**

Overview of different approaches to talent- The relevance of talent in business-Framework for talent management-Building talent pipeline-Practices of talent management in organisations-Talent management scenario in India;expanding repository of talent management research-Future directions

**Evaluating Current Performance Management Systems**

Building competency models-Types of competency models-Competencies defined-Identifying competencies-Steps in creating competency models-Competency mapping and methods of competency mapping-Use of competency models in talent management-Understanding performance and determinants of performance-Understanding performance management system-Objectives of performance management system-Differentiating between performance management and performance appraisal-Types of performance appraisal-Potential appraisal-Performance management process

**Designing and Integrating Effective Performance Management Systems**

Integration of performance management systems with other Systems-Employee development and performance Management-Coaching and mentoring-Use of technology in performance management systems-Performance management practices in contemporary organisations-Performance management and reward systems-Performance based pay systems-Employee engagement and performance management-High performance organisations.

**References:**

1. Aguinis, H. (2009). *Performance Management*. Upper Saddle River, NJ: Pearson Prentice Hall.
2. Armstrong, M. (2021). *Performance Management*. Kogan Page Limited.
3. Berger, D. R., & Berger, L. A. (2011). *The Talent Management Handbook : Creating a Sustainable Competitive Advantage by Selecting, Developing, and Promoting the Best People*.

**MS7155E TOTAL REWARDS AND EMPLOYEE RECOGNITION**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

CO1: Understand the role of compensation and benefits in the employment relationship.

CO2: Explain how organisations develop and implement pay systems.

CO3: Analyse how total rewards and recognition create a competitive advantage for modern enterprises.

CO4: Integrate and apply the knowledge to solve compensation related problems in the organisation.

**Understanding total reward systems in organisations**

Introduction to compensation-Concept of total rewards-monetary and non-monetary aspects of compensation-Total reward strategy-Economic theories related to compensation-Concept of wage and wage theories-The pay model; Strategic issues in designing pay models-Internal alignment-Job analysis and job descriptions-Job evaluation and job based structures-Person based structures

**Setting up of reward systems**

Defining competitiveness-External competitiveness-Salary surveys-Market based pay-Pay levels and structures-Pay for performance-Importance of variable pay-Motivation theories of compensation-Performance appraisals and incentive pay system-Short term and long term incentives-Introduction to benefits-The benefit determination process-Benefit options-Role of fringe benefits-Growth of benefit options in India-Compensation of special groups-Executive compensation-International pay systems

**Contemporary aspects and execution of reward systems**

Emerging trends and issues in reward systems- Alternative reward systems and strategies-Employee recognition and flexible reward systems-Managing the system-Government and legal issues in compensation-Making it work, cost and other aspects of reward systems

**References:**

1. Bhattacharyya, D. K. (2009). *Compensation management*. Oxford University Press.
2. Milkovich, G. T., Newman, J. M., & Gerhart, B. A. (2017). *Compensation*. Mcgraw-Hill Education.
3. Shields, J., Rooney, J., Brown, M., & Kaine, S. (2020). *Managing Employee Performance and Reward: Systems, Practices and Prospects*. Cambridge University Press.

**MS7156E ORGANISATIONAL DEVELOPMENT AND SUSTAINABILITY**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Assess the sustainability level of organisations by evaluating frameworks and establishing a growth agenda for organisations
- CO2: Develop strategies for building effective and sustainable organisations by managing the human resources
- CO3: Evaluate the micro level sustainability of organisations using different HR functions and processes
- CO4: Appraise different scenarios of organisational development and sustainability for a diverse set of organisational setting.

**Macro Level Sustainability of organisations**

Macro level sustainability: Direction setting: vision, mission, strategy and goals of the organisation, - Corporate Sustainability, Socially Responsible organisations - Frameworks in sustainable development, - Sustainable Human Resource Management - Green Human Resource Management and organisational Sustainability - organisational Growth and Lifecycle - organisational Effectiveness - organisational Development, organisational Decline.

**Micro Level Sustainability of organisations**

Micro level sustainability: Sustainable Recruitment, Responsible Recruitment - Employer Branding, Collaboration, Developing Sustainable Behaviour - Theory of Reasoned Action, Values and Ethics, - Coaching and Mentoring, Responsible Innovation - Capacity Building, Performance Evaluation, - Accountability in Appraisals, Impactful Rewards and Recognition on Employee Behaviour - Trust and Transparency, organisational justice - Engaging Employees through full range leadership - High Performance Work Culture, High-Trust Relationships, Responsible communication - Prosocial Behaviours

**Factors affecting Sustainability and Development**

Diversity and Inclusion for sustainability, Case of sustainability in: Agriculture and non profit organisations, - small businesses, public sector enterprises, educational institutions, for profit organisations, multi national organisations, virtual organisations

**References:**

1. Sharma, R. R (2019), Human Resource Management for organisational Sustainability, Business Expert Press
2. Galpin T J, Whittington, J L & Bell, R G (2012), Leading the Sustainable Organization, Routelge, UK
3. Flamholtz, E G & Randle, Y (2016), Growing Pains: Building Sustainably Successful Organizations (5e), Wiley.

**MS7157E EMPLOYER BRANDING AND ORGANISATIONAL COMMUNICATION**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Construct a brand image for an organisation for strategic positioning.
- CO2: Formulate strategies to develop an organisation as a sought after employer.
- CO3: Conduct employee engagement surveys and promote a culture of open communication.
- CO4: Reinforce trust and pride in employees by devising strategies for effective communication.

**Basics of Internal Branding**

Fundamentals of Branding: Brand Ideology, Brand Hierarchy and Adaptation - Strategy and Capability - Brand Image, Employer Brand Positioning, Brand Differentiation, Brand Personality, Brand Consistency and Continuity - Brand Building and Development - Internal Branding in organisations. Role of leadership, internal brand ambassadors, organisational citizenship - Advertising and Marketing, Public Relations - Liaison with stakeholders: government, educational institutions, shareholders, general public and employees

**Brand Building Strategies**

Employee Value Proposition, Employer Attractiveness, Changing employee landscape - Talent Acquisition, Great Place to Work, Advertising for recruitment, Utilizing Recruitment Channels - Shaping the work culture, Internal Marketing and Engagement, Brand Experience, Onboarding employees - Career Development, Personal Growth Plans, Policy development - Engagement surveys and analysis, - Measuring brand impact, Rewards and Recognition, Employee Benefits, Emotional Engagement

**Designing effective Communication Strategies**

Internal Communications, Communication Ethics -Human Relations, Collaboration and Networks,Power and Politics in communication - Conflict, Negotiation, Transactional Analysis - Formal and Informal Communication in organisations - Leveraging social media for effective communication, internal channels for communication, bulletin boards, encouraging open communication - Diversity in communication, Team communication, Virtual Communication

**References:**

1. Barrow, S & Richard M (2005) [\*The Employer Brand: Bringing the Best of Brand Management to People at Work\*](#), (2e) Wiley.
2. Bell, R L & Martin, B J S (2019) *Managerial Communication for Organizational Development*, (2e) Business Expert Press
3. Miller, K (2011) *Organizational Communication: Approaches and Processes* (6e) Cengage Learning
4. Richard, M (2015) *Employer brand management: Practical Lessons from World's Leading Employers*, Wiley
5. Wrench, J S, Majocha, K L & Carter, N P (2015) *Organizational Communication: Theory Research and Practice*, Flat World Knowledge

**MS7158E EMPLOYEE HAPPINESS AND WELLBEING**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the concepts of workplace health, happiness and well-being and how they are relevant to organisations.
- CO2: Explain the psychological roots of happiness and Identify the key factors contributing to workplace happiness
- CO3: Critically evaluate the current well-being research, interventions and evaluations
- CO4: Create strategies to promote workplace health and well-being

**Understanding Wellbeing In The Context Of Workplace**

Occupational health psychology-Workplace health; risk factors in the workplace-Work stress models and theoretical frameworks-Common work stressors and strains-Individual differences in experiencing work stress-Emotional labour and burnout- Positive occupational health psychology-Well-being; Situational factors and job characteristics for employee well-being; Dimensions of well-being; hedonic and subjective well-being-Motivation and well-being-Measuring subjective wellbeing-life satisfaction; positive and negative affect

**Positive Organisational Behaviour**

Understanding happiness; Determinants of happiness-Happiness and positive emotions: biological foundations; socio-demographic predictors-The broaden and build theory-Benefit of being happy-Strengths, Engagement, Meaning, and Callings-Positive organisational behaviour-Role of positive psychological capital: Hope, Efficacy, Resilience and Optimism-Emerging constructs relevant to workplaces: Flow, creativity, Gratitude, Mindfulness-Research on well-being and POB; Impact of interventions

**Positive Organisational Scholarship**

Positive organisational scholarship-Organisational excellence-Effects of virtue in organisations-Flourishing and positive deviance-High quality connections-Positive energy networks-Prosocial behaviours-Corporate citizenship-Positive practices and organisational effectiveness-Social integration, actualisation and acceptance- Human sustainability-Role of culture and leadership

**References**

1. Cameron, K. S., Dutton, J. E., & Quinn, R. E. (2003). Positive Organisational Scholarship : Foundations of a New Discipline. Berrett-Koehler.
2. Carr, A. (2022). *Positive Psychology: The Science of Wellbeing and Human Strengths*. Routledge.
3. Luthans, F., Youssef-Morgan, C. M., & Avolio, B. J. (2015). *Psychological Capital and Beyond*. Oxford University Press.
4. Lyubomirsky, S. (2007). *The How of Happiness*. Penguin Publishing Group.
5. Peterson, C. (2006). *A Primer in Positive Psychology*. Oxford University Press.



