

Syllabi of Master of Business Administration



**School of Management Studies
National Institute of Technology Calicut**

MS6101D FINANCIAL AND MANAGEMENT ACCOUNTING

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1. Acquire knowledge of theoretical and practical perspective of financial accounting and its practices Indian and international perspective.
- CO2. Demonstrate ability to solve financial accounting business problems using the standard techniques and theoretical principles as per the international standards.
- CO3. Demonstrate ability to solve cost and management accounting business problems using the standard techniques and theoretical principles as per the standards
- CO4. Develop ability to build strategic and operational accounting frameworks for any business from the entry level to the advanced level using principles of accounting

Module 1: (12 hours)

Introduction to accounting: The process of financial accounting, Basic accounting postulates, Accounting terminology, Accounting principles and theories, Recording business transactions, Journals, Subsidiary books of accounts or special journals, Ledger, balancing ledger accounts and extracting trial balance, Preparation of financial statements-P&L and balance Sheet,

Module 2: (13 hours)

Preparing the chart of accounts: Preparing trading and profit and loss accounts, Accounts of non-trading concerns, Income and expenditure statement, Adjusting entries, Closing entries, Opening entries, Financial statement analysis, Common sized statements, Ratio analysis, Trend percentages, Published annual reports, Regulatory framework of financial reporting in India. International Financial Reporting Standards, Ind-AS

Module 3: (14 hours)

Introduction to cost accounting – cost elements- Overhead cost analysis-Overheads, nature, collection and classification- Production overheads- Collection, apportionment, absorption, fixed, variable and semi variable overhead- Report for control of overhead cost- Administration, selling and distribution overheads- Analysis, accounting and control- Treatment of miscellaneous items in cost accounting. Unit costing and cost sheet- Job and process costing- Determination of cost accounting in job, batch and contract, Treatment of normal and abnormal losses and gains, Marginal costing – Decision making- concepts- Marginal cost and absorption costing- Cost-volume-profit analysis- Break-even analysis- Differential cost analysis and relevant cost analysis- Applications for management decision making.

References:

1. R. Narayanaswamy, *Financial Accounting – A Managerial Perspective*, 5th ed. Prentice-Hall of India, 2008.
2. R. N. Anthony and J. S Reece and R. D. Urwin, *Accounting Principles*, Tata McGraw Hill, 1989.
3. S. K. Bhattacharya and Dearden, *Accounting for Management: Text and Cases*, Vikas Publishing House Pvt. Ltd., 2009.
4. A. K. Bhattacharyya, *Principles and Practice of Cost Accounting*, 3rd ed. Prentice-Hall of India, 2005.

MS6101D FINANCIAL AND MANAGEMENT ACCOUNTING

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Accounting, Accounting terminology, Accounting principles and theories, Recording business transactions, Journals, Preparation of financial statements-P&L and balance Sheet, Preparing the chart of accounts: Accounts of non-trading concerns, Adjusting entries, Closing entries, Opening entries, Financial statement analysis, Regulatory framework of financial reporting in India. International Financial Reporting Standards, Ind-AS, Cost accounting, Unit costing and cost sheet- Job and process costing- Determination of cost accounting, batch and contract, Marginal costing, Cost-volume-profit analysis- Break-even analysis, Applications for management decision making.

MS6102D MARKETING MANAGEMENT: CONCEPTS AND APPLICATIONS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Justify the importance and requirement of planned and organized marketing activities.
CO2: Assess the core concepts in marketing management like segmentation, research, differentiation, branding.
CO3: Design and propose an optimum marketing mix by understating the product, consumers and customers.
CO4: Critically analyze the importance of marketing communication and sales promotion activities.

Module 1: (13 hours)

Introduction to Marketing: Marketing defined, Marketing Concepts, Marketing functions, Marketing environment; Marketing planning: Planning process, Strategic business units, Evaluation of SBUs, Market segmentation and market targeting: Segmentation procedure, Market targeting, Product positioning. Marketing mix: Marketing mix variables and their importance.

Module 2: (13 hours)

Pricing strategies: Meaning of pricing, Importance, Objectives, Factors influencing price determination, Demand market based pricing, Tender pricing, Product line pricing, selecting the final price, Marketing Research: Marketing research process, Research objectives, Research Plan development, Collecting information, Analysis. Consumer Behaviour: Factors influencing consumer behaviour, Decision making process in buying; Perceived risks.

Module 3: (13 hours)

Product Development: Idea generation, Concept development and Testing, Market testing, Commercialization, Branding; Marketing Communication: Marketing mix variables communicate, Steps in developing effective communication. Advertising Management: Purpose, Factors in advertising, Advertising portfolio selection, Deciding message or copy; Sales promotion: Sales promotion tools, Consumer promotion tools, Business promotion tools.

References:

1. P. Kotler, *Marketing Management - Analysis, Planning, Implementation and Control*, 15th ed. Prentice-Hall of India, 2001.
2. V.S. Ramaswamy and S. Namkumari, *Marketing Management - Planning, Implementation and Control*, 3rd ed. Macmillan India Limited, 2002.
3. R. Majumdar, *Marketing Research - Text, Applications and Case Studies*, 3rded. New Age International (P) Limited Publishers, 2007.
4. W.J.Stanton, M.J. Etzel, and B.J.Walker, *Fundamentals of Marketing*, McGraw-Hill 10thed. 1994.
5. M.J.Mathew, *Sales Management and Sales Promotion*, First Edition, RBSA Publishers, 2013.

MS6102D MARKETING MANAGEMENT: CONCEPTS AND APPLICATIONS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Introduction to marketing, Marketing concepts, Marketing planning, Marketing environment, Strategic business units, Market segmentation, 4Ps of marketing, Pricing, Product, Promotion, Place, Positioning, Marketing mix, Market life-cycle, Marketing communication, Market research, Consumer behaviour, Product development, Market testing and commercialization, Branding, Advertisement, Sales promotion.

MS6103D ORGANISATIONAL BEHAVIOUR

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Determine the importance and requirement of managing employee behaviour in Organisations
- CO2: Grasp and channelize 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 Organisation such as change adaptability, self development, Organisation culture.

Module 1: (13 hours)

Major disciplines of behavioural science, Contributing disciplines of Organisational behaviour, System concept, Developing a model for Organisational behaviour, Foundations of individual behaviour, 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, Fundamentals of motivation, Job characteristics, Creating jobs that motivate, Job enlargement, Job rotation, Job enrichment, Scheduling to motivate, Using rewards to motivate.

Module 2: (13 hours)

Learning and performance management: Classical conditioning, Operant conditioning, social learning. Theory, correcting poor performance, Coaching, counselling and monitoring, Directive and non-directive counselling, 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.

Module 3: (13 hours)

Leadership: Trait, behavioural and contingency theories, Trust and leadership, Mentoring, Power and influence, Political behaviour Conflict in Organisations, Process and management, Negotiation., Foundations of Organisational structure, Centralization and decentralization, 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. S.P. Robbins., *Organisational Behaviour*, 16th ed. Pearson Education, 2009
2. F. Luthans, F. *Organisational Behavior*, 13th ed. McGraw Hill, 2016
3. Richard L. D. *Organisational Theory, Change and Design*, 4th ed. Cengage Learning, 2004
4. D. L. Nelson and J. C. Quick: *Organisational Behaviour- Science, Real World and You*, 8th ed., Cengage Learning, 2012.
5. N. Strom and Davis: *Organisational Behaviour: Human behaviour at work*, 13th ed. Tata Mc Graw Hill, 2010.

MS6103D ORGANISATIONAL BEHAVIOUR

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Contributing disciplines of Organisational behaviour, Developing a model for Organisational behaviour, Foundations of individual behaviour, Personality determinants, Personality theories, Attitudes and attitude formation, Attitude and behaviour, Perception, Motivation and motivation theories, Learning and performance management, Coaching, counselling and monitoring, Stress and well-being at work, Group behaviour: Defining and classifying groups, Stages of group development. Group properties, Work teams, improving team effectiveness, Interpersonal communication, Leadership: Trait, behavioural and contingency theories, Power and influence, Political behaviour Conflict in Organisations, Negotiation, Foundations of Organisational structure, Organisational culture, Organisational change.

MS6104D MANAGEMENT INFORMATION SYSTEMS

Pre-requisite: NIL

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Develop an understanding of the importance of an enterprise information system from a business perspective
- CO2: Apply advances in the Information Technology domain for the achievement of management goals
- CO3: Evaluate the legal, ethical, and security aspects of Information Systems from an Organisational perspective

Module 1: (11 hours)

Information Systems (IS) in the context of global business. Importance of collaboration and how information systems aid it. Link between Information Systems and Strategy with emphasis on Knowledge Management. Information Technology (IT) infrastructure and technologies aiding its evolution.

Module 2: (17 hours)

Advances in data storage and interpretation - business intelligence and data mining - The interaction between these advances in IT and the Information Systems in the Organisation. An overview of advances in computer networks as the backbone of IS. Information Systems Building - Approaches to Software Development - A brief overview of Software Development Life Cycle - Importance of Maintenance. Managing IS projects - Evaluating alternatives, quantifying business value of IS - Risk assessment.

Module 3: (11 hours)

IS in the context of E-business and E-commerce. Evaluating social computing from an Organisational perspective. Ethics and Privacy issues in Information Systems context. An overview of Information Security and Information Security Management.

References:

1. K. C. Laudon, and J. P. Laudon, *Management Information Systems: Managing the Digital Firm*, 14th ed. Pearson India, 2016.
2. R. K. Rainer, B. Prince, H. J. Watson, *Management Information Systems: Moving Business Forward*, 2nd ed. Wiley India, 2015.

MS6104D MANAGEMENT INFORMATION SYSTEMS

Pre-requisite: NIL

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Information Systems - Importance, Impact, and Development. Information technology advancements aiding the existence and evolution of information systems. Implications of having information systems in an Organisation - legal, ethical, and security issues.

MS6105D MICRO ECONOMICS

Pre-requisites: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Appraise how demand and supply interact in various market structures to determine price and quantity of goods and services produced and consumed.

CO2: Analyse operations of markets under various competitive market scenarios.

CO3: Identify the various components of costs of production and determine optimal production and maximize profits under various market situations

CO4: Develop models to describe economic phenomena; analyze and make predictions about the impact of government intervention and changing market conditions on consumer and producer behaviour and well-being.

Module 1: (13 hours)

General Foundations of Economics; Forms of Organisations-Objectives of firms-Opportunity principle-Discounting, Marginalism versus Incrementalism-Production Possibility frontier-Central problems of an economy- Two sector, Three sector and Four sector circular flow of income. Demand analysis- Individual, Market and Firm demand, Determinants of demand and supply, Shifts and changes in demand and supply, Market equilibrium, Shortages versus surpluses, Price ceiling ,Price floor- Elasticity of demand and business decision making

Module 2: (14 hours)

Market failure and government role, Public goods, Merit goods, Producer's surplus, Consumer's surplus, Dead Weight Loss, Production functions in the short and long run-Cost concepts- Short run and long run costs- economies and diseconomies of scale-economies and diseconomies of scope, Break even analysis, Margin of Safety, Vertical & horizontal integration, Product markets, Market structure-Competitive market, Imperfect competition (Monopoly, Monopolistic competition and Oligopoly)

Module 3: (13 hours)

Monopoly power, Price discrimination, Game Theory-Prisoner's Dilemma-Maximin, Minimax, Saddle point, Nash Equilibrium, Input market- Monopsony, Oligopsony, Antitrust monopoly, Average Cost Pricing, Marginal cost pricing, Peak Load Pricing, Limit Pricing, Multiproduct Pricing, Transfer Pricing, Externalities and Market Failure, Basic Concepts of Income Distribution & Welfare Economics.