**MS7159E LEADERSHIP AND TEAM EFFECTIVENESS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Appraise different styles of leadership to effectively manage teams and organisations
- CO2: Justify the decision making process of leaders by evaluating the personality, emotional balance and interaction with the team members
- CO3: Develop a rationale for the leadership styles and strategies adopted for effective team management
- CO4: Evaluate the team dynamics and build effective teams

**Foundations of Leadership**

Leadership as a Phenomenon, Vision - Leadership Theories, Leadership in interaction - Social identity and leadership, Authentic Leadership, Servant Leadership, Transactional, Transformational and Charismatic Leadership - Fiedler Theory, Leadership Grid - People-centric vs Task-centric leadership, Leader Member Exchange

**Leadership Development**

Personality and Leadership - Dark Triad and Leadership - Leadership Traits, Reason, Emotions and Ethics in Leadership - Emotional Intelligence, Emotional Quotient, Resource mobilization and utilization. - Perceived justice - Technology and Leadership, Temporal consideration in leadership - Distributed Leadership, Decision Making styles, Empowerment - Leadership in NGOs, Dyadic Relations and Followers, Developing Leadership skills - Succession Planning

**Team Dynamics and Building Effective Teams**

Groups vs Teams, Team Building, Team building models - Team design, Employee-first approach, Team size, Team cohesiveness, Team Effectiveness and Productivity, Morale in team - Team compensation, rewards and recognition, term performance evaluation - Team engagement, High Performance Teams, Special teams

**References:**

1. Richard, K & Shawn, M M (2015) *Team Genius: The New Science of High Performing Organisations*, Harper Collins
2. Schedlitzki, D, Larsson, M, Carrol, B., Bligh, M C & Epitropaki, O (2023) *The SAGE Handbook of Leadership (2e)* SAGE Publications
3. Younger, H R (2021) *The Art of Caring Leadership: How Leading with Hearts Uplifts Teams and Organizations*, Berrett-Koehler Publishers
4. Yukl, G A & Gardner, W L (2019) *Leadership in Organizations (9e)* Pearson.

**MS7160E ARTIFICIAL INTELLIGENCE AND BIG DATA IN BUSINESS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

CO1: Appraise the fundamental concepts and applications of artificial intelligence and big data in business.

CO2: Apply machine learning techniques to analyse large datasets and extract insights.

CO3: Utilise natural language processing techniques for text analysis and sentiment analysis.

CO4: Evaluate the role of Generative Pre-trained Transformer(GPT) models in enhancing business analytics and decision-making.

**Fundamentals of Artificial Intelligence and Big Data**

Intelligent Systems: Evolution of Technology and Business- Types of Digital Data, Introduction to Big Data, Big Data Analytics - Overview of artificial intelligence and big data analytics- History of Hadoop - Evolution of AI - Role of AI and big data in business transformation - Ethical Considerations in AI and big data applications - Business use cases and success stories

**Big Data Analytics, Machine Learning, Natural Language Processing and Text Analytics**

Big Data Environments - Apache Big Data Platform - Big data storage and retrieval: noSQL, GraphDB, Hive, Pig - Big data distributed computing: Analysing Data using Hadoop and Spark - MapReduce - Supervised learning techniques (regression, classification) - Unsupervised learning techniques (clustering, dimensionality reduction) - Evaluation and validation of machine learning models - Feature engineering and selection - Introduction to natural language processing (NLP) - Text preprocessing and feature extraction - Sentiment analysis and opinion mining - Named entity recognition and text classification

**Artificial Intelligence in Business**

Learning from Big Data - Meta-heuristics: Genetic Algorithm, Scatter Search, Tabu Search, Particle Swarm Intelligence, Ant Colony Optimization, Fuzzy Logic Systems, Case-based reasoning, Artificial Neural Networks - Deep Learning - Deep Reinforcement Learning - Large Language Models- Generative Pre-trained Transformer(GPT) Models in Business Analytics: Introduction, Fine-tuning GPT models for business applications - Generative AI - GPT applications in chatbots and virtual assistants - Applications, Opportunities, Challenges - Future trends and advancements in AI and big data

**References:**

1. Alto, V. (2023). *Modern Generative AI with ChatGPT and OpenAI Models: Leverage the Capabilities of OpenAI's LLM for Productivity and Innovation with GPT3 and GPT4* (1st edition). Packt Publishing.
2. Babcock, J., & Bali, R. (2021). *Generative AI with Python and TensorFlow 2: Create images, text, and music with VAEs, GANs, LSTMs, and Transformer models*. Packt Publishing Limited.
3. Davenport, T. H., & Michelman, P. (2018). *The AI Advantage – How to Put the Artificial Intelligence Revolution to Work* (1st edition). MIT Press.
4. Deshpande, A., & Kumar, M. (2018). *Artificial Intelligence for Big Data: Complete guide to automating Big Data solutions using Artificial Intelligence techniques*. Packt Publishing.

5. Dhanrajani, S. (2018). *AI and Analytics, Accelerating Business Decisions*. Wiley.
6. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis*. Cengage.
7. Jurafsky, D. & James H. Martin. (2008). *Speech and Language Processing* (2nd edition). Prentice Hall.
8. Kelleher, J. D., Namee, B. M., & D'Arcy, A. (2015). *Fundamentals of Machine Learning for Predictive Data Analytics: Algorithms, Worked Examples, and Case Studies* (Illustrated edition). The MIT Press.
9. Liebowitz, J. (Ed.). (2013). *Big Data and Business Analytics* (1st edition). Auerbach Publications.
10. Manning, C. D., & Schütze, H. (1999). *Foundations of Statistical Natural Language Processing* (1st edition). The MIT Press.
11. White, T. (2015). *Hadoop: The Definitive Guide, 4th Edition* (4th edition). Shroff/O'Reilly.
12. Witten, I. H., Frank, E., Hall, M. A., & Pal, C. J. (2016). *Data Mining: Practical Machine Learning Tools and Techniques* (4th edition). Morgan Kaufmann.
13. Devlin, J., Chang, M.-W., Lee, K., & Toutanova, K. (2019). BERT: Pre-training of Deep Bidirectional Transformers for Language Understanding. *Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, Volume 1 (Long and Short Papers)*, 4171–4186. <https://doi.org/10.18653/v1/N19-1423>

**MS7161E BUSINESS ANALYTICS AND INTELLIGENCE**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Appraise the role of analytics in business decision-making.
- CO2: Apply data visualisation techniques to communicate insights effectively.
- CO3: Utilise predictive and prescriptive analytics to support decision-making.
- CO4: Evaluate the role of artificial intelligence, including GPT models, in business analytics.

**Fundamentals of Business Analytics**

Decision-Making and Analytics: Decision-Making Process, Decision Support Systems - Business Intelligence Framework - Overview of statistical analysis techniques - Business Analytics Overview: Descriptive Analytics, Predictive Analytics, Prescriptive Analytics - Big Data Analytics - Artificial Intelligence - Analytics Tools

**Analytics and Business**

Descriptive Analytics: Data warehousing, Business Reporting, Visual Analytics, and Business Performance Management - Predictive Analytics: Data Mining and Exploration, Techniques for Predictive Modelling, Text Analytics, Web Analytics, and Social Analytics - Prescriptive Analytics: Model-based Decision Making, Modeling and Analysis - Multi-objective optimisation and decision-making - Simulation and risk analysis for decision support - Automated Decision Systems and Expert Systems, Knowledge Management and Collaborative Systems

**Algorithms, Tools, and Applications**

Regression Analysis and Time Series Forecasting - Classification and decision tree algorithms - Association Rules - Clustering techniques for customer segmentation - Applications: Marketing Models, Logistics and Production Models, Data Envelopment Analysis - Information Strategy - Security - Overview of artificial intelligence and its applications - Introduction to natural language processing (NLP) - Leveraging GPT models for text analytics and insights - Ethical considerations in AI-powered analytics

**References:**

1. Davenport, T. H. (2007). *Competing on Analytics: The New Science of Winning* (1st edition). Harvard Business Review Press.
2. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis* (8th edition). Cengage.
3. James, G., Witten, D., Hastie, T., & Tibshirani, R. (2013). *An Introduction to Statistical Learning* (Vol. 103). Springer New York. <https://doi.org/10.1007/978-1-4614-7138-7>
4. Marr, B. (2017). *Data Strategy: How to Profit from a World of Big Data, Analytics and the Internet of Things* (1st edition). Kogan Page.
5. Nisbet, R., Miner, G. D., & Yale, K. (2017). *Handbook of Statistical Analysis and Data Mining Applications* (2nd edition). Academic Press.
6. Sharda, R., Delen, D., & Turban, E. (2018). *Business Intelligence and Analytics* (10th edition). Pearson Education.
7. Shmueli, G. (2017). *Data Mining for Business Analytics—Concepts, Techniques, and Applications in R* (1st edition). John Wiley & Sons Inc.
8. Vercellis, C. (2009). *Business Intelligence—Data Mining and Optimization for Decision Making* (1st edition). John Wiley & Sons Inc.
9. Winston, W., & Albright, S. (2014). *Business Analytics: Data Analysis & Decision Making* (5th edition). South-Western College Publishing.

**MS7162E DATA MANAGEMENT AND VISUALISATION**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the principles and best practices of data management, including blockchain technology and spreadsheets.
- CO2: Apply data management techniques using databases, spreadsheets, and blockchains.
- CO3: Create visually appealing and informative data visualisations using spreadsheets and advanced visualisation tools.
- CO4: Utilise state-of-the-art visualisation options to communicate insights effectively.

**Introduction to Data Management**

Data as an Asset - Overview of data management (DM) concepts and processes - Scope of data management - Value creation through DM, critical challenges for DM, DM and business process management, DM and IT Management, DM lifecycle, Types of data - Data governance - Relational database management systems - Data modelling and database design - Introduction to blockchain technology

**Database Management**

Structured Query Language (SQL) fundamentals - Data integrity and quality assurance: Data Architecture, Data Cleaning, Data Manipulation, Handling Missing data, Data Reduction, Trimming, Data Integration, Data Quality, Risk and Risk Mitigating Measures, Data Security, Data Centre Management - Business Intelligence, Big Data, Ethical aspects of data management, Data management policy Blockchain Technology for Data Management: Applications of blockchain in data management - Smart contracts and decentralised data storage - Privacy and security considerations in blockchain-based data management

**Data Visualisation**

Introduction to spreadsheet tools for data management - Data organisation and manipulation in spreadsheets- Advanced spreadsheet functions and formulas - Data visualisation techniques using spreadsheets - Visual representation methods: Line chart, Steam and Leaf plots, bar diagrams, histograms, density plots, violin plot - Introduction to advanced data visualisation tools and techniques - Interactive and dynamic visualisation options - Geospatial visualisation and mapping techniques - Network visualisation and social network analysis

**References:**

1. Alexander, M., Kusleika, R., & Walkenbach, J. (2018). *Excel 2019 Bible* (1st edition). Wiley.
2. Brackett, M. (2014). *Data Resource Simplicity: How Organizations Choose Data Resource Success or Failure* (1st edition). Technics Publications.
3. Cairo, A. (2012). *Functional Art, The* (1st edition). New Riders.
4. Few, S. (2004). *Show Me the Numbers: Designing Tables and Graphs to Enlighten*. Analytics Press.
5. Gils, B. van. (2020). *Data Management: A gentle introduction* (V. H. Publishing, Ed.; 1st edition). Van Haren Publishing.

6. Healy, K. (2018). *Data Visualization: A Practical Introduction*. Princeton University Press.
7. Knaflic, C. N. (2015). *Storytelling With Data: A Data Visualization Guide For Business Professionals* Nussbaumer Knaflic, Cole (1st edition). Wiley
8. Mahanti, R. (2021). *Data Governance and Data Management: Contextualizing Data Governance Drivers, Technologies, and Tools*. Springer Nature Singapore.
9. Munzner, T. (2014). *Visualization Analysis and Design* (1st edition). A K Peters/CRC Press.
10. Tufte, E. R. (2001). *The Visual Display of Quantitative Information* (2nd edition). Graphics Pr.
11. Wickham, H. (2009). *ggplot2: Elegant Graphics for Data Analysis*. Springer.  
<https://doi.org/10.1007/978-0-387-98141-3>
12. Yau, N. (2011). *Visualize This: The Flowing Data Guide to Design, Visualization, and Statistics* (1st edition). Wiley.

**MS7163E DIGITAL TRANSFORMATION**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the fundamentals of digital transformation and its significance in organisations.
- CO2: Analyse the role of emerging technologies in driving digital transformation initiatives.
- CO3: Evaluate and apply software management concepts to support digital transformation projects.
- CO4: Develop strategies for successful implementation and management of digital transformation initiatives.

**Introduction to Digital Transformation**

Definition and scope of digital transformation - The rationale for Digital Transformation - Drivers and challenges of digital transformation - Digital transformation frameworks and models - Digital Platforms: Digital Business Ecosystems, Multi-sided Platform Business, Platform Economy, Value Co-creation, Disruptive Innovation and Business Strategy, Disruption of business processes, Technology Adoption, Structural Transformation, Transformation enabled by Business Analytics - Strategies and leadership for successful digital transformation - Introduction to software management practices

**Emerging Technologies and Software Management Concepts for Digital Transformation**

Artificial intelligence and machine learning in digital transformation - Cloud computing and its impact on digital transformation - Internet of things and its role in driving digital transformation - Big data analytics and data-driven decision-making - Blockchain in business - Software Management Concepts - Rapid Prototyping - Project Management: Agile, Software Management Practices: DevOps, Site Reliability Engineering - Integrating software management concepts into digital transformation - Continuous integration and continuous delivery (CI/CD) pipelines - Managing software quality and reliability in digital transformation

**Implementing and Managing Digital Transformation**

Assessing organisational readiness for digital transformation - Change management and organisational culture in digital transformation - Digital customer experience and personalisation strategies - Measuring and evaluating the impact of digital transformation initiatives - Digital Transformation (in Education, Healthcare, other verticals), Data business and Data Security, Automation

**References:**

1. Ambler, S., & Lines, M. (2012). *Disciplined Agile Delivery: A Practitioner's Guide to Agile Software Delivery in the Enterprise* (1st edition). IBM Press.
2. Beyer, B., Petoff, J., Jones, C., & Murphy, N. R. (2016). *Site Reliability Engineering: How Google Runs Production Systems*. O'Reilly.
3. Davenport, T. H., & Michelman, P. (2018). *The AI Advantage – How to Put the Artificial Intelligence Revolution to Work* (1st edition). MIT Press.
4. Herbert, L. (2017). *Digital Transformation: Build Your Organization's Future for the Innovation Age*. Bloomsbury Business India.

5. Kersten, M. (2018). *Project to Product: How Value Stream Networks Will Transform It and Business* (Illustrated edition). IT Revolution Press.
6. Kim, G., Forsgren, N., & Humble, J. (2018). *Accelerate: Building and Scaling High Performing Technology Organizations*. IT Revolution.
7. Kim, G., Humble, J., Debois, P., & Willis, J. (2016). *The DevOps Handbook: How to Create World-Class Agility, Reliability, and Security in Technology Organizations*. IT Revolution.
8. Li, C., & Bernoff, J. (2011). *Groundswell: Winning in a World Transformed by Social Technologies*. Harvard Business Press.
9. Ries, E. (2011). *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses* (Illustrated edition). Currency.
10. Rogers, D. (2016). *The Digital Transformation Playbook: Rethink Your Business for the Digital Age*. Columbia University Press.



**MS7164E ENTERPRISE RESOURCE PLANNING**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the fundamental concepts and components of enterprise resource planning (ERP).
- CO2: Analyse business processes and requirements for ERP system implementation.
- CO3: Configure and customise ERP systems to align with organisational needs.
- CO4: Utilise ERP software for efficient resource planning and decision-making.