References:

1. R. S. Pindyck, D. L. Rubinfeld and P. L. Mehta, *Microeconomics*, 9th ed. Pearson, 2018.
2. P. A. Samuelson and W. D. Nordhaus, *Economics*, 19th ed. Tata McGraw Hill, 2015.
3. N. G. Mankiw, *Principles of Microeconomics*, 7th ed. Cengage Publications, 2014.
4. K. E. Case, R. C. Fair and S. Oster, *Principles of Economics*, 10th ed. Prentice Hall, India, 2011.

MS6105D MICRO ECONOMICS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Micro Economics, Opportunity principle-Discounting, Marginalism versus Incrementalism-Production Possibility frontier-Central problems of an economy- Two sector, Three sector and Four sector circular flow of income Demand and Supply Forces, Elasticity concepts, Short run and long run costs, Market Structure, Pricing in different markets, Game theory, Break even analysis, Market failure and government role, Public goods, Merit goods, Producer's surplus, Consumer's surplus, Dead Weight Loss, Pricing strategies, Externalities, Welfare Economics.

MS6106D DECISION MODELS IN MANAGEMENT

Pre-requisites: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Outline the fundamental concepts of modeling decision problems in management and develop linear models from the verbal description of the real-life managerial situations.
- CO2: Solve 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.
- CO4: Analyze decisions under uncertainty, risk, competition and multiple criteria.

Module 1 (14 hours)

Managerial decision modelling: Steps in decision modelling; Formulation of decision problems; Solution of linear programming problems using graphical method, Simplex method and computer methods; Duality concept: Primal-dual relationships, Economic interpretation of dual variables and constraints; Sensitivity analysis.

Module 2 (13 hours)

Integer programming: Application involving binary variables; Solution of integer programming problems: branch-and-bound method.

Formulation and solution of transportation, assignment and transshipment problems.

Network models and solutions: Shortest route problems, Minimal spanning tree problems, Maximal flow problems.

Module 3 (12 hours)

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. D. R. Anderson, D. J. Sweeney, T. A. Williams, J. D. Camm, J. J. Cochran, M. J. Fry, J. W. Ohlmann, *Quantitative Methods for Business*, 15th Edn. Cengage Learning 2015.
2. N. Balakrishnan, B. Render and R. M. Stair, *Managerial Decision Modeling with Spreadsheets*, 3rd Edn. Pearson, Dorling Kindersley (India) Pvt. Ltd., New Delhi, 2014.
3. A. Ravindran, D. T. Philips, and J. J. Solberg, *Operations Research: Principles and Practice*, Second Edition, John Wiley & Sons, 1987.
4. R. A. Sarker, and C. S. Newton, *Optimization Modelling: A Practical Approach*, CRC Press, 2008.
5. G. Srinivasan, *Operations Research: Principles and Applications*, 3rd Edn. PHI Learning Private Limited, 2017.
6. H. A. Taha, *Operations Research: An Introduction*, 8th Edn. Pearson, Dorling Kindersley (India) Pvt. Ltd., New Delhi, 2008.
7. W. L. Winston, *Operations Research: Applications and Algorithms*, 4thEdn. Cengage Learning, 2003.

MS6106D DECISION MODELS IN MANAGEMENT

Pre-requisites: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Formulation of managerial decision problems; Solution of linear programming problems using graphical method, Simplex method and computer methods; Primal-dual relationships, Economic interpretation of dual variables and constraints, Sensitivity analysis; Formulation and solution of integer programming problems, transportation, assignment and network models; Decision making under risk, 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.

MS6107D BUSINESS STATISTICS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Execute the principles of data collection, organising and description
- CO2: Illustrate 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: Develop critical and integrative thinking in order to communicate the results of the analysis clearly in the context of the problem

Module 1: (12 hours)

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.

Module 2: (14 hours)

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.

Module 3: (13 hours)

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. K. Black, *Business Statistics*, 7th ed. Wiley, 2012.
2. R. I. Levin and D. S. Rubin, *Statistics for Management*, 7th ed. Prentice-Hall, 2012.
3. D. R. Anderson, D. J. Sweeney and T. A. Williams, *Statistics for Business and Economics*, 12th ed. Cengage, 2014.
4. D. M. Levine, D. F. Stephan and K. A. Szabat, *Statistics for Managers – Using Microsoft Excel*, 8th ed. Pearson, 2017.
5. W. L. Winston, *Microsoft Excel 2016 Data Analysis and Business Modeling*, 1st ed. Prentice-Hall Inc. Publication, 2017.
6. R. E. Walpole, R. H. Myers, S.L. Myers and K. Ye, *Probability & Statistics for Engineers and Scientists*, 9th ed. Pearson, 2014.

MS6107D BUSINESS STATISTICS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Data, Measures of Statistics, Exploratory data analysis, Cross tabulations and scatter diagrams. Probability distributions, Sampling–sampling techniques, Introducing statistical packages, Statistical hypothesis testing, confidence interval estimation, Hypothesis testing for single populations and two population, about two population proportions, about two variances. Tests of goodness of fit and independence. Analysis of variance and design of experiments, one-way and two-way classification, Multiple comparison procedures, Simple linear regression, Multiple linear regression, Non-Parametric Statistics.

MS6191D BUSINESS COMMUNICATION LABORATORY

Pre-requisite: Nil

L	T	P	C
1	0	2	2

Total hours: 39

Course Outcomes:

- CO1: Identify the different skills of persuasive communication in business and Organisational contexts for different goal- oriented purposes.
- CO2: Learn and practice principles of communication as a requisite of enhancing business opportunities through various media.
- CO3: Develop competence in team building and team maintaining strategies within an Organisation or for collaboration, by way of conducting interviews, meetings, discussions, negotiation talks etc.
- CO4: Deliver clear and effective communication in the oral and written medium by knowing various communication nuances for an easy target achievement.

Module 1: (15 hours)

Different types of words- buzz words, neologisms, jargons etc., enhancing business vocabulary, learning the art of persuasive communication and condensation for negotiation, decision making and problem solving, in verbal communication. Differentiating between assertion, manipulation, implicit and explicit meanings in sentences and using it goal oriented business communication. Various types of interviews and acquiring the knowledge to frame questions for each type. Conducting and assessing GDs, and other means of successful Organisational communication.

Module 2: (9 hours)

Paragraph writing (various styles) and editing, research writing in management, project proposals and drafting business reports, graphical data interpretation, financial data interpretation, writing for print media- different types of leads

Module 3: (15 hours)

Introduction to different media, media planning and media buying, writing for various media, knowing the differences of communicating according to subjects (contents, audiences and situations) for goal – oriented business communication, difference between advertisements, publicity, product promotion, and PR, liasoning and lobbying, language and technical aspects of promotional literature like advertisements, advertorials, newsletters, house journals and other PR tools including flyers, pamphlets, handbooks, manuals etc. Understanding the lay out for different types of business writing across various media, printing techniques and use of photography for business including propaganda.

References:

1. R. Blakeman, *Integrated Marketing Communication*, 2nd ed. Rowman and Littlefield, 2015.
2. N. Canavor, *Business Writing Today*, 2nd ed. Sage, Los Angeles, 2016.
3. N. Canavor, *Business Writing in the Digital Age*, Sage, 2012.
4. B. A. Garner, *HBR Guide to Better Business Writing: Engage Readers, Tighten and Brighten, Make Your Case*. Harvard Business Review Press, 2012.
5. M.J. Gelfand and J.M. Brett, 2004, *The Handbook of Negotiation and Culture*, Stanford University Press, 2004.

MS6191D BUSINESS COMMUNICATION LABORATORY

Pre-requisite: Nil

L	T	P	C
1	0	2	2

Total hours: 39

Brief Syllabus:

Enhancing business vocabulary, Learning the art of persuasive communication and condensation for negotiation, Decision making and problem solving, in verbal communication, Research writing in management, Introduction to different media, Media planning and media buying, Writing for various media, Knowing the differences of communicating according to subjects (contents, audiences and situations) for goal – oriented business communication, Understanding the lay out for different types of business writing across various media, printing techniques and use of photography for business including propaganda.

MS6111D OPERATIONS MANAGEMENT

Pre-requisite: Nil

L	T	P	C
1	0	2	0

Total hours: 39

Course Outcomes:

CO1: Explain the different types of the production system and its implications on the different classification of layouts

CO2: Develop different basic forecasting models

CO3: Analyse the different layouts from the perspective of various performance measures

CO4: Analyse and control the inventory in an operations

Module 1: (12 hours)

Components of Operations system: Equipment, People, Inventory; functions of operations, classification of production system, and types of layout Decision areas of operations management, recent development in operations

Performance measures: productivity, efficiency, effectiveness, cycle time, flow time, capacity, flow rate; Little's law. Simple problems

Process analysis, solved example of process. Exercises

Forecasting : Time series forecasting, Moving averages, Exponential smoothing, Measuring forecast error, Regression and correlation analysis, Multiple regression analysis trend adjustment, Trend projections, Seasonal variations in data, Forecasting in the service sector, Using software in forecasting.

Module 2: (14 hours)

Job shop: Characteristics and performance measures. Analysis of performance measures, bottleneck and capacity.

Flow shop: Characteristics and performance measures. Analysis of performance, bottleneck and capacity - Assembly line balancing.

Batch shop: Characteristics and performance measures. Analysis of performance, bottleneck and capacity

Operations in services – characteristics of services, identification of relevant performance measures - analysis

Module 3: (13 hours)

Capacity requirements planning - Applying decision trees to capacity decisions. Aggregate production planning methods, Master production schedule, Inventory planning for dependent items - Materials requirement planning (MRP),. Inventory planning for independent items – Economic Order Quantity model, Economic Production Quantity model, sensitivity analysis, Quantity discount models, Probabilistic models and safety stock, EOI.

References:

1. R. B. Chase, R. Shankar and F. R. Jacobs, *Operations and Supply Chain Management*, 14th ed. Tata McGraw-Hill, New Delhi, 2015.
2. B. Mahadevan, *Operations Management – Theory and practice*, 2nd ed. Pearson, 2010.
3. J. Heizer, B. Render and J. Rajashekhar, *Operations Management*, 9th ed. Pearson, 2009.

MS6111D OPERATIONS MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus

Components of Operations system, Performance measures, Process analysis, Exercises, Time series of Forecasting, Forecasting techniques, Characteristics analysis of jobshop, flowshop, batchshop, operations in services, Capacity requirements planning, Aggregate production planning methods, Master production schedule, Inventory control for Dependent (Materials requirement planning) and Independent demand (Economic Order Quantity), Sensitivity analysis, Probabilistic models, Economic order Interval (EOI)

MS6112D FINANCIAL MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1. Demonstrate knowledge of theoretical and practical perspective of financial management and its practices Indian and international perspective.
- CO2. Develop ability to analyse the complex finance problems of an organisation and recommend ideal solution for those problems.
- CO3. Demonstrate ability to solve financial management business problems using the standard techniques and theoretical principles as per the international standards.
- CO4. Develop ability to build strategic and operational financial management frameworks for any business from the entry level to the advanced level using standard practices.