**Introduction to Enterprise Systems**

Enterprise Resources Planning (ERP): Features, Selection criteria, Merits, Issues and challenges in implementation - Supply Chain Management (SCM): Features, Selection criteria, Merits, Issues and challenges in implementation - Customer Relationship Management (CRM): Features, Selection criteria, Merits, Issues and challenges in implementation - Data management: Data warehousing, Data mining, Online Analytical Processing - Business Process Re-engineering (BPR) - Overview of enterprise resource planning and its importance - Evolution and benefits of ERP systems - Key modules and functionalities of ERP systems - ERP implementation life cycle and project management

**Developing Enterprise Resource Planning Systems**

Business process mapping and documentation: Business process mapping and documentation, Analysis of organisational requirements for ERP implementation, Gap analysis and process reengineering, Change management and user adoption in ERP projects - ERP System Configuration and Customization: System configuration and master data management, Customization options and best practices, Workflow management and automation, Integration of ERP systems with external applications - Business modules in an ERP package, Finance, Manufacturing, Human resources, Plant maintenance, Materials management, Quality management, Sales and distribution - ERP Market - Closed source and open source market

**ERP Integration, Optimisation and Performance Management**

ERP system Installation Options; Risk identification analysis, System projects, Demonstration of the system failure method, System architecture and ERP - Stabilization period, Support mechanism and activities, ERP and related technologies; Business Intelligence, Product Data Management, Electronic Data Interchange, E-commerce, Enabling technologies: Internet, e-mail, mobile phones, Bar code system - Performance monitoring and system maintenance - Data analytics and reporting in ERP systems - Continuous improvement and optimisation strategies - Security and governance in ERP environments

**References:**

1. Garg, V. K., & Venkitakrishnan, N. K. (2003). *Enterprise Resource Planning: Concepts And Practice*. PHI Learning Pvt. Ltd.
2. Goyal, D. P. (2011). *Enterprise Resource Planning: A Managerial Perspective: A Managerial Perspective*. Tata McGraw Hill Education Private Limited.
3. Leon, A. (2007). *Enterprise Resource Planning* (2nd edition). McGraw Hill Education.
4. Leon, A. (2014). *ERP Demystified* (3rd edition). McGraw Hill Education.

5. Monk, E., & Wagner, B. (2012). *Concepts in Enterprise Resource Planning* (4th edition). CENGAGE Learning Custom Publishing.
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7. Vaman, J. N. (2007). *ERP in Practice: ERP Strategies for Steering Organizational Competence and Competitive Advantage*. Tata McGraw-Hill Publishing Company.
8. Wallace, T. F., & Kremzar, M. H. (2002). *ERP: Making It Happen: The Implementers' Guide to Success with Enterprise Resource Planning*. John Wiley & Sons.

**MS7165E INFORMATION SECURITY AND RISK MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the fundamental concepts and principles of information security and risk management.
- CO2: Identify and assess vulnerabilities and threats to information systems.
- CO3: Design and implement adequate information security controls.
- CO4: Evaluate and manage information security risks within organisations.

**Introduction to Information Security**

Overview of information security principles and concepts - Social Engineering - Human behaviour and Information Security - Risk Management - Complexity of Risk Management - Information Security Risk Management - Stakeholders and Communication - Security governance and compliance - Legal and ethical considerations in information security - Security Policies, standards, and procedures

**Threats, Vulnerabilities, Risk Assessment, and Information Security Controls**

Types of threats to information systems - Common vulnerabilities and attack vectors - Risk assessment methodologies - Measuring Risks - Quantitative and qualitative risk analysis - Information Security Controls: Access control mechanisms and models - Network security and perimeter defence - Encryption and cryptographic techniques - Security in the cloud and mobile environments

**Information Security Risk Management**

Risk management frameworks and methodologies - Incident response and disaster recovery planning- Security awareness and training - Business continuity and IT governance - Information Security Governance - Information Security Policy: Information Security Policy Framework - Information Security Procedures and Standards - Problems with Policies - Decision Making from a Managerial Perspective

**References:**

1. Anderson, R. J. (2008). *Security Engineering: A Guide to Building Dependable Distributed Systems* (2nd edition). John Wiley & Sons.
2. Chapple, M., & Seidl, D. (2016). *CISSP Official (ISC)2 Practice Tests* (1st edition). Sybex.
3. Chapple, M., Stewart, J. M., & Gibson, D. (2018). *(ISC)2 CISSP Certified Information Systems Security Professional Official Study Guide*. John Wiley & Sons.
4. Conrad, E., Misener, S., & Feldman, J. (2015). *CISSP Study Guide* (3rd edition). Syngress.
5. Harold F. Tipton & Micki Krause. (2007). *Information Security Management Handbook* (6th ed.). CRC Press. <https://doi.org/10.1201/9781439833032>
6. Maymi, F., & Harris, S. (2018). *CISSP All-in-One Exam Guide, Eighth Edition*. McGraw-Hill Education.
7. Tanenbaum, A. S., Feamster, N., & Wetherall, D. J. (2022). *Computer Networks* (Sixth edition). Pearson Education India.
8. Whitman, M. E., & Mattord, H. J. (2021). *Principles of Information Security*. Cengage Learning.

**MS7166E KNOWLEDGE MANAGEMENT**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Describe different support systems for explicit knowledge management.
- CO2: Identify and analyse organisation knowledge assets.
- CO3: Design and implement knowledge management strategies and initiatives.
- CO4: Utilise knowledge management technologies and tools for effective knowledge sharing.

**Introduction to Knowledge Management**

Overview of knowledge management concepts and theories: Introduction, Knowledge Management (KM) myths, KM Life Cycle - Understanding knowledge: Knowledge economy, knowledge engineering, Cognition and KM - The role of knowledge in organisational success - Challenges in building KM systems, Conventional vs Knowledge Management Systems Life Cycle (KMSLC), Knowledge creation, capture, and transfer - Intellectual capital and knowledge valuation Knowledge Modelling: Visualization, Meta knowledge, diffuse domains. Capturing knowledge: Evaluating the expert, Developing a relationship with experts, Fuzzy reasoning and the quality of knowledge.

**Knowledge Management Systems**

Strategies for fostering knowledge sharing and collaboration - Communities of practice and social networks - Incentives and rewards for knowledge sharing - Knowledge sharing technologies and platforms - Knowledge management systems and their functionalities - Knowledge repositories and content management - Data mining and knowledge discovery - Artificial intelligence and machine learning in knowledge management

**Developing and Managing Knowledge Management Systems**

Knowledge Capturing: Brainstorming, Protocol analysis, Consensus decision-making, Repertory grid, concept mapping, blackboarding - Knowledge codification: Modes of knowledge conversion, Codification tools and procedures - Approaches to logical testing, Logic and Logic programming; User acceptance testing, Decision support systems; Different types of knowledge systems - Managing Knowledge in Organisations: Deployment issues, User training, Post implementation. Knowledge transfer and sharing, Transfer methods, Role of the internet, Knowledge transfer in e-world, KM system - Managing knowledge workers - Knowledge management strategy and planning - Knowledge audits and mapping - Change management and organisational culture - Measuring the effectiveness of knowledge management initiatives

**References:**

1. Awad, E. M., & Ghaziri, H. M. (2004). *Knowledge Management*. Prentice Hall.
2. Bukowitz, W. R., & Williams, R. L. (1999). *The Knowledge Management Fieldbook*. Financial Times Prentice Hall.
3. Davenport, T. H., & Prusak, L. (2000). *Working Knowledge: How Organizations Manage What They Know*. Harvard Business Press.
4. Grayson, C. J., & O'dell, C. (2012). *If Only We Knew What We Know: The Transfer of Internal Knowledge and Best Practice*. Free Press.

5. Holsapple, C. W. (Ed.). (2003). *Handbook on Knowledge Management: Knowledge Directions*. Springer. <https://doi.org/10.1007/978-3-540-24748-7>
6. Jashapara, A. (2011). *Knowledge Management: An Integrated Approach*. Financial Times/Prentice Hall.
7. Liebowitz, J. (2012). *Knowledge Management Handbook: Collaboration and Social Networking, Second Edition*. CRC Press.
8. Nonaka, I., & Takeuchi, H. (1995). *The Knowledge-creating Company: How Japanese Companies Create the Dynamics of Innovation*. Oxford University Press.
9. Rao, M. (2004). *Knowledge Management Tools and Techniques: Practitioners and Experts Evaluate KM Solutions* (1st edition). Butterworth-Heinemann.
10. Schreiber, G. (2000). *Knowledge Engineering and Management: The CommonKADS Methodology*. MIT Press.
11. Tiwana, A. (2002). *The Knowledge Management Toolkit: Orchestrating IT, Strategy, and Knowledge Platforms* (2nd edition). Prentice Hall.
12. Wiig, K. M. (1993). *Knowledge Management Foundations: Thinking About Thinking - How People and Organizations Represent, Create and Use Knowledge*.

**MS7167E SOCIAL NETWORK ANALYTICS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the fundamental concepts and principles of social network analysis.
- CO2: Analyse and interpret social networks using appropriate methods and tools.
- CO3: Identify key actors, relationships, and network structures within organisations.
- CO4: Apply social network analysis techniques to gain insights into organisational dynamics and improve decision-making.

**Introduction to Social Network Analysis**

Emergence of the Social Web - Overview of social network analysis and its applications - Basic concepts and measures in social network Analysis - Electronic sources for network analysis - Types of networks and network data collection: Electronic discussion networks, Blogs and online communities - Cover networks - Community welfare - Collaboration networks - Co-Citation networks - Web-based networks - Applications of Social Network Analysis - Organisational network analysis and its benefits - Influence and information flow in networks - Team dynamics and collaboration networks - Innovation and knowledge transfer in networks - Ethical considerations in social network analysis

**Network Measures and Analysis Techniques**

Overview on Network Analysis, Graph theory - Centrality: Centrality measures and their interpretation - Cohesion and structural holes in networks - Community detection and clustering algorithms: Detecting communities in social networks - Definition of community - Evaluating communities - Node-Edge Diagrams - Matrix representation - Visualization techniques for network analysis: Visualizing online social networks, Visualizing social networks with matrix-based representations - Matrix and Node-Link Diagrams - Hybrid Representations - Social Network Analysis in Organisations: Extracting evolution of Web Community from a Series of Web Archive - Decentralized online social networks - Multi-Relational characterisation of dynamic social network communities. Understanding and predicting human behaviour in social communities

**Advanced Topics in Social Network Analysis**

Longitudinal network analysis - Multiplex and multilevel networks - Network dynamics and evolution - Social network analysis software and tools

**References:**

1. Burt, R. S. (2007). *Brokerage and Closure: An Introduction to Social Capital*. Oxford University Press.
2. Freeman, L. C. (2004). *The Development of Social Network Analysis: A Study in the Sociology of Science*. Empirical Press.
3. Harris, J. K. (2013). *An Introduction to Exponential Random Graph Modeling: 173* (1st edition). SAGE Publications, Inc.
4. Knoke, D., & Yang, S. (2008). *Social Network Analysis*. SAGE.
5. Lazega, E. (2001). *The Collegial Phenomenon: The Social Mechanisms of Cooperation among Peers in a Corporate Law Partnership* (1st edition). Oxford University Press.
6. Scott, J. (2000). *Social Network Analysis: A Handbook* (2nd edition). SAGE Publications Ltd.
7. Wasserman, S., & Faust, K. (1994). *Social Network Analysis: Methods and Applications*. Cambridge University Press.

**MS7168E SOCIETY, ETHICS AND ANALYTICS**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Understand the ethical considerations and social implications of data analytics.
- CO2: Analyse the ethical challenges in data collection, analysis, and interpretation.
- CO3: Evaluate the impact of data analytics on individuals, communities, and institutions.
- CO4: Apply ethical frameworks to make responsible decisions in analytics.

**Introduction to Ethics, Analytics, and Society**

Evolution of Information Systems and Ethical, Social and Political issues - Technology trends and ethical issues - Nonobvious relationship awareness (NORA) - Concepts: Responsibility, Accountability, Liability - Overview of ethics: definition, principles, and theories - Ethics in the context of data analytics: importance and challenges - Social impact of analytics: opportunities and risks - Ethical decision-making models and frameworks

**Ethical Challenges in Data Collection, Analysis and Interpretation**

Data collection methods: types, sources, and implications - Privacy, consent, and data protection - Ethical considerations in data acquisition and storage - Ethical issues in data anonymisation and de-identification - Ethical Issues in Data Analysis and Interpretation - Data integrity, accuracy, and quality - Algorithmic transparency, fairness, and bias: Value-laden Biases in Data Analytic- Ethical Theories and Data Analytics - Concepts: Privacy, Shared Responsibility, Surveillance, Fairness, Discrimination, Transparency, Accountability - Gamification, Manipulation and Data Analytics - Ethical implications of predictive analytics and profiling - Social and cultural biases in data analysis

**Social Impact of Data Analytics**

Data-driven decision-making and its consequences - Ethical implications for individuals, communities, and institutions - Economic, political, and social dimensions of data analytics - Responsible AI: Principles, Facial recognition technology (FRT): Categorisation, Design-based and Rights-based Risks, Regulations - Ethics in AI and automation - Role of Government - Role of Individual and Organisations

**References:**

1. Davis, K. (2012). *Ethics of Big Data: Balancing Risk and Innovation* (1st edition). O'Reilly Media.
2. Dignum. (2019). *Responsible Artificial Intelligence* (1st ed. 2019 edition). Springer.
3. Eubanks, V. (2018). *Automating Inequality*. St. Martin's Press.
4. Nissenbaum, H. (2009). *Privacy in Context: Technology, Policy, and the Integrity of Social Life* (1st edition). Stanford Law Books.
5. Noble, S. U. (2018). *Algorithms of Oppression: How Search Engines Reinforce Racism* (Illustrated edition). New York University Press.
6. O'Neil, C. (2016). *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*. Crown.
7. Schneier, B. (2016). *Data and Goliath – The Hidden Battles to Collect Your Data and Control Your World* (Reprint edition). W. W. Norton & Company.
8. Singer, P. (2016). *Ethics in the Real World – 82 Brief Essays on Things That Matter*. Princeton University Press.
9. Wachter–Boettcher, S. (2017). *Technically Wrong – Sexist Apps, Biased Algorithms, and Other Threats of Toxic Tech: Why Digital Products Are Designed to Fail You* (1st edition). W. W. Norton & Company.
10. Zuboff, S. (2019). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. Public Affairs.

**MS7169E SYSTEMS MODELLING AND SIMULATION**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

- CO1: Apply systems thinking and modelling in a business environment.
- CO2: Create a System Dynamics model to predict the emergent behaviour of a system.
- CO3: Create an Agent-based model to predict the emergent behaviour of a multi-agent system.
- CO4: Select the appropriate simulation model based on the type of problem.

**Introduction to Systems Thinking**

Systems: Natural and Artificial Systems, Dynamic Systems- Types of Systems: Simple, Complicated, Complex - Complex Systems: Learning in and about Complex Systems, Barriers and Requirements of Learning - System States and Behaviour - Varieties of Systems Thinking - Need for Simulation - The modelling and simulation lifecycle - Model validation and verification - Types of Simulation models: System Dynamics, Discrete Event Simulation, Agent-based Modelling - Application of Modeling and Simulation in Business - Strategic decision-making using simulation models - Risk analysis and scenario planning - Optimization and decision support systems -Case studies in systems modelling and simulation

**System Dynamics**

Applications of System Dynamics - Modelling Process: Purpose of Modelling, Overview and Steps of the Modelling Process - Structure and Behaviour of Dynamic Systems - Tools for Systems Thinking: Causal Loop Diagrams, Stocks and Flows, Dynamics of Stocks and Flows - Tools of Modeling Dynamic Systems: Delays, Coflows and Aging Chains, Modeling decision making, Formulating Nonlinear Relationships, Modeling Human behaviour, Forecasting- Model Testing - Systems Archetypes

**Agent-Based Modeling**

Models, Agent-Based Models, and the Modeling Cycle - Describing and Formulating ABMs: The Overview, Design Concepts and Details (ODD) Protocol - Implementing Agent-Based Model using Netlogo: Introduction to NetLogo - Model Design Concepts: Emergence, Observation, Sensing, Adaptive Behaviour and Objectives, Prediction, Interaction, Scheduling, Stochasticity, Collectives - Pattern-oriented modelling - Model Analysis

**References:**

1. Epstein, J. (1996). *Growing Artificial Societies – Social Science from the Bottom up* (1st Edition). MIT Press.
2. Law, A., & Kelton, W. D. (2000). *Simulation Modeling and Analysis* (3rd edition). McGraw-Hill Education.
3. Nigel, G., & Klaus, T. (2005). *Simulation For The Social Scientist*. McGraw-Hill Education (UK).
4. Railsback, S. F., & Grimm, V. (2011). *Agent-Based and Individual-Based Modeling: A Practical Introduction* (2nd ed.). Princeton University Press.
5. Simon, H. (1996). *The Sciences of the Artificial* (3rd edition). MIT Press.
6. Sterman, J. D. (2000). *Business Dynamics: Systems Thinking and Modeling for a Complex World*. McGraw-Hill Education.
7. Weinberg, G. M. (2001). *An Introduction to General Systems Thinking* (25th edition). Dorset House Publishing Co Inc., U.S.



## MS7170E BUSINESS MODELS

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

CO1: Identify the economic structure of a business enterprise.

CO2: Analyse the design elements of a business model.

CO3: Evaluate the approaches to business modeling.

CO4: Develop empirical models for understanding and evaluating the real-life business models.