Module 1: (14 hours)

Introduction to Finance and 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.

Module 2: (12 hours)

Time value of money-Rationale-Techniques-Practical Applications of Compounding and Present Value Techniques-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.

Module 3: (13 hours)

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. P. Chandra, *Financial Management*, 8th ed. Tata McGraw Hill, 2011
2. M. Y. Khan and P. K. Jain, *Financial Management: Text Theory and Cases*, 4th ed. Tata Mc-Graw Hill, 2007
3. V. Horne, *Financial Management and Policy*, 12th ed. Prentice-Hall of India, 2002.
4. Breally and Myers, *Principles of Corporate Finance*, 7th ed. Tata McGraw Hill, 2002.
5. W. Ross and Jordan, *Fundamentals of Corporate Finance*, Tata McGraw Hill, 2002.
6. Damodaran, *Corporate Finance*, John Wiley & Sons, 2002.
7. I. M. Pandey, *Financial Management*, 11th ed. Vikas Publishing House Pvt. Ltd., 2017.

MS6112D FINANCIAL MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Management of Finance, Finance- Functions, Scope, Objectives, Role of Finance Managers, Forms of capital, Statement of Cash flows, sources of Finance, Capital Markets, Equity/Ordinary Shares-Term Loans, Debentures/Bonds and Securitisation-Hybrid Financing/Instruments-Preference Share Capital, Warrants, Lease Financing and Hire-purchase, Venture Capital Financing. Time value of money, NPV, IRR, Profitability Index Methods, Capital Budgeting, Dividend decisions, Current Assets Management, Working Capital Management, Inventory Management, Capital Structure, Leverage, Cost of Capital, Valuation, Capital Structure Theories.

MS6113D HUMAN RESOURCES MANAGEMENT

Pre-requisites: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Develop awareness on the evolution, current issues, practices and trends of human resource management and their effective management in Organisations.
- CO2: Gain an understanding of human resource management functions and practices including man power planning, recruitment, selection methods, training, and performance appraisal.
- CO3: Ability to conduct job analysis and job evaluation, develop job descriptions and determine compensation policies.
- CO4: Develop an understanding of employee welfare programs, industrial relations and illustrate the enduring global contexts of International HRM

Module 1: (11 hours)

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, Globalization, Mergers and Acquisitions. Organisational objectives, functions, relationships, Organisational structure of formal and Organisations.

Module 2: (14 hours)

Manpower planning: Man power forecasting process and techniques, job analysis and job design. Selection: Developing sources, methods of recruitment, alternative selection policies, application blanks and qualification card, interviews, psychological testing. Training: The 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.

Module3 (15 hours)

Compensation: Managing Basic Remuneration and Incentives, Factors affecting compensation policy - equity and compensation -comparable value, job evaluation, job evaluating systems Employee Benefits, Empowering Employees, Promotions- Basis of Promotions. Transfers, Separations and Rightsizing. Employee Welfare: A Safe and Healthy Environment, Motivating Employees. Career Management and Growth. Industrial Relations- Trade Unions, Resolving Disputes. , Evaluating HRM Effectiveness, International HRM.

References:

1. K. Aswathappa, *Human Resource Management*, Tata McGraw Hill, 2008.
2. J. Ivanicevic, *Human Resource Management*, Tata McGraw Hill, 2004.
3. Noe, Hollenbeck, Gerhart, and Wright, *Fundamentals of Human Resource*, McGraw-Hill, 2006.
4. S. C. Fisher, *Human Resource Management*, Wiley / Biztantra, 1999,
5. G. Dessler, *Human Resource Management*, 12th ed. Person Education, 2011

MS6113D HUMAN RESOURCES MANAGEMENT

Pre-requisites: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Concept, Nature and Scope of HRM, Emerging Trends of HRM in a globalised economy, Contemporary Issues in HRM, Organisational objectives, functions, relationships, Organisational structure of formal and Organisations, Manpower planning, job analysis, recruitment and Selection, Training, management development and evaluating training effectiveness, Performance appraisal: Traditional performance appraisal systems, appraisal programs, Managing Basic Remuneration and Incentives, job evaluation, job evaluating systems, Employee Benefits, Empowering Employees, Employee Welfare - A Safe and Healthy Environment, Motivating Employees, Career Management and Growth, Industrial Relations- Trade Unions, Resolving Disputes. , Evaluating HRM Effectiveness, International HRM.

MS6114D LEGAL ASPECTS OF BUSINESS

Pre requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1. Understand the legal aspects of business
- CO2. Formulate a vocabulary, imagery and analysis of laws related to business, company, industrial disputes, contracts, competition and taxation in the country
- CO3. Observe the legal structure and suggestions legal solutions for business problems.
- CO4. Demonstrate an ability to observe and judge issues in connection to various business disputes and guidelines in a legal perspective than organisational perspective

Module 1: (11 hours)

Introduction to the global business and legal environment: Context of economic interdependence and the global market. Forms of international business, International trade laws, intellectual property rights, liberalization, globalization, patent, trademarks, copyright, trade and factory design. Constitution of India: Preamble fundamental rights- writ jurisdiction – of high courts and supreme courts. Different types of writs.

Module 2: (14 hours)

Indian Contract Act: Offer, acceptance, Consideration, discharge and breach of contract- contingent contract, Special Contracts: Bailment, contract of indemnity and guarantee, termination of agency- revocation and partnership Act, sale of goods act. I.T Act Provisions: digital signature, electronic records, certifying authorities Company Law: Types of companies, incorporation, memorandum of association, articles of association, prospectus, share capital, company meetings, limited liability, Companies Act 1956, Companies Act 2013, Partnership Act 1932.

Module 3: (14 hours)

Banking and Insurance Law: Banking regulation Act 1949, IRDA Act 1999, law relating to regulatory authority, The Negotiable Instruments Act- 1881, Types of negotiable instruments, Endorsements. Law of Insolvency: Creditors Rights, secured transactions, R.B.I Act, financial institutions, Non-banking financial institutions, Insurance: IRDA , FEMA – 1999, Competition Act – 2002 (MRTP), Consumer Protection Law: Consumer protection act 1986, consumer, person, goods, services, trader, manufacturer, consumer dispute , complaint, Environment Protection Act1986 , Right to Information Act, Intellectual property Rights law-Patent Act 1999, Patent and IPR guidelines Taxation law. Fundamentals of Income tax Act 1961.

References:

1. A. Pathak, *Legal Aspects of Business*, 4th ed. Tata Mc-Grawhill, 2010.
2. N. D. Kapoor, *Elements of Mercantile Law*, S Chand & Sons, 2002.
3. K. Aswathappa, *Essentials of Business Environment*, Himalaya Publishing House, 1987.
4. K. C. Garg, V. K. Sareen, M. Sharma, R. C. Chawla, *Mercantile Law*, Kalyani Publishers, 2004.
5. T. Sheth, *Business Law*, 3rd ed. Pearson Education, 2017.

MS6114D LEGAL ASPECTS OF BUSINESS

Pre requisites: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Legal Environment, International Business, International Trade Laws, Intellectual Property Rights, Trademarks, Copyright, Trade and Factory Design, Constitution of India, Laws Pertaining to Contracts, Partnership, Sale of Goods, I.T, Company Law, Banking and Insurance Law, Negotiable Instruments, Non-Banking Financial Institutions, Competition, Consumer Protection, Environment Protection, Right to Information, Taxation.

MS6115D BUSINESS GOVERNMENT AND SOCIETY

Pre requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1. Develop and evaluate different viewpoints on business government relations
- CO2. Formulate vocabulary, imagery and analysis of corporate social responsibility practices in India.
- CO3. Develop skills to judge and differentiate ethical and unethical practices in business. Also understand the gravity of unethical practices in a community perspective

Module 1: (12 hours)

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

Module 2: (13 hours)

Corporate Governance: Insider trading, outsider trading, committees on corporate governance, Cadbury committee-London stock exchange, Kumaramangalam Birla Committee-SEBI, role of independent directors-non-executive directors, corporate governance in 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.

Module 3: (14 hours)

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.

References:

1. J. F. Steiner and G. A. Steiner: *Business, Government and Society: A Managerial Perspective*, Irwin/McGraw-Hill, 2008.
2. A. C. Fernando, *Business Ethics—An Indian Perspective*, Pearson Education, 2015.
3. C. K. Prahalad, *The Fortune at the Bottom of the Pyramid*, Wharton School Publishing, 2005.
4. B. Willard, *The Sustainability Wave: Building Boardroom Buy-in*, Conscientious Commerce, 2007.
5. K. Amaeshi, P. Nnodim, O. Onyeka, *Corporate Social Responsibility, Entrepreneurship, and Innovation*, Routledge, 2013.

MS6115D BUSINESS GOVERNMENT AND SOCIETY

Pre requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Introduction to business, government and society relationship: Society and formation of states, Legal issues, power and Critics of business, Globalisation. Corporate social responsibility, Sustainability, Sustainable responsible business, The Triple Bottom-line Approach, Environmental issues, Social issues, Labour and related issues, Ethical and Governance UN Compact, charter, Corporate Governance: Committee, banking sector. Basel I, II & III, BIS, Business Ethics, Corporate crimes.

MS6116D STRATEGIC MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total Hours: 39

Course Outcomes:

- CO1. Outline the fundamental concepts strategic management in governing business organisations
- CO2. Apply SWOT analysis for competitive advantage of organisations and oneself.
- CO3. Evaluate the financial performance of the company for value addition through key performance indicators and develop solution through strategic decision making.
- CO4. Develop analytical reports on the organization through strategic systems thinking

Module I (12 hours)

Strategic Management: Introduction, Objectives and goals, managing strategy for competitive edge and performance effectiveness, SWOT analysis, Competitive advantage, Durability, Functional level strategy, Business level strategy, Strategy for building competitive advantage, Building strategy for performance effectiveness, Strategy and management excellence, Winning strategy, Strategy and business environment, Fragmented industries, Embryonic and growth industries, Strategic management in the life cycle of a business.

Module II (12 hours)

Strategy and technology: Costs in high technology industries, Managing intellectual property rights, Captrng advantages through strategic management, Global strategy, Entry and exit decision, Corporate level strategy, Multi-line integration—horizontal and vertical, Strategy and outsourcing, Diversifications, Strategy implementation, Corporate performance, Stake holders, Ethics and strategy, Strategy and organisational design, Strategy and organisational culture, Strategy and competition.

Module III (15 hours)

Understanding key financial ratios in strategic management, Company value chain and cost competitiveness, Benchmarking as a tool for assessing the value chain costs, Ethics and benchmarking, Examining the distinguishing features of the five generic competitive strategies—low cost provider, broad differentiation, best cost provider, focused low cost provider and focused differentiation, Strategy for global competition, Practical examination of situations with respect to global economy, market conditions and governmental policies, Crafting winning strategies for various industries and other organisations, Diversification and strategies for managing group of businesses and corporations.

References:

1. Charles W. L. Hill and Gareth R. Jones: *Strategic Management: An Integrated Approach*. – Dreamtech press, 2009.
2. Arthur A. Thompson Jr., A. J. Strickland III: *Strategic Management—Concepts and Cases*, Tata McGraw-Hill, 2003.
3. Arthur A. Thompson Jr., A.J. Strickland III, John E. Gamble, Arun K. Jain: *Crafting and Executing Strategy: The Quest for Competitive Advantage—Concepts and Cases*, Tata McGraw-Hill, 2009.