### Introduction to Business Models

Introduction to Business models - Business model as a key concept of strategic management; Generic business models - Pipeline vs. Platform business models; Value Architecture - Key ingredients of business models – Value creation, Value delivery, Value capture; Porter's Value Chain, Sustainable Competitive Advantage; Business model and the digital world – e-business models, types – B2B, B2C, C2C, D2C, B2G, Sharing economy

### Types of Business Models

Understanding business models – Types of business models – Brick and Mortar, Digital (Multi-sided) Platforms, Affinity clubs, Brokerage, Bundling, Leasing, Disintermediation, Freemium, Data-into-Assets, Razor-blade, Reverse Razor-blade, Subscription Club, Pas-as-you-go, User Communities, Product-service, Standardization, Negative Operating Cycle, Low Touch, Franchising, Drop shipping; Case studies of prominent business models; Business models vs. Revenue models – key differences

### Model Frameworks

Introduction to business model frameworks – Business model canvas, Zott-Amit model, BM navigator, 4W approach, Hybrid business models; Business model innovation – Approaches to business model innovation – Reinventor approach, Adapter approach, Maverick approach, Adventurer approach; Disruptive Innovation; Capstone Project – Project on self analysis of the business models of an Indian business enterprise

### References:

1. Monteiro,L,J., Swatman,P,M,C., and Tavares,L,V., (2002),*E-business, E-government*,13e(October 7–9) (pp. 259–270). Lisbon, Portugal.
2. Hedman, J., & Kalling, T. (2003). Analysing e-business Models. In *Towards the knowledge society: Ecommerce, ebusiness and eGovernment the Second IFIP Conference on E-Commerce*.
3. Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: A handbook for visionaries, game changers, and challengers, 1*. Chichester, UK: John Wiley & Sons..
4. Ritter, M., & Schanz, H. (2019). The sharing economy: A comprehensive business model framework. *Journal of Cleaner Production, 213*, 320–331
5. Schneider, S., & Spieth, P. (2013). Business model innovation: Towards an integrated future research agenda. *International Journal of Innovation Management, 17*(1).

## MS7171E DIGITAL PLATFORMS

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

CO1: Understand the difference between digital platform business and other business models

CO2: Understand the dynamics of a digital platform business

CO3: Develop platform thinking in attending customer pain points

CO4: Develop empirical models for understanding the real-life digital platform businesses

### **Digital Platform as a Business Model**

Introduction to Platform Business Model – Digital Platform as a business model, Value architecture of digital platforms, Value creation, Value Delivery, Value Capture, Modified business model canvas for digital platforms; Digital Platform vs. Electronic Marketplaces; Multi-sided platforms - essential features, network effects; Platformisation; Digital Economy – Platform Economy, Gig Economy, Sharing Economy

### **Typology of Digital Platforms**

Basic types of digital platforms – infomediational platforms, matching platforms, transaction platforms, evaluation platforms, innovation platforms; Key Challenges of Digital Platforms – Platform Openness, Network Mobilization – Chicken and egg problem, Platform Competition – platform envelopment and winner-take-all competition, Platform Pricing – monetizing and subsidizing; behavioural aspects of digital platforms – multi-homing, search and switching, customer stickiness, trust

### **The Digital Platform Ecosystem**

Digital platform as an ecosystem - Participants of platform ecosystem and their role; Case studies on prominent digital platform businesses; Capstone Project – Project on analysing platform business models through modified business model canvas

**References:**

1. Choudary, S. P. (2021). *Platform scale: For A Post-Pandemic world*. London: Penguin Random House India Private Limited
2. Parker, G. G., Van Alstyne, M. W., & Choudary, S. P. (2016). *Platform Revolution: How Networked Markets are Transforming the Economy and How to Make Them Work for you*. WW. Norton, and Company.
3. Rahman, K. S., & Thelen, K. (2019). The Rise of the Platform Business Model and the Transformation of twenty-first Century Capitalism. *Politics and Society*, 47(2), 177–204.
4. Srinivasan, R. (2021). *Platform Business Models*. Singapore: Springer.

## MS7172E CORPORATE STRATEGY

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture sessions: 39**

### Course Outcomes:

- CO1: Understand and explain key concepts of corporate strategy and their practical implications.
- CO2: Identify and determine in which business and market a firm should compete.
- CO3: Analyse and diagnose corporate strategic issues, and critical factors that require attention.
- CO4: Evaluate critical resources available to management in a given business or industry.
- CO5: Create realistic and feasible action plans for strategic and organisational problems.

### Concepts and Evolution

The Concept & Definition of Corporate Strategy - An historical perspective on corporate strategy - The Role of Manager - Role and function of executives - Develop vision, mission and setting objectives - Growth, Structure and Corporate Strategy - Six Organisational Structures - Match Structure & Strategy - Five Stages of Organisation Growth - Corporate Advantage & Decision-making

### Business Expansion and Alliances

Business Expansion and Strategic Alliance - Business and geographic expansion - Backward and Forward Integration – Joint Ventures and Strategic alliances - Mergers, acquisitions, takeovers, and conglomerates - Different types of Mergers & Acquisitions - Reasons and motivations for M&A - Determinants of M&A success - Problems in achieving M&A success - Challenges of after M&A Integration - Attributes of Effective and successful M&A Restructuring

### Emerging Contexts

Corporate Strategy in Emerging Markets - Corporate strategy dynamics - Balancing opposing objectives - Corporate strategy and institutional context - Corporate Strategy in Emerging Industries - Analysis of corporate externalities - Proprietary or shared platforms - Platform strategy - Complexity Management - Concept of complexity and Bounded Rationality - Process management and Decision making in complexity

### References:

1. Collis, D., & Montgomery, C. (2005). *Corporate strategy: A resource-based approach* (2nd ed). Boston: McGraw-Hill. Irwin Publishing.
2. Grant, R. (2016). *Contemporary strategy analysis, text and cases* (9th ed). Oxford: Blackwell Publishing.
3. Johnson, G. et al. (2017). *Exploring strategy: Text and cases* (11th ed). London: Pearson.
4. Zenger, T. (2016). *Beyond competitive advantage: How to solve the puzzle of sustaining growth while creating value*. Harvard Business Review Press.

## MS7173E INCLUSIVE BUSINESS MODELS

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

### Course Outcomes:

CO1: Understand the unique features of various business models.

CO2: Understand the dynamics of inclusive business models.

CO3: Learn new dimensions of business activities that are grounded in social realities.

CO4: Evaluate inspirational models from the case instances for comprehensive understanding.

### Business Models and Objectives

Business Models, Business Objectives, Profit Maximizing business, Low cost strategies, BoP strategies and for-profit social enterprise, Mixed-motive business, Social business, No loss, no dividend, Traditional social enterprise, social enterprises, social responsibility, Not for profit venture, Philanthropy, Fortune *at the bottom of the pyramid*, Prahalad framework

### Inclusivity: Priorities and Considerations

Healthcare trilemma, Accessibility, Affordability and Availability. Charitable hospitals, Corporate Hospitals and Public Sector, Access to healthcare: Healthcare utilization, Health goods, Market failure and justice; Public health; Externalities, Education, sustainable business model; sustainable development; sustainability; climate change; climate protection; global warming; research method; circular economy; sustainable mobility; mitigation; adaptation. Financial inclusion, Models in Micro Finance, Credit Lending Models. Participatory Rural Appraisal, Financial Services- Micro Finance, Risk Categories- Micro Finance

### Case Instances

Particular Case instances- not excluded to: Affordable Healthcare (Narayana Hrudayala Hospitals Case), Accessible Healthcare (Vatsalya) and Available Healthcare (Aravind Eye Care), Providing Inclusive Education (Gyanshala), Creating a Platform for Social Investing (Rang De), Empowering Informal Sector Labourers (Labournet), Inclusive Model for Energy Access (Selco), Improving Lives of Waste Pickers (Hasiru Dala), Creating Inclusive Supply Chain (Reliance Retail), Developing Smallholder Ecosystem (International Development Enterprise (IDE) Nepal), Delivering Inclusive Service (Ruralshores), Social Business (Gujarat Narmada Fertilizer Company's Neem Initiative)

### References:

1. Banerjee, A. V. and E. Duflo (2011). *Poor Economics*. New York: Public Affairs.
2. Das, G. (2019). *Jobonomics: India's Employment Crisis and What the Future Holds*. Gurugram: Hachette India
3. Mukherji, Sourav. *Inclusive Business Models: Transforming Lives and Creating Livelihoods*. Cambridge University Press, 2022.
4. Yunus, M. (1999). *Banker to the Poor: Micro lending and the Battle against World Poverty*. New York: Public Affairs.

**Guiding Cases:**

1. S Mukherji, K Basu, and M Muller (2013), *Reliance Retail's Banana Value Chain*, Harvard Business Publishing for Educators
2. S Mukherji (2013), *Rural Shores: Service Excellence at Indian Hinterland*, Harvard Business Publishing for Educators
3. H Sanga, S Mukherji, and V Jha(2013), *RHCF: Reaching Primary Healthcare to the Base of The Pyramid*, Harvard Business Publishing for Educators
4. S Mukherji, C Rodriguez, and S Pavisetty(2012), *LabourNet: Empowering Informal Sector Labourers*, Harvard Business Publishing for Educators
5. S Mukherji and P D Jose (2011), *SELCO: Harnessing Sunlight to Create Livelihood*, Harvard Business Publishing for Educators
6. S Mukherji and P D Jose (2011), *Vaatsalya Hospitals: Affordable Healthcare in Proximity*, Harvard Business Publishing for Educators
7. S Mukherji and P D Jose (2010), *"IDE Nepal: Creating a Smallholder Ecosystem"*, Harvard Business Publishing for Educators

## MS7174 HEALTHCARE MANAGEMENT

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes:**

CO1: Identify the micro-foundations of health policy debates in India.

CO2: Analyse the design elements of healthcare systems.

CO3: Evaluate the growth prospects and challenges for healthcare in India.

CO4: Develop empirical models for understanding patient and physician behaviour and impact of policies.

### **The Economic View of Health**

Economic way of thinking about health; Healthcare quadrilemma: Technological change, Insurance, Quality of care, Cost containment; Healthcare systems: Alternative designs, Market boundaries, Role of state, Developing economy perspectives; India's healthcare system; Measurement of health: Self-reported health status, Vital statistics, Anthropometric measures, Socio-economic status (SES), Mortality, Morbidity; Access to healthcare: Healthcare utilization, Health goods, Market failure and justice; Public health; Externalities; Population and Health.

### **Theoretical Underpinnings**

Demand for health and healthcare: Grossman model, Newhouse model; Demand for health insurance: Theory and evidence, Expected utility, Information, Complexity, Decision making, Adverse selection, Akerlof model, Moral hazard; Health financing and investment in health: Healthcare costs, Health expenditure and health finance, Human capital approach, Investment in health; Public funded health insurance; Impact of Universal insurance coverage; Schemes of government sponsored insurance in India; Optimal insurance contracts; Public health spending: Theoretical underpinnings of public expenditure on health, Health expenditure policies; Health status and health expenditure, Health expenditure in India; Econometric analysis of health expenditure: Private expenditure trends, Out of pocket (OOP) expenditures, Catastrophic health payments, Poverty and health, Horizontal equity and Vertical equity, Social insurance and equity, Impact Evaluation, Social Determinants of Health.

### **The Healthcare Industry**

Health Management: Delivery of healthcare, Labor market for physicians, Hospital industry, Iron triangle of healthcare provision; Measurement of costs of health delivery: Cost-benefit analysis, Cost-utility analysis, Cost-effectiveness analysis; Technology growth and innovation; Physician decision making, Pharmaceutical markets and innovation; Healthcare providers and privatization; Economic efficiency and economic evaluation of the health sector; AYUSH in India; Hospital and Health System Administration: Public and Private, Healthcare Financial Management, Understanding Healthcare Reform Issues, Health Promotion, Education, Outreach, Program Development and Evaluation, Ambulatory Care and Medical Group Practice Management, Healthcare Business Development, Marketing and Public Relations, Pharmaceutical and Medical Device Industry Opportunities, Nonprofit Community Health Organisation Management.

**References:**

1. Bhattacharya, J., Hyde, T., & Tu, P. (2013). *Health Economics*, Macmillan IHE.
2. Burns, L. R. (2014). *India's healthcare industry: Innovation and delivery* (2nd ed). Cambridge University Press.

3. Deb, P., Norton, E. C., & Manning, W. G. (2017). *Health Econometrics using Stata* (2nd ed). Stata Press.
4. Jones, A. (2007). *Applied Econometrics for Health Economists: A Practical Guide* (2nd ed). Boca Raton, FL: CRC Press.
5. Marmot, M. (2005). *Status syndrome: How your social standing directly affects your health*. A&C Black.
6. Morris, S., Spencer, A., & Parkin, D. (2013). *Economic analysis in healthcare* (2nd ed). Chichester, UK: Wiley.
7. Rao, K. S. (2017). *Do we care*. Oxford: *India's Health System*, Oxford University Press.

## MS7175E CONSULTING TOOLBOX

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

### Course Outcomes:

CO1: Develop an understanding of the nature and rigor of management consulting and to develop skills in management consulting practice fundamentals.

CO2: Learn how to identify, analyse, and negotiate consulting opportunities

CO3: Demonstrate problem solving, design, and other analytical skills and learn overall consulting process and practice skills.

CO4: Practice and sharpen executive writing and presentation skills.

### Introduction to the Management Consulting

Introduction to the Management Consulting - Definition, roles, purpose of the management consulting - History and development of the profession - Management Consulting Industry – Major Companies- Consulting roles and culture - Professionalization certification (CMC) and licensing - Management Consulting Process and Stages - Entry and Defining Client Needs - Diagnoses and Action Planning - Conceptual framework - Data gathering techniques (Quantitative and Qualitative) - Synthesis complex data Sources- Client feedback - On-site interaction

### Methodologies and Tools

Consulting Types, Skills, Roles and Culture Types of projects and project cycles, First client meetings, Assignment strategy and plan – Proposal development – Internal vs External Consulting – Consulting contract – Service Quality – Methodologies, Tools and Techniques - Effective Consulting Client Relationships – Managing Expectations - Contract management – Methods of Influencing-Customer Loyalty Staircase – Stakeholder engagement and Consulting Flaws – Getting Opportunities – The elevator pitch – Building Rapport, listening, Probing

### Managing the Context

Management of Change and Unique Client Culture – How Consultants Add Value Tailored to Client Culture – Maintaining independence and objectivity – The Cultural Imperative – Consulting in the Functions of Management - Engineering Management – Consulting in Industry Sectors – Legal and Ethical Issues - Legal risks and management – Bad Press in the Consulting Industry – Client privilege issues – Professional ethics

### References:

1. Block, P. (2011). *Flawless consulting* (3rd ed). University Associates. La Jolla, CA.
2. Brussalis, C. W. (Ed.). (2017). *Management consulting class reading material*. Pittsburgh: Carnegie Mellon University.
3. Cohen, W. A. (2009). *How to make it big as a consultant*, [ThriftBooks-Phoenix](#).
4. Greiner, L. E., & Metzger, R. O. (1983). *Consulting to management*, Prentice-Hall, Englewood Cliffs.
5. Greiner, L. E., & Poulfelt, F. (2004). *The contemporary consultant – Insights from experts*. Thomson: South-Western Publishing.
6. Greiner, L. E., Olson, T. H., & Poulfelt, F. (2004). *The contemporary consultant – Casebook*. Thomson: South-Western Publishing.
7. Kubr, M. (2002). *Management consulting-A guide to the profession*.



## MS7176E STRATEGIC POLICY PLANNING

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

### Course Outcomes:

- CO1: Understand strategy and its multiple dimensions.
- CO2: Define the content of strategy in a public sector organisation.
- CO3: Determine priorities in all aspects of public sector strategy.
- CO4: Evaluate sustainability factor in public sector strategy.

### Strategy in Public Sector

Definition of Strategy in the Public Sector – What is strategy and why is it important? - The alternative approaches to strategic thinking - The question of complexity, resources and choices - The unique aspects of strategy in the public sector - Financial and non-financial dimensions of public sector strategy - How to build an effective strategic planning team- Strategic Analysis in a Public Sector Context– Introducing a strategic mindset into public sector activities

### Strategy Implementation

Managing internal and external relationships in strategy development, Risk analysis – what are the right risks to take? – Risk minimization - Securing the cohesion of strategic programmes and projects- A framework for an effective public sector strategic plan, Managing Organisational Development - The difference between task-oriented teams and strategy-oriented teams, The flexible organisation – Managing alliances and joint ventures - Achieving agility – Organisational responses to business change

### Sustaining Strategic Initiatives

Ensuring Sustainability of Strategic Initiatives- Sustainability in public sector planning and how it is measured - Designing and controlling public sector strategic programmes- The practice of continuous renewal and development- The concept of creative destruction and its strategic significance - Dealing with “value migration” and its impact on public sector strategy - Accountability and corporate governance in public sector strategy - Making Decisions and Controlling Outcomes - The drivers of different emotions, reactions and behaviours - The concept of empathy in public sector team leadership and management - Leadership in situations of discomfort and conflict.

### References:

1. Bloom, C. (1986). Strategic planning in the public sector. *Journal of Planning Literature*, 1(2), 253–259.
2. Bryson, J. M. (2011). Strategic planning for public and nonprofit organizations: A guide to strengthening and sustaining organizational achievement john Wiley and Sons, *Journal of Business and Economics*.
3. Joyce, P. (2015). *Strategic Management in the Public Sector Routledge critical studies in public management, Routledge*.

## MS7177E BUSINESS AND MARKETS: EVOLUTIONARY PERSPECTIVE

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

### Course Outcomes:

- CO1: Understand the formalization of business over time from craft guilds to formal markets.  
CO2: Describe how the social structure of a society affects the growth of the market.  
CO3: Explain a historical perspective of how markets evolve.  
CO4: Analyse various policies of business and market; role of institutions, and technology in the development process.