MS6116D STRATEGIC MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total Hours: 39

Brief Syllabus:

Strategic Management: Introduction, Objectives and goals, Competitive advantage, Strategy and management excellence, Winning strategy, Strategy and technology: Managing intellectual property rights, Capturing advantages through strategic management, Global strategy, Entry and exit decision, Corporate level strategy, Multi-line integration—horizontal and vertical, Strategy and outsourcing, Diversifications, Strategy implementation, Understanding key financial ratios in strategic management, Strategy for global competition, Diversification and strategies for managing group of businesses and corporations.

MS6117D BUSINESS RESEARCH METHODS

Pre-requisites: MS6107D Business Statistics/Level 1 course on Statistics

L	T	P	C
3	1	0	3

Total hours: 39

Course Outcomes:

CO1: Develop research design for a business problem

CO2: Compare, contrast and identify appropriate statistical tool among various alternatives to model the data.

CO3: Design the analytical model for finding business solutions

CO4: Acquire hands on experience on the statistical software package for analyzing data

Module 1: (13 hours)

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.

Module 2: (14 hours)

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.

Module 3: (13 hours)

Computer packages for data analysis.-SPSS, Exploratory data analysis, Descriptive Statistics, Measures of central tendency, Measures of dispersion, Skewness, Kurtosis, Various statistical distributions, 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, Multivariate data analysis methods, Multiple regressions, Logistic regression, Logic behind the choice of various multivariate techniques, Testing of hypothesis and Inferential statistics.

References:

1. D. R. Cooper and P.S. Schindler, *Business Research Methods*, 9th ed. Tata McGraw Hill, 2012.
2. S. L. Jackson, *Research Methods and Statistics*, Cengage, 2009.
3. K. N. Krishnaswamy, A. I. Sivakumar and M. Mathirajan, *Management Research Methodology*, Pearson, India, 2006.
4. G. A. Churchill and D. Lacobucci, *Marketing Research Methodological Foundations*, 9th ed. Cengage, 2009.
5. N. Malhotra, *Marketing Research: An Applied Orientation*, 6th ed. Pearson Education, 2010.
6. W. M. K. Trochim, *Research Methods: The Concise Knowledge Base*, Atomic Dog Publishing, 2005.
7. P. Newbold, W. L. Carlson and B.Thorne, *Statistics for Business and Economics*, 8th ed., Pearson, 2013.
8. R. Levin and D. Rubin, *Statistics for Management*, 7th ed. Pearson, 2008.

MS6117D BUSINESS RESEARCH METHODS

Pre-requisite: MS6107D Business Statistics

L	T	P	C
2	1	0	3

Total hours: 39

Brief Syllabus:

Research methodology- Concepts, constructs, operational definitions, variables, propositions, hypotheses, theories, and models - Literature review -Types of research- Measurement issues , Scales of measurement, Methods of data collection- Types of data- Sources and collection of data- Observation method- Interview method– Questionnaire Survey design - Research design- Variables: Dependent, Independent, Moderating, Mediating, Intervening ,Extraneous types, Basic analysis for research: Editing, Coding and tabulation, Sampling, Computer packages for data analysis.-SPSS, Logic behind Statistics: Measures of central tendency, Measures of dispersion, Skewness, Kurtosis, Various statistical distributions, Bivariate analysis for association among variables, Correlation and regression, ANOVA versus, means test and t test, Multivariate data analysis methods, Testing of hypothesis and Inferential statistics.

MS6192D INFORMATION TECHNOLOGY LABORATORY

Prerequisite: Nil

L	T	P	C
0	0	3	2

Total hours: 39

Course Outcomes:

CO1: Develop a statistical analysis of data generated in a small to large scale business process

CO2: Visualise small to large scale business process data graphically

CO3: Develop spreadsheet based solution for business problems that requires multiple worksheets, random variable functions, mathematical computations and replications

Exercises that give capability to use the following features have to be conducted:

- Data validation, filters and grouping
- Visualizing data using various charts in Excel
- Connecting Microsoft Excel to external data sources
- Pivot tables in Excel
- Excel VLOOKUP to find some information in a large data-spreadsheet, or to search for the same kind of information throughout the spreadsheet
- Recording and modifying macros in Excel
- Use of statistical functions and hypothesis testing
- Identification of suitable distribution for business process data

References:

1. S. Richard, *Excel VBA macro programming*. No. 001.6424 S42. McGraw-Hill/Osborne, 2004.
2. B. A.Lisa, J. Walkenbach, M. Alexander, R. Kusleika, and F. Wempen, *Office 2013 Bible: The Comprehensive Tutorial Resource*. Vol. 808. John Wiley & Sons, 2013.
3. Learning Easyfit: Link: <http://www.mathwave.com/help/easyfit/index.html>

MS6192D INFORMATION TECHNOLOGY LABORATORY

Prerequisite: Nil

L	T	P	C
0	0	3	2

Total hours: 39

Brief Syllabus:

Exercise on data validation, filters and grouping; Visualizing data using various charts in Excel; Connecting Microsoft Excel to external data sources; Pivot tables in Excel; Excel VLOOKUP; Recording and modifying macros in Excel, Use of statistical functions and hypothesis testing, Identification of suitable distribution for business process data.

MS6193D SUMMER INTERNSHIP PROJECT

Prerequisite: Nil

L	T	P	C
0	0	8	3

Total hours: 65

Course Outcomes:

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

CO2: Evaluate the working of the organizations' departments based on the various domains of interests of the students.

CO3: Infer the theoretical relevance of the solution applied for an identified problem.

CO4: Demonstrate the aptness of the solution identified for the problem within the organization of internship.

Course Summary

The summer internship project is a business project undertaken by the students during their summer break, May – June, every year. The project is intended to acquire practical experience during the course of study in any organization of high repute as per the students' choice. The major objective of the summer internship is to provide an 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 student undergoes internship) are to be chosen. During the internship, students are expected to find an apt solution, applying the theoretical principles that are studied during the first two semesters of their graduation programme, for a real-world problem of the organization that they have been working for. The student will make a presentation on this internship during the beginning of the third semester and submit a final report which would be assessed for its theoretical relevance.

MS6193D SUMMER INTERNSHIP PROJECT

Prerequisite: Nil

L	T	P	C
0	0	8	3

Total hours: 65

Brief Syllabus:

The summer internship project is a business project undertaken by the students during their summer break, May – June, every year. The project is intended to acquire practical experience during the course of study in any organization of high repute as per the students' choice. The major objective of the summer internship is to provide an 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 student undergoes internship) are to be chosen. During the internship, students are expected to find an apt solution, applying the theoretical principles that are studied during the first two semesters of their graduation programme, for a real-world problem of the organization that they have been working for. The student will make a presentation on this internship during the beginning of the third semester and submit a final report which would be assessed for its theoretical relevance.

MS7101D ORGANISATIONAL STRUCTURE AND DESIGN

Pre-requisite: MS6116D Strategic Management

Total hours: 39

L	T	P	C
3	0	0	3

Course Outcomes:

CO1: Comprehend the importance of Organisational structure and design from a strategic perspective.

CO2: Predict and manage various dimensions of Organisational effectiveness and the factors influencing the effectiveness.

CO3: Critically evaluate the Organisational theories and rationale behind Organisation structure and design.

CO4: Assess the continuous and dynamic transactions in Organisations.

Module 1: (12 hours)

Introduction to Organisations, Value Creation of Organisation, Nature and Purpose of Organisations, Taylor's principle of Organisation, Organisational Theory, Organisational Effectiveness, Measuring Organisations Effectiveness, Goal Achievement, Balanced Scorecard, Organisational Stakeholders, Organisational Authority, Agency Theory, Organisational Ethics.

Module 2: (14 hours)

Organisational Environment, Specific and General Environment, Resource Dependence Theory, Transaction Cost Theory, Organisational Authority, Hierarchy, Differentiation, Centralization, Standardization, Bureaucracy, Informal Organisations, Organisational Structure, Mechanistic and Organic Structure, Functional Structure, Divisional Structure, Matrix Structure, Network Structure.

Module 3: (13 hours)

Organisational Design, Design Thinking, Approaches to Organisational Design, Balancing Differentiation and Integration, Balancing, Centralization and Decentralization, Balancing Standardization and Mutual Adjustment, Organisational Values and Culture, CSR, Organisational Strategy, Integration and Diversification, Organisation Development, Organisational Learning, Managing Conflict in Organisations, Organisational Politics.

References:

1. G. R. Jones. and M. Mathew, *Organisational Theory, Design and Change*, 5th ed. Pearson Education, 2008.
2. S P Robbins and M Mathew, *Organisation Theory: Structure, Design and applications*, 3rd ed. Pearson Education, 2009.
3. J. Mc Auley and Duberly, *Organisational Theory Challenges and perspective*, Prentice Hall, 2nd ed. 2007.
4. L. D. Richard, *Organisational Theory and Design*. Cengage Learning, 2010.
5. S. Robins and Barnwell, *Organisational Theory, Concepts and Cases*, 3rd ed. PrenticeHall, 2006.

MS7101D ORGANISATIONAL STRUCTURE AND DESIGN

Pre-requisite: MS6116D Strategic Management

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Nature and Purpose of Organisations, Organisational Theory, Organisational Effectiveness, Measuring Organisations Effectiveness, Organisational Stakeholders, Agency Theory, Organisational Ethics. Organisational Environment, Organisational Authority, Hierarchy, Organisational Structure, Organisational Design, Design Thinking, Approaches to Organisational Design, Differentiation and Integration, Centralization and Decentralization, Standardization and Mutual Adjustment, Organisational Values and Culture, CSR, Organisational Strategy, Integration and Diversification, Organisation Development, Organisational Learning, Managing Conflict in Organisations, Organisational Politics.

MS7102D MACRO ECONOMICS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Analyse causes and consequences of unemployment, inflation and economic growth
CO2: Interpret 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.

Module 1: (13 hours)

Introduction to Macro Economics – Difference between Micro and Macro Economics, Macro economic aggregates, Transfer payments, Value-added, Net indirect taxes, Depreciation, Gross domestic product, Gross national product, Net national product,– Computation of national income national income accounting – factors determining national income – difficulties – Applications of national income statistics.

Module 2: (14 hours)

National Income Equilibrium: Concepts of equilibrium – consumption and savings –consumption theory – savings theory, investment theory-factors influencing investment-government sector-foreign sector-determination of equilibrium, Basic ideas of Keynes-Fundamental Equation-concept and analysis effective demand-saving and Investment- difference between classical theory and Keynes's theory of employment-Keyne's law of consumption-consumption function, MPC and investment multiplier.

Module 3: (13 hours)

Inflation-Types, Demand pull inflation, Cost push inflation, Deflation, Stagflation, Business cycles, Fiscal and Monetary Policies ,Monetary system, Banking in India, Development Banks, Unregulated credit markets, Role of Reserve Bank of India, Policy ratios , Reserve ratios, NBFIs, Money Market, Capital market; Market capitalization, Indian stock market, Bull and bear, Fundamental analysis of NIFTY, SENSEX.

References:

- 1.R. Dornbusch, S. Fischer and R. Startz, *Macro Economics*, 10th ed. Tata McGraw-Hill, 2012.
- 2.R. T. Froyen, *Macro Economics: Theories and Policies*, 10th ed. Pearson, 2013.
- 3.G. N. Mankiw, *Principles of Macro Economics*, 8th ed. Cengage, 2016.

MS7102D MACRO ECONOMICS

Pre-requisite: NIL

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Introduction to Macro Economics, Macroeconomic aggregates ,Computation of national income, national income accounting, consumption theory , savings theory, investment theory-factors influencing investment-government sector-foreign sector-determination of equilibrium, Basic ideas of Keynes-Fundamental Equation- difference between classical theory and Keynes theory of employment-Keynes law of consumption-consumption function, MPC and investment multiplier, Inflation, Business cycles, Fiscal and Monetary Policies ,Monetary system, Banking in India, Role of Reserve Bank of India, Policy ratios , Reserve ratios, Money Market, Capital market;, Indian stock market, Bull and bear, Fundamental analysis of NIFTY, SENSEX.

MS7194D MANAGEMENT SCIENCE LABORATORY

Pre-requisites: (i) MS6106D Decision Models in Management and
(ii) MS6111D Operations Management

L	T	P	C
0	0	3	2

Total hours: 39

Course Outcomes:

- CO1: Develop awareness about application of scientific methods in operation function of any enterprise and in supply chain management.
- CO2: Understand the practical situations in operations of a firm and develop appropriate models, methods and procedures, and identify appropriate solution procedures for the models and methods developed.
- CO3: Apply theoretical knowledge in solving the practical and operational and supply chain management problems.
- CO4: Develop visual representation of results, conduct analysis, derive inferences and work as a team.

Supply chain operation simulation; production system performance evaluation using simulation software packages; solution and sensitivity analysis of mathematical programming problems using software packages; application of statistical process control for a production system; preparation of assembly chart, product structure and material requirements plans for a product; material requirements plan generation under rolling through time for components of a product; process layout design for a typical layout problem using a software package; preparation of learning curve; stop watch time study of a drill press operation..

List of Suggested Exercises:

1. Supply chain operation simulation for serial supply chain performance evaluation using role play games like supply chain role play game, vendor managed inventory based supply chain role play game, etc.
2. Supply chain operation simulation under different inventory policies using software packages like Supply Chain Inventory Policy Analyser (SCIPA) software, four-stage serial supply chain inventory policy analyser, etc.
3. Production system performance evaluation using ARENA, WITNESS, Tecnomatix plant simulator, etc.
4. Mathematical programming model formulation, solution and sensitivity analysis for some typical problems using LINGO, AMPL, C-PLEX, etc.
5. Application of statistical process control for a production system using the experimental setup for construction of X-bar, R chart and process capability determination
6. Material requirements planning for a product using the setup for preparation of assembly chart, product structure and material planning
7. Material requirements plan generation under rolling through time for components of a product using a software package (MNMRP software package)
8. Process layout design for a typical problem using layout planning software
9. Study the effect of performing a task repeatedly and to understand the principles of learning curve for expressing the rate of learning
10. Stop watch time study of a drill press operation

References:

1. Supply chain role play game help files, [online] available:
<http://med1.nitc.ac.in/~user/scrpg7/scrpg/>
2. Vendor managed inventory-based supply chain role play game help files, [online] available:
<http://med1.nitc.ac.in/~user/vmi2/help.php>
3. V. M. Pillai, I. B. Hunagund, K. K. Krishnan, (2011), "Design of robust layout for Dynamic Plant Layout Problems," *Computers & Industrial Engineering*, Vol. 61, pp. 813–823, 2011.
4. R. L. Francis, L. F. McGinnis, Jr. and J.A. White, *Facility Layout and Location: An Analytical Approach*, 2nd ed. Prentice-Hall of India, 1999.
5. D. P. Ravindran and J. J. Solberg, *Operations Research: Principles and Practice*, 2nd ed. John Wiley & Sons, 1989.

MS7194D MANAGEMENT SCIENCE LABORATORY

Pre-requisites: (i) MS6106D Decision Models in Management and
(ii) MS6111D Operations Management

L	T	P	C
0	0	3	2

Total hours: 39

Brief Syllabus:

Supply chain operation simulation; production system performance evaluation using simulation software packages; solution and sensitivity analysis of mathematical programming problems using software packages; application of statistical process control for a production system; preparation of assembly chart, product structure and material requirements plans for a product; material requirements plan generation under rolling through time for components of a product; process layout design for a typical layout problem using a software package; preparation of learning curve; stop watch time study of a drill press operation.

MS7195D BUSINESS RESEARCH PROJECT- I

Pre-requisite: Nil

L	T	P	C
0	0	5	3

Total hours: 65

Course Outcomes:

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

Course Summary

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 back ground 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.

MS7195D BUSINESS RESEARCH PROJECT- I

Pre-requisite: Nil

L	T	P	C
0	0	5	3

Total hours: 65

Brief Syllabus:

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 back ground 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.

MS7111D INTERNATIONAL BUSINESS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1. Develop awareness on theoretical and practical perspective of doing business internationally and make suitable judgements
- CO2. Understand international business environment and scenario of individual countries
- CO3. Build strategic and operational frameworks for entry into international business and understand its implications
- CO4. Understand and analyse the legal structure, environmental, political, cultural, geographical environment of any nation so as to advice the business in making right decisions

Module 1: (12 hours)

Introduction to International Business: Importance nature and scope of international business, reasons, benefits, modes of entry into International Business internationalization process and managerial implications, Environmental Context of International Business: Political, Social, Cultural, Economic, Legal, Technological factors. Incoterms: International Trade Agreements, GSP, GSTP, objectives and effects Framework for analysing international business environment – Domestic, foreign and global environments and their impact on international business decisions, Registration formalities.

Module 2: (14 hours)

International Finance: Foreign Exchange Markets and Dealings-Foreign Exchange Markets-Foreign Exchange Dealings-Determinants and Select Theories of Exchange Rates-Foreign Exchange Exposure -Types of Exposure. FEMA, FOREX reserve, FOREX risk, Devaluation. Exchange Rate System, determinants. BOP, BOT, Trade Deficit International Economic organisation: IMF. WTO, IBRD, UNCTAD, IFC, IDA. International Financial Systems.

Module 3: (13 hours)

Globalisation & Liberalisation: Global Trading Environment: World trade in goods and services – Major trends and developments; World trade and protectionism – Tariff and non-tariff barriers; Counter trade. International Financial Environment: Foreign investments-Pattern, Structure and effects; Foreign investment flows, Foreign Direct Investments, Foreign Institutional Investments, Double Taxation Avoidance Agreement, America depository receipt, Global depository receipt and Indian Depository Receipt, Foreign Currency convertible bonds. International Economic Institutions and Agreements: Regional Trading Blocs, Implications, Major Trade Blocs E.U.NAFTA, SAARC, ASEAN, Economic Integration, Trade Barriers, Types. Tariff & Non-Tariff Barriers, Commodity Agreements, MNC, TNC.

References:

1. B. Bhattacharya, *Going International: Response Strategies of the Indian Sector*, Wheeler Publishing, 1996.
2. J. D. Danoes and L. H. Radebaugh, *International Business: Environment and Operations*, 8th ed. Addison Wesley, 1998.
3. R. W. Griffin and M. W. Pustay, *International Business: A Managerial Perspective*, Addison Wesley, 1999.
4. C. W. L. Hill, *International Business*, McGraw Hill, 2000.
5. J. Paul, *Business Environment Text and Cases*, Tata Mc Graw Hill, 2010
6. K. S. Jain and A. V. Jain, *Foreign Trade - Theory, Procedures, Practices & Documentation*, Himalaya Publishing House, 2017.

MS7111D INTERNATIONAL BUSINESS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

International Business, entry into International Business, internationalization process, Political, Social, Cultural, Economic, Legal, Technological factors, Domestic, foreign and global environments, International Finance, Foreign Exchange Markets, FEMA, Trade Deficit International Economic organisation: IMF. WTO, IBRD, UNCTAD, IFC, IDA, International Financial Systems, globalisation & Liberalisation, Tariff and non-tariff barriers, International Financial Environment, Foreign investments, Double Taxation Avoidance Agreement, MNC, TNC.

MS7196D BUSINESS RESEARCH PROJECT- II

Pre-requisite: Nil

L	T	P	C
0	0	5	5

Total hours: 104

Course Outcomes:

CO1: Enhance the research aptitude through the knowledge of the technical and managerial aspects of the problem identified.

CO2: Analyse the data collected and interpret the possible solution for the identified problem.

CO3: Prepare a thesis based on a project work and identify the future scope of the work.

CO4: Demonstrate the research work on any business problem in an impressive and convincing way for further evaluation.

Course Summary

The Business Research Project - II is a practical business research project, in the final semester of the MBA programme, as a follow - up of Business Research Project - I. The project is intended to enhance the research aptitude that can solve the complex business problems using the theoretical back ground developed by the students during the entire programme of the study. The project carries five credits in the fourth semester. The data analysis and interpretation based on the preparatory work done in the third semester and submission of the final thesis are the major activities for evaluation. The evaluation is conducted based on the final presentation and submission of BRP thesis at the end of the programme of study, against its five credits.

MS7196D BUSINESS RESEARCH PROJECT- II

Pre-requisite: Nil

L	T	P	C
0	0	5	5

Total hours: 104

Brief Syllabus:

The Business Research Project - II is a practical business research project, in the final semester of the MBA programme, as a follow - up of Business Research Project - I. The project is intended to enhance the research aptitude that can solve the complex business problems using the theoretical back ground developed by the students during the entire programme of the study. The project carries five credits in the fourth semester. The data analysis and interpretation based on the preparatory work done in the third semester and submission of the final thesis are the major activities for evaluation. The evaluation is conducted based on the final presentation and submission of BRP thesis at the end of the programme of study, against its five credits.

MS7121D PROJECT RISK EVALUATION AND MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Explain and illustrate the nature of risk and its impact on the project environment
- CO2: Define, explain and illustrate the limitations of a risk management tool and techniques
- CO3: Estimate the quality of a project risk management framework in real-life scenarios
- CO4: Apply a risk management tool set

Module 1: (12 hours)

Project Risk Evaluation and Management (PRAM) : Definitions, Background to project risk management, Hard benefits of project risk management, Soft benefits of project risk management; Threats to effective risk management: Risk as threat and opportunity; Different phases of the PRAM process: Identification of project objectives, scope, stakeholders and success criteria. Application of project management tools and packages. Lab exercises

Module 2: (13 hours)

Risk Assessment: Identification of risks, Assess risks qualitatively and quantitatively, Selection of appropriate risk response strategies dependent on importance of the risk event and cost benefit of the response(Cost benefit analysis means the total cost of applying a response (including direct cost and the expected value of any secondary risk) against the benefit of the expected reduction in the expected value of the risk ; Control of the process - risk management plan, risk register, risk analysis, risk status reports, risk reviews, lessons learnt; Project contingency or management reserve; risk allocation; risk responses, Human factors in risk management: Potential biasing effect of the triple strand of influences on risk attitude (and therefore judgement in risky situations).

Module 3: (14 hours)

Introducing risk management into an organization; Getting and maintaining buy-in to risk management; Uses and benefits of different risk identification techniques, Uses and benefits of different qualitative risk assessment techniques, Risk breakdown structures; Uses and benefits of different quantitative risk assessment techniques: Monte Carlo, Decision trees, Sensitivity analysis, Expected value; Use of probability distributions specific to Monte Carlo: Triangular, Uniform, Beta, Discrete, Correlation, criticality index, cruciality; Net present value and internal rate of return; Uses of different techniques for responding to risks, Simulation exercises.

References:

1. C.Chapman, and S. Ward, *Project Risk Management: Processes, Techniques and Insights*, 2nd ed: John Wiley and Sons Ltd, 2003.
2. D. A. Hillson and R. Murray-Webster, *Understanding and Managing Risk Attitude* 2nd ed. Gower Publications Ltd, 2007.

MS7121D PROJECT RISK EVALUATION AND MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Project Risk Evaluation and Management (PRAM) - Threats to effective risk management - Risk as threat and opportunity; Different phases of the PRAM process - Application of project management tools and packages - Risk Assessment - Control of the process, risk management plan - Project contingency or management reserve; risk allocation - risk responses – Human biasing effect - Uses and benefits of different qualitative risk assessment techniques, Risk breakdown structures - Quantitative risk assessment techniques - Use of probability distributions specific to Monte Carlo: Triangular, Uniform, Beta, Discrete, Correlation, criticality index, cruciality - Net present value and internal rate of return - Simulation exercises.

ME6103D INVENTORY AND SUPPLY CHAIN MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 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

Module I (16 hours)

Building a strategic framework to analyse supply chains: Understanding the supply chains, Decision phases, Process view, Supply chain flows, Competitive and supply chain strategies, Strategic fit, Drivers of supply chain performance

Designing the supply chain network: Role of distribution, Factors influencing distribution network design, Design options, Value of distributors, Online sales and distribution network; Designing the network design, Factors influencing network design, Models for facility location and capacity allocation

Module II (11 hours)

Supply chain operation simulation using role play game: 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 (*all units, and incremental*), Sensitivity, Economic Production Quantity for multiple items, Periodic order interval systems.

Module III (12 hours)

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.

References:

1. S. Chopra, and P. Meindl, *Supply Chain Management: Strategy, Planning and Operations*. 6th ed. Pearson Education Ltd, 2016.
2. D. Simchi-Levi, P. Kaminsky, and E. Simchi-Levi, *Designing & Managing the Supply Chain: Concepts, Strategies & Case studies*. 3rd ed. McGraw-Hill Education, 2007.
3. R. J. Tersine, *Principles of Inventory and Materials Management*, 4th ed. Prentice-Hall Inc., New Jersey, 1994.
4. M. K. Starr, and D. W. Miller, *Inventory Control: Theory and Practice*, Prentice-Hall India, New Delhi, 1986.
5. Department of Mechanical Engineering, NITC, *Supply Chain Role Play Game: Instructor's Manual*. 2017.

ME6103D INVENTORY AND SUPPLY CHAIN MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Building a strategic framework to analyse supply chains, Designing the supply chain network, Supply chain operation simulation using role play game, Information and supply chain trade-offs, Independent demand systems (Deterministic models), Inventory system constraints, Independent demand systems (Probabilistic models).

ME6112D MANUFACTURING PLANNING AND CONTROL

Pre-requisite: MS6111D Operations Management/First level Production Management course

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Develop an understanding on the manufacturing system characteristics, and the planning and control system framework

CO2: Create time series based forecasting models for demand management

CO3: Develop tactical level planning models for a manufacturing system

CO4: Develop and analyse operational level planning problems in a push type of production control

Module I (15 hours)

Manufacturing Planning and Control (MPC): MPC systems, MPC system payoff, MPC system framework, Type of configurations of manufacturing system, Matching the MPC system with the needs of the firm.

Enterprise Resource Planning (ERP): What is ERP, ERP and functional units, How MPC fits within ERP, Performance measures to evaluate integrated system of effectiveness.

Demand Management: Demand management and MPC environment, Communicating with other MPC modules and customers, Forecasting framework; Time series analysis: Weighted moving average, Exponentially weighted moving average, Seasonal and trend adjusted exponentially weighted moving average, Forecast errors, Interval estimate, Economic indicators.

Module II (11 hours)

Sales and Operation Planning: Nature of sales and operation planning, Planning process, Development and evaluation of plans, Mathematical programming approaches.

Master Production Schedule (MPS): Nature of MPS, MPS techniques, Time fencing and MPS stability, Rolling through time, Order promising and available to promise, Structuring BOM, Final assembly schedule, Managing using two level MPS.

Module III (13 hours)

Material Requirement Planning (MRP): Nature of MRP, MRP records, MRP logic, Linking of MRP records, Determination of planning horizon; Technical Issues: safety stock and safety lead time, Low-level coding, Pegging, Firm planned orders, Service parts, Rolling horizon; Using the MRP system, System Dynamics, Lot sizing methods, Buffering concepts, System nervousness.

Production Activity Control: Framework, Shop floor control concepts, Basic data required, Techniques, Performance measures, Gantt chart, progress chart, schedule chart, load chart, Finite loading systems, Horizontal loading, vertical loading, Priority sequencing rules, Two-machine job shop scheduling, Runout time method scheduling.

References:

1. F. Robert Jacobs, William L. Berry, D. Clay Whybark, and Thomas E. Vollmann, *Manufacturing Planning and Control for Supply Chain Management*, 6th ed. McGraw Hill Education (India) Private Limited, Chennai, 2014.
2. Edward A. Silver, David F. Pyke and Rein Peterson, *Inventory Management and Production Planning and Scheduling*, 3rd ed. John Wiley & Sons, 1998.
3. Seetharama L. Narasimhan, Dennis W. McLeavy and Peter J. Billington, *Production Planning and Inventory Control*, 2nd ed. Prentice-Hall of India Pvt. Ltd., New Delhi, 2000.
4. Richard J. Tersine, *Production/Operations Management*, Second Edition, North Holland, 1985.
5. A. C. Hax and D. Candea, *Production and Inventory Management*, Prentice-Hall, Englewood Cliffs, NJ, 1984.

ME6112D MANUFACTURING PLANNING AND CONTROL

Pre-requisite: MS6111D Operations Management/First level Production Management course

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Manufacturing Planning and Control (MPC) systems, MPC system framework, Matching the MPC system with the needs of the firm; Enterprise Resource Planning (ERP); Demand Management: Time series analysis; Sales and Operation Planning: Development and evaluation of plans, Mathematical programming approaches; Master Production Schedule (MPS): MPS techniques, Order promising and available to promise, Final assembly schedule, Managing using two level MPS; Material Requirement Planning (MRP): Technical Issues, Using the MRP system, System Dynamics, Lot sizing methods, Buffering concepts, System nervousness; Production Activity Control: Basic data required, Techniques, Performance measures, Gantt chart, Finite loading systems, Priority sequencing rules, Two-machine job shop scheduling, Runout time method scheduling.

ME6146D PROJECT MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Evaluate projects from business and social perspectives

CO2: Build the network and relate the time-cost trade off

CO3: Optimize 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

Module 1: (12 hours)

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.

Module 2: (13 hours)

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.

Module 3: (14 hours)

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, Levelling 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 organization, Matrix organization, Project control, Variance analysis approach, Performance analysis.

References:

1. Ravindran, D.T. Phillips, and J.J. Solberg, Operations Research: Principles and Practice, 2nd ed. John Wiley & Sons, 1987.
2. J. D. Weist, and F.K. Levy, *A Management Guide to PERT/CPM*, Prentice Hall of India, 1994.
3. J. V. Moder, and C.R.E. Phillips, *Project Management with CPM and PERT*, 2nd ed. Van Nostrand Reinhold Company, 1964.
4. P. Chandra., *Projects: Planning, Analysis, Selection, Financing, Implementation, and Review*, 8th ed. McGraw Hill Education (India), 2014.
5. R.W. Griffin, *Management: Principles and Applications*, Cengage Learning, 2008.

ME6146D PROJECT MANAGEMENT

Pre-requisite: Nil

Total hours: 39

L	T	P	C
3	0	0	3

Brief Syllabus:

Project planning, Introduction to project management, Cost of project, Social cost benefit analysis Income distribution impact, Goods Little Mirrless approach, Shadow prices. Project implementation, Development of project network, Dummy activities, Forward pass and Backward pass computations, Algorithm for critical path. Time-cost trade off procedure, Schedule related project costs, Time cost trade off. PERT Network, Three time estimates for activities, Event oriented algorithm for critical path. Network analysis, Algorithms for shortest route problems, Algorithms for minimal spanning tree, Algorithms for maximal flow problems, Maximum flow minimum cut explanation. Linear programming Formulation of Network problems, Project Scheduling with Limited Resources, Complexity of project scheduling with limited resources, Levelling the demands on key resources. Project review and administrative aspects.

ME6148D MANAGEMENT OF TECHNOLOGY AND INNOVATIONS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Analyse the process and factors that govern the technology evolution and propagation

CO2: Understand the lifecycles of technology and audit the strengths and weakness of the technological strength

CO3: Devise strategies for technology acquisition based on the audited strengths

CO4: Develop product and process and evaluate the technology for financial sustainability

Module 1: (13 hours)

Understanding Management of Technology, Key concepts – importance – issues. Process of technological change – Process versus product innovation in the generic product technology; Types of innovation, innovation technology evolution, Dominant design, Diffusion – methods of diffusion, factors governing diffusion, Expeditionary marketing

Module 2: (13 hours)

Managing technology: What is distinct, disruptive & strategic - Core Competence/Core Capability, Marquis anatomy of successful Innovation, strategic firm fit audit – Technology Market Matrix / Portfolio theory technology life cycles – Technology and competition, technology acquisition; Integration of strategic planning and technology planning.
Key performance factors for technology management.

Module 3: (13 hours)

Technology Strategy: - Technology intelligence – collaborative mode, Appropriation of technology Deployment in new products; simultaneous engineering; Development in the value chain.
Technology evaluation and financing – changing role of R & D, Management of manufacturing technology.

References:

1. M.A. Schilling, *Strategic Management of Technological Innovation*, 3rd ed. McGraw-Hill, 2010.
2. U.K. Narayanan, "*Managing Technology and Innovation for competitive Advantage*" Pearson Education, Asia, 2001.
3. T. Khalil and Ravishankar, *Management of Technology: The key to competitiveness and wealth creation*, McGraw Hill Education; 2nded. 2017
4. Robert Burgelman , Clayton Christensen and Steven Wheelwright, *Strategic Management of Technology and Innovation*, Tata McGraw-Hill, 2001.

ME6148D MANAGEMENT OF TECHNOLOGY AND INNOVATIONS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Key concepts of technology management, Process of technological change, Innovation, Diffusion, Expeditionary marketing, Core Competence/Core Capability, Technology audit, Technology Market Matrix / Portfolio theory, Technology Life Cycles, Integration of strategic planning and technology planning, Key performance factors for technology management, Technology Strategy, Deployment in new products, Technology evaluation and financing.

ME6130D GROUP TECHNOLOGY AND FLEXIBLE MANUFACTURING SYSTEM

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Understand the characteristics of cellular manufacturing system
- CO2: Develop an understanding on the application of group technology in a manufacturing industry with emphasis 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

Module I (13 hours)

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.

Module II (15 hours)

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.

Module III (11 hours)

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 workpiece flow, Material handling, and machining; Performance measures, Bottleneck model, Extended bottleneck model, Sizing of FMS

References:

1. J. Nicholas, *Competitive Manufacturing Management - Continuous Improvement, Lean Production, and Customer-Focused Qualities*, Tata McGraw-Hill Edition, 2001.
2. N. Singh, and D. Rajamani, *Cellular Manufacturing Systems: Design, Planning & Control*, Chapman & Hall, 1996.
3. R.G. Askin, and C.R. Standridge, *Modelling and Analysis of Manufacturing Systems*, John Wiley & sons. Inc, 1993.
4. M. P. Groover, *Automation, Production Systems, and Computer-Integrated Manufacturing*, 2nd ed. Prentice Hall of India Private Limited, 2001.
5. D. D. Bedworth, R. M. Henderson and P. M. Wolfe, *Computer-Integrated Design and Manufacturing*, McGraw-Hill International Editions, 1991.
6. Tien-Chien Cheng, R. A. Wysk, and Hsu-Pin Wang, *Computer-Aided Manufacturing*, Second Edition, Prentice Hall International, Inc., 1998.
7. E. M. Wicks, and R.J. Reasor, *Designing Cellular Manufacturing Systems with Dynamic Part Population*, "IIE Transactions", Vol. 31, pp 11-20, 1999.
8. Burbidge, J. L., *Production Flow Analysis for Planning Group Technology*, "Journal of Operations Management", Vol. 10, No. 1 (January), pp 5-27, 1991.

ME6130D GROUP TECHNOLOGY AND FLEXIBLE MANUFACTURING SYSTEM

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Characteristics of modern production system, Ways of configuring manufacturing system, Group Technology (GT): Composite part, Coding and classification, Similarity coefficient based clustering, Key machine approach, Binary ordering algorithm, Production flow analysis; Models for Cellular Manufacturing System (CMS) Design: Mathematical programming approaches, Model for dynamic part population, Solution procedure using genetic algorithm; Cellular Manufacturing: Focused factory, pull production: Two-card pull system, Linked cell, Different types of cells, Workcell design, Worker assignment; Process Planning: Computer aided process planning (CAPP), Variant process planning: Development stages; Flexible Manufacturing System (FMS): FMS Layout configuration, Automated workpiece flow, Bottleneck model, Extended bottleneck model.

ME6132D LEAN PRODUCTION MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Develop an understanding on the effect of small lot in the performance of a production system

CO2: Design a pull production control system

CO3: Understand the need for production levelling for lean production system design

CO4: Design a synchronised and balanced production system for mixed model production

Module 1 (11 hours)

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.

Module 2 (13 hours)

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.

Module 3 (15 hours)

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

References:

1. J. Nicholas, *Lean Production for Competitive Advantage: A Comprehensive Guide to Lean Methodologies and Management Practices*, CRC Press – Taylor & Francis Group – A Productivity Press Book, 2010
2. J. Nicholas, *Competitive Manufacturing Management – Continuous Improvement, Lean Production, and Customer-Focused Qualities*. Tata McGraw-Hill Edition, 2001.
3. R. G. Askin and J. B. Goldberg, *Design and Analysis of Lean Production Systems*. Wiley Student Edition, 2007.
4. M. G. Korgaonker, *Just In Time Manufacturing*, Macmillan Publishers India Limited, 2000.

ME6132D LEAN PRODUCTION MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Small-Lot Production, Setup-Time reduction, Pull Production Systems: Two-card pull production system, Signal Kanban, CONWIP; Workcells and Cellular Manufacturing: Design of Workcells; Scheduling for Smooth Flow: Levelling the master production schedule, Mixed model production (Heijunka); Synchronising and Balancing Process: Synchronisation, Bottleneck Scheduling; Planning and Control in Pull Production.

MS7131D MANAGING FINANCIAL SERVICES AND INSTITUTIONS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Elaborate the functioning system of various financial institutions.

CO2: Formulate the financial institutions problems and provide feasible solutions.

CO3: Estimate and control the risk exposures of various financial institutions.

CO4: Develop the capacity to deal with problems of failing financial institutions.

Module 1: (12 hours)

The nature and role of financial institutions in a financial system; Ethics and social responsibility of financial institutions; Development of financial system in India; Financial markets; Money and capital markets; Monetary policy; Fiscal policy; Financial market regulations; Financial sector reforms in India; Overview of money, prices, exchange rates, and interest rates; Inflation; Asymmetric information problem; Adverse selection and moral hazard.

Module 2: (15 hours)

Role of banking sector in an economy; Types of banks; Development financial institutions; Management of commercial banks in India; Merchant Banking; Management of risk in financial services; Methods and procedures in banks; Regulation and supervision of the financial sector, Treasury and risk management in banks, Marketing of bank services, Relationship banking and innovations, International banking, Off-shore banking, Multinational banking; Banking consolidation, Finance companies and evolution, Micro finance and its importance, Different types of funds: Mutual fund; Other depository institutions; Non-depository institutions; Contractual financial institutions; Insurance companies and pension funds; Investment institutions; Unit trusts and investment trusts; Merchant banking.

Module 3: (12 hours)

Capital management; Asset/liability management; Performance analysis; Investment Environment in India; Changing investment habits; Investment culture-recent change in Indian capital and money markets; Investment indicators; Investment avenues; Selection of investment decisions; Problems in selection of investment decisions; Financial service management; Alternative financing; Purchase order finance; P2P lending.

References:

1. F.S. Mishkin, & S.G Eakins, *Financial markets and institutions*. Pearson Education India, 2006.
2. A.Saunders, *Financial markets and institutions*. McGraw-Hill Higher Education, 2014.
- S.K. Matta, *Management of Financial Institutions and Services*. Vrinda Publications P. Ltd. 2014
4. P. Suresh and J. Paul, *Management of banking and financial services*. Pearson Education India, 2014.
5. M.Y.Khan, *Financial Services*. Tata McGraw Hill, 2013.

MS7131D MANAGING FINANCIAL SERVICES AND INSTITUTIONS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total Hours: 39

Brief Syllabus:

The nature and role of financial institutions in a financial system; Indian financial system, Financial markets; Money and capital markets; Monetary policy; Fiscal policy; Financial market regulations; Evolution of commercial banks and banking Structure; Central banking and monetary policy; Monetary expansion, Inflation, interest rates and exchange rates; Role of banking sector in an economy; Types of banks; Development financial institutions; Management of commercial banks in India; Merchant Banking; Management of risk in financial services; Economics of insurance, Raising capital from International markets, Investment institutions; Unit trusts and investment trusts; Merchant banking; Different types of funds; Regulations of funds; Performance accounting aspects; Financial service management; Alternative financing; Purchase order finance; P2P lending.

MS7132D INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Understand the principles of investment analysis and the risks and returns involved.
- CO2: Develop the skills for portfolio management and allocate investments portfolios according to risk preferences.
- CO3: Develop an understanding on the working of stock markets and analyse securities and make investment decisions.
- CO4: Understand articles of financial significance and evaluate in a critical manner.

Module 1: (15 hours)

Introduction: Functions, Constituents of financial system, Financial intermediation and disintermediation, Functions of financial markets and its classification, Structure of financial institutions. Markets and securities: Types of securities, Debt instruments and Money market instruments. Valuation: Bonds, Common stock, Cost of capital, Weighted average cost of capital, Dividend yields' Theories of term structure, Long term investor, Expectations hypothesis, Liquidity preference theory, Segmented market theory, Yield curve, Variance covariance matrix, Risk return trade off.

Module 2: (12 hours)

Portfolio selection: Efficient market hypothesis, Capital Asset Pricing Model (CAPM), Arbitrage pricing theory, Beta computations in excel, Risk return and opportunity cost of capital, Market portfolio, Measuring portfolio risk, Anomalies in CAPM, Sources of market wide risk.

Module 3: (12 hours)

Stock indices: Price weighted index, Equally weighted index, Value weighted index; Bombay Stock Exchange, Standard & Poor's, Computation of Sensex and related computations, Event study method, Measures of portfolio performance, Mutual fund ratings, Contingent claim securities, Replicating portfolios, Interest rate derivatives.

References:

1. D. E. Fisher, and R. J. Jordan, *Securities Analysis and Portfolio Management*, 6th ed. Pearson, 1995.
2. F. K. Reilly, and K. C. Brown, *Investment Analysis & Portfolio Management*, Thomson Learning, 10th ed. South Western Cengage Learning, USA, 2012.

MS7132D INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Financial system: Constituents, Financial markets, Financial institutions, Types of securities, Debt instruments, Money market instruments. Valuation; Cost of capital, Theories of term structure, Yield curve. Portfolio selection: Efficient market hypothesis, Capital asset pricing model, Arbitrage pricing theory, Risk return and opportunity cost of capital, Market portfolio, Measuring portfolio risk, Stock indices: Computation of Sensex and related computations.

MS7133D DERIVATIVES AND RISK MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Develop conceptual knowledge on derivatives, trading mechanism and variables that determine their market values.

CO2: Ability to compare and contrast different types of derivative instruments.

CO3: Develop an understanding on the reasons and explanations for corporate hedging activity.

CO4: Identify and evaluate the nature and extent of a company's exposure to types of risk and its management.

Module 1: (14 hours)

Introduction to Derivatives: Derivative markets and instruments, Forward contracts, Futures contracts, Options, Swaps and other derivatives, The underlying asset, Structure of derivative markets, Exchange traded markets, Over the counter markets, Types of traders, Role of derivative markets and its uses, Overview of the Indian derivatives markets. Specification of a futures contract: Contract size, Daily settlement and margins, Marking to market using margin accounts, Delivery; Types of futures contracts: Commodity futures, Currency futures, Interest rate futures, Stock index futures; Forward and futures prices, Uses of futures and forward contracts.

Module 2: (14 hours)

Options, swaps and credit derivatives: Option terminology, Types of options, Specifications, Option premium, Payoffs from options, Put-Call Parity, Exchange traded options, Over-the-counter options, Options on trading, Strategies involving Options, Option pricing models, Binomial Option Pricing Model, No arbitrage pricing argument and Risk neutral valuation, Black-Scholes Option Pricing Model, Options on Securities, Stock indices; Currencies and futures, Embedded options in debt instruments, Warrants, Caps, Floors, Collars, Terminology and structure of swap, Comparative advantage argument, Interest rate swaps, Currency swaps, Equity swaps, Valuation of swaps, Forward rate agreements, Credit default swaps, Swap options.

Module 3: (11 hours)

Risk management: Sources and types of risk; systematic risk and unsystematic risk. Different approaches to risk management, Risk management process, Risk management techniques, Risk management with derivatives, Hedging with forward, futures and options, Delta hedging, Value at risk, Real options.

References:

1. D. M. Chance and R. Brooks, *An Introduction to Derivatives and Risk Management*, 9th ed. South-western Cengage Learning, 2013.
2. J. C. Hull, *Option Futures and Other Derivatives*, 9th ed. Pearson, 2015.
3. S. S. S. Kumar, *Financial Derivatives*, Pearson, 2010.

MS7133D DERIVATIVES AND RISK MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Introduction to Derivative markets and instruments: Exchange traded markets, Types of traders, Overview of the Indian derivatives markets; Forward contract, Futures contract, Types of futures contracts; Pricing of future contracts; Introduction to Options: Payoffs from options, Exchange traded options, Binomial Option Pricing Model, Black-Scholes Option Pricing Model, Options on securities, Stock indices, Embedded options in debt instruments. Swaps: interest rate swap, currency swap, credit risk. Interest rate derivatives, Credit derivatives; Credit default swaps. Risk management: Risk management techniques, Hedging with forward, futures and options, Delta hedging.

MS7134D STRATEGIC FINANCIAL MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Develop skills in strategic management of financial assets and an understanding on various strategic financial decisions and corporate risks

CO2: Ability to understand the economic environment in which financial instruments operate and employ theoretical valuation methods to price the financial instruments

CO3: Understand management of corporate capital structure, capital budgeting and resource allocation and to evaluate corporate projects

CO4: Acquire knowledge of good financial practice, ethical, social and professional responsibility in corporate investment decision-making and risk management.

Module 1: (14 hours)

Link between financial policy and strategic planning, Objectives and goals of strategic planning process, Components of financial strategy, Investment decisions under risk and uncertainty; Techniques of investment decision: Risk adjusted discount rate, Statistical methods and sensitivity analysis, Corporate strategy and high technology investments; Concept and guidelines of Project and corporate evaluation.

Module 2: (13 hours)

Expansion and financial restructuring: Mergers and acquisitions, Corporate restructuring, Expansion strategy, Cost-benefit analysis, Evaluation of merger proposals. Leasing: Meaning, importance and types, Evaluation of lease from the point of view of lesser and lessee, Lessee versus buy decision; Venture Capital: Concept and developments in India, Process and methods of financing.

Module 3: (12 hours)

Introduction to Financing Strategy: Hybrid securities namely convertible and non-convertible securities, Deep discount bonds, Secured premium notes, preference shares, Option financing warrants, convertibles and Exchangeable bonds. Corporate strategy, Financial policy and shareholder value creation, Linkage between corporate strategy and financial strategy, Implications of Capital budgeting, Capital structure and dividend policy on Corporate strategy, Shareholder value creation. Managing financial risk with derivatives, corporate governance and ethical business strategy.

References:

1. W. C. Kester, R. S. Ruback, and P. Tufano, *Case Problems in Finance*, 12th ed. Tata McGraw Hill, 2007.
2. D. Hillier, M. Grinblatt, and S. Titman, *Financial Markets and Corporate Strategy*, 2nd ed. McGraw Hill, USA, 2012.
3. R. A. Braeley, S. C. Myers, and F. Allen, *Principles of Corporate Finance*, 9th ed. McGraw Hill, USA, 2008.

MS7134D STRATEGIC FINANCIAL MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Introduction to financial policy and strategic planning, Strategic planning process, Investment decisions under risk and uncertainty, Financial restructuring: Mergers and acquisitions, Expansion strategy, Divestment strategy, Determination of swap ratios, Leasing: Meaning, importance, types, Corporate strategy, Financial policy and shareholder value creation, Linkage between corporate strategy and financial strategy, Implications of Capital budgeting, Managing financial risk with derivatives, Corporate governance and ethical business strategy.

MS7135D INTERNATIONAL FINANCE AND INVESTMENT MANAGEMENT

L	T	P	C
3	0	0	3

Pre-requisite: Nil

Total hours: 39

Course Outcomes:

CO1: Understand the application of principles and concepts used in international finance and investment in overall management of an enterprise at global perspective

CO2: Analyse financial market and instruments and apply standard models of financial economics to problems of portfolio optimization, diversification, immunization, and risk management

CO3: Learn to manage short term resources of a business firm

CO4: Evaluate financial management and investment decisions taken in private and public sector undertakings

Module 1 (14 hours)

Multinational financial management; The determination of exchange rates and central bank intervention; The international monetary system and European monetary system; Parity conditions in international finance and currency forecasting; The balance of payments and international economic linkages; Foreign exchange and derivatives markets and foreign risk management; Financing the Multinational Corporation; Theory of Foreign Direct Investment (FDI); Foreign investments analysis and multinational working capital management: Capital budgeting for the multinational corporation, Country risk analysis, Financing foreign trade, Current asset management and short term financing, Managing the multinational financial system.

Module 2 (12 hours)

Investment Management: Nature and scope of investment analysis; Elements of investment return, risk and time elements; Objectives of investment-Investment vs speculation-Investment vs gambling; Types of Investment; Fundamental analysis and investment decisions; Technical analysis and investment decisions; Efficient Market Hypothesis- Random walk theory-Weak, Semi-strong market, Testing of different forms of market efficiency and their significance.

Module 3 (13 hours)

Active fund management and investment strategies; Market microstructure; Diversification; Fixed income securities and portfolio immunization; Risk and performance measurement; Risk management; International financing strategy and institutional structure; Euro currency loans; International equity markets; International investment strategy; Strategies of direct investment; Strategies of portfolio investments; Interest Rate Parity; Capital mobility and fiscal policy; International portfolio Investment; Hedging strategies; International Capital Asset Pricing Model (CAPM); Capital budgeting for FDI, Adjusted present value technique; Risk in forex management; Managing foreign exchange Risk: Hedging with currency swaps.

References:

1. K.T. Bhala, W. Yeh, and R. Bhala, *International investment management: theory, ethics and practice*, Routledge, 2016.
2. J. Madura, *International financial management*, South-Western College Publication, 2014.
3. E.J. Elton, M.J. Gruber, S. J. Brown and W.N. Goetzmann, *Modern portfolio theory and investment analysis*, John Wiley & Sons, 2009.
4. B. Jordan, *Fundamentals of investments*, McGraw-Hill Higher Education, 2014.
5. G.A. Hirt and S.B. Block, *Fundamentals of investment management*, McGraw Hill, 2006.
6. P.K.Jain, P. Josette, and S.S.Yadav, *International financial management*. Macmillan India Limited, 1999.
7. P.K.Jain, P.Josette, and S.S.Yadav, *Foreign exchange markets-understanding derivatives and other instruments*, Macmillan India Limited, 2001.
8. A.V. Rajwade, *Foreign exchange, international finance and risk management*, Academy of Business Studies, 1998.

MS7135D INTERNATIONAL FINANCE AND INVESTMENT MANAGEMENT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

International financial Institutions, Financial functions in multinational firms, Environmental factors and finance function, Balance of payments, Money markets, Foreign exchange markets, International working capital management, Working capital policy, International financing strategy and institutional structure, Investment management; Strategies of direct investment, Foreign investments analysis and multinational working capital management; Strategies of portfolio investments, Interest Rate Parity, Capital mobility and fiscal policy, International Portfolio Management, Capital budgeting for Foreign Direct Investment (FDI), Adjusted present value technique, Forex management.

MS7136D CORPORATE TAX PLANNING AND TAXATION

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Understand key concepts of corporate taxation and tax planning in corporate decision-making process
- CO2: Acquire knowledge of principles of taxation, its ethical constraints and analyse the impact of taxation on businesses
- CO3: Develop skills relevant to taxation of particular transaction and to provide proper tax treatment.
- CO4: Demonstrate awareness of tax policy considerations and how these policies shape tax legislation

Module 1: (13 hours)

Income tax: Introduction, Definitions, Residential status and taxation, Heads of Income, Corporate taxation; Computation of taxable income, Taxation of companies, Special provision in computation of profit from business. Deductions from gross total income, Amalgamations of companies and fiscal incentives, Minimum alternate tax on companies, Special provisions relating to tax on distributed profits of domestic companies.

Module 2: (15 hours)

Tax planning; Concepts relating to tax avoidance and tax evasion, Tax planning with reference to Location of Undertaking, Type of Activity, Ownership Pattern, Dividend policy, Issue of bonus shares, Inter-corporate dividends and transfers, Tax planning relating to amalgamations and mergers of companies. Tax considerations in respect of specific managerial decisions like Make or Buy, Own or Lease, Close or Continue, Sale in Domestic Markets or Exports, Capital Budgeting Decisions, Managerial Remuneration, Foreign Collaboration and Joint Ventures.

Module 3: (11 hours)

Tax Management; Filing of Returns and Assessments, Penalties and Prosecutions, Appeals and Revisions, Advance Tax, TDS, Advance Rulings, Avoidance of Double Taxation Agreements. Implications of double taxation avoidance agreements.

References:

1. R. N. Lakhotia, and S. Lakhatia, *Corporate Tax Planning Hand Book*, 5th ed. Orient, 2006.
2. E. A. Srinivas, *Hand Book of Corporate Tax Planning*, 2nd ed. State Mutual Book & Periodical Service, USSR, 1989.
3. V. K. Singhania, and M. Singhania, *Students Guide to Income Tax*, Taxmann, 2005.
4. B.B. Goenka, *Corporate Taxation – Planning & Management*, Shree Mahaveer Book, 1986.
5. G.K. Ahuja, and R. Gupta, *Systematic Approach to Income Tax*, 33rd ed. Bharat Law House, 2015.

MS7136D CORPORATE TAX PLANNING AND TAXATION

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Income tax, Definition and computation. Taxation of Companies, Amalgamations of Companies and fiscal Incentives, Minimum Alternate Tax on Companies Deductions from gross total income, Special provisions relating to tax. Tax evasion, Tax planning and issues related to dividend policy, amalgamations and mergers of companies. Tax considerations and managerial decisions, Sales in domestic markets or exports, Capital budgeting decisions, Foreign collaboration and joint ventures. Tax Management, Implications of double taxation avoidance agreements.

MS7137D MERGERS, ACQUISITIONS AND DIVESTMENTS

Pre-Requisites: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Identify the importance of mergers, acquisitions and divestments in the terms of the company's value.

CO2: Value innovative financial decisions in the deals mergers, acquisitions and divestments.

CO3: Provide students with a basic understanding of how to use financial models to value and structure mergers and acquisitions.

CO4: Enable to estimate synergies as the operations merge in firms.

Module 1: (12 hours)

Introduction: Mergers, Acquisitions and Divestments; Mergers and Acquisitions (M & A) Activities; Characteristics, and drivers, Mergers and acquisitions as a corporate strategy, Success rate, Merger waves, Takeover contests, Merger negotiation and documentation; Feasibility analysis; Public tender offer; Method of payment and financing mergers and acquisitions; Theory of takeovers, tactics and defenses,; Futures of mergers and acquisitions.

Module 2: (13 hours)

Mergers, Acquisitions and Divestments Process: Divestment in Govt. equity; Divestment as a strategy; Planning on developing business and Acquisition plans, Implementation and integration; Acquisition process: Search through closing, LBOs, Agency costs and free cash flow, Divestiture five-step process model, Importance of strategic factors in driving divestitures; Perspectives on mergers and acquisitions integration; Opportunities and challenges; Amalgamation, absorption, reconstruction accounting.

Module 3: (14 hours)

Valuation and accounting for mergers and acquisitions; Steps in valuation, Valuation Methodologies for M&A, Enterprise Value/EBITDA, Comparable company analysis, Comparable transaction analysis, Discounted cash flow models; Alternative valuation models, Accounting dilemmas in valuation analysis, Application of financial modelling techniques to Mergers and Acquisitions; Financial reporting and tax considerations for Mergers and Acquisitions, Mergers and acquisitions strategies, Synergy and value creation in mergers, Synergy and its different types, Industry convergence and role of industry life cycle; Value creation in synergy; Valuing synergies; Sharing synergies, Valuing firms and synergies.

References:

1. D. DePamphilis, D. *Mergers, Acquisitions, and Other Restructuring Activities*, Academic Press, 2013.
2. R. F. Bruner, *Applied mergers and acquisitions* (Vol. 173). John Wiley & Sons, 2004.
3. A. J. Sherman, 2018. *Mergers and Acquisitions from A to Z