### Businesses: History and Evolution

Business History: key concepts and approaches - Ancient Trade and Business: Networks, Communications, and Transactions - Medieval and Early Modern Business: Accounting, Finance, Law and Family - The Estado da India and East India Companies: States as Companies and Companies as States or the rise of the first global Multinationals - Trade and Business Networks in Colonial Asia: Indian Ocean, Southeast Asia and the China Seas - Evolution of Business - The long-run relationship between financial development and growth - Transformation of Business - Evolution of Markets- Democratized Markets - Forces of Evolution - India as a Case

### Introduction of Technology

Technology, Big Business and Modern Corporations in the 19th & early 20th Centuries: Scale, Scope and Enterprise across the Atlantic - Big Business and Economies of Empire: Commercial Agriculture, Mining, and Transport Companies and the Modern Enterprise in colonial Asia and Africa Technologies, Consumption, and the Changing Parameters of Global Competition - Nation, Ideology and Multinationals: Nationalism, the Cold War, and the Shape of Global/Local Business

### The Role of Financial Crises

Financial crises: A historical overview - Banking crises in the UK and in the US before WW1 - The 1929 stock market crash and US banking panics - The European crisis - London merchant banks, the central European panic, and the sterling crisis of 1931 - Recovery from the Great Depression: Fiscal and monetary policy in helping recovery in Britain and in the US - What Was New About the New Deal- Financial crises in emerging markets, 1980-2008 - The Asia Crisis: Causes, Policy Responses and Outcomes - The subprime crisis in historical perspective - The great mortgaging: housing finance, crises and business cycles - The Euro crisis in historical perspective- The Role of the Financial Sector

### References:

1. Flandreau, M., & Zumer, F. (2004). *The making of global finance, 1880–1913*, OECD: Development centre.
2. Neal, L. (1994). The finance of business during the Industrial Revolution. In R. Floud & D. McCloskey (Eds.), *The economic history of Britain since 1700* (pp. 1700–1860). Cambridge: Cambridge University Press.
3. Pomeranz, K., & Topik, S.. (2006). The world that trade created: Society culture, and the. *World Economy* (2nd ed). New York: ME Sharpe, 1400 to the Present.

## MS7180E UNDERSTANDING CULTURE AND LEADERSHIP IN FILMS

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

### Course Outcomes:

CO1: Identify culture and leadership in films

CO2: Examine the popular, people's leaders in films on race, colonialism and national movement

CO3: Analyse the role of social, motivational and transformational leaders through films

### Understanding Culture and Films

Defining Culture - Introduction to Cultural Studies - Introduction to Film Studies: Evolution of the Language of Cinema, Visual Pleasure and Narrative Cinema - *Pulp Fiction* (1984) and Popular Culture - *The Revenant* (2015) and vengeance - *The Pursuit of Happyness* (2006) and inner struggles - *Nayakan* (1987) and machismo

### Representing Identities

Orientalism in films – Modernity: colonial and postcolonial - Colonialism, Race, and Identity in *Lagaan* (2001) - National movement, birth of the modern nation and leadership in *Gandhi* (1982) - Race, popular people's movements and leadership in *Cry Freedom* (1987)

### Leadership Styles

Introduction to Leadership Styles - Theories of Motivation - Motivational Leadership in *Remember the Titans* (2000), and *Chak De! India* (2007) - Social Leadership, Social Justice, and Narratives of Casteism and Racism in *Dr. Babasaheb Ambedkar* (2000) and *Malcolm X* (1992) - Transformational Leadership in *Invictus* (2009) and *Kabali* (2016)

### References:

1. Ambedkar, B. R. (2014). *Annihilation of Caste: The Annotated Critical Edition*. Navayana.
2. Ashcroft, B. et.al. (1989) *The Empire Writes Back: Theory and Practice in Post-Colonial Literatures*. Routledge.
3. Attenborough, R. (Director) (1987). *Cry Freedom*. Universal Pictures.
4. Attenborough, R. (Director) (1982). *Gandhi*. Columbia Pictures.
5. Amin, S. (Director) (2007). *Chak De! India*. Yash Raj Films.
6. Cobb, S. (2013). *Introduction to Film Studies: History Production and Genre*. Kendal Hunt Publishing Company.
7. Eastwood, C. (Director) (2009). *Invictus*. Warner Bros.
8. Gowariker, A. (Director) (2001). *Lagaan*. Sony Pictures Network and Zee Network.
9. Greenberg, J. (2016). *Behaviour in Organisations*. Pearson.
10. Innaritu, A. G. (Director) (2015). *The Revenant*. Twentieth Century Fox.

11. Lee, S. (Director) (1992). *Malcolm X*. Warner Bros.
12. Muccino, G. (Director) (2006). *The Pursuit of Happyness*. Columbia Pictures.
13. Mulvey, L. (1975). Visual pleasure and narrative cinema. *Screen*, 16(3), 6-18.  
<https://doi.org/10.1093/screen/16.3.6>
14. Nayar, P. K. (2011). *An Introduction to Cultural Studies*. Viva Books Pvt Ltd.
14. Pareek, U. (2016). *Understanding Organizational Behaviour*. Oxford University Press.
15. Patel, J. (Director) (2000). *Dr. Babasaheb Ambedkar*. National Film Development Corporation of India.
16. Radhakrishnan, R. (2008). *Cultural Studies in India: A Preliminary Report on Institutionalisation*. Higher Education Cell, Centre for the Study of Culture and Society.
17. Ranjith, P. (Director) (2016). *Kabali*. Gemini Film Circuit et al.
18. Ratnam, M. (Director) (1987). *Nayakan*. G.V. Films.
19. Sharma, S. (2013). *Organisational Behaviour*. Tata McGraw Hill Education Pvt Ltd.
20. Tarantino, Q. (Director) (1994). *Pulp fiction*. Miramax.
22. Yakin, B. (Director) (2000). *Remember the Titans*. Buena Vista Pictures.

**MS7196E COGNITIVE AND SOCIAL PSYCHOLOGY**

**Prerequisites: Nil**

L	T	P	O	C
3	0	0	6	3

**Total Lecture Sessions: 39**

**Course Outcomes**

- CO1: Analyse, evaluate, and compare major theories in cognitive psychology and relate new experimental results to these theories.
- CO2: Evaluate the theories of social psychology and develop a better comprehension about the social self.
- CO3: Design appropriate methods to enhance knowledge in cognitive and social psychology and critically analyse the sufficiency and effectiveness of theoretical concept.
- CO4: Justify the use of application of cognitive and social psychology in real life contexts.

**Cognitive Psychology**

Structuralism, Functionalism, Behaviourism, Gestalt Psychology, Individual Differences - Paradigms in Cognitive Psychology -- Brand and Functions Perception - - Attention - Selective Attention, Schema Theory, Inattentional Blindness, Automaticity, Divided Attention - Memory - Working Memory, Sensory Memory, Short Term memory, Long Term memory, Information Retrieval, Mnemonics, Reconstructive nature, Amnesia - Knowledge Representation - Models, Concept formation - Visual Imagery and Spatial Cognition - Long Term Imagery, Mental Imagery - Language - Structure of Language, Language Comprehension and Production - Thinking and Problem Solving - Solution finding, Barriers, Creativity - Reasoning and Decision Making - Types of Reasoning, Cognitive Illusions in Decision Making - Individual Differences in Cognition - Cross cultural perspective

**Social Psychology**

Principles of Social Psychology - Experiments - Milgram Experiment - Fundamental Attribution Error, Culture and Human Behaviour - Social self - Sense of self, Family, Siblings, Culture, Social Comparison - Self Esteem, Self Enhancement, Self Verification, Self Regulation, Self Presentation - Social Cognition, Information Availability, Confirmation Bias, Schemas, Intuition and Heuristics - Social Attribution, Causal Attribution, Errors and Bias in Attribution - Emotion, Emotional Expression, Social Relationship, Happiness, Attitudes, Behaviour and Rationalization, Cognitive Dissonance, Self Perception - Persuasion, Elaboration likelihood Model, Metacognition and Persuasion, Media, Resistance to Persuasion, Social influence, Conformity, Compliance, Obedience - Relationships, Attraction, Proximity, Similarity - Stereotyping and Prejudice - Groups, Social facilitation, Group Decision Making - Aggression, Situational Determinants, Conflict and Peacemaking - Altruism and Cooperation, Empathic Concern, Cooperation, Prisoner's Dilemma

**Applications of Cognitive and Social Psychology**

Natural and Artificial Intelligence, Branding and Advertisement, Designing better training programs, Curriculum Design, Rewards and Recognition, Social Psychology and Health, Stress, Culture and Health, Social Connection -Social Psychology and Education, Pygmalion Effect, Intelligence, Social Phobia, Social Psychology and Organisation, Employee Selection, Work Teams, Employer Attractiveness

**References:**

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2. Galotti, K. M. (2020). *Cognitive psychology in and out of the laboratory*.5th ed. Sage Publications

3. Gilovich, T., Keltner, D., Chen, S., & Nisbett, R. E. (2018). *Social psychology*. WW Norton & Company.
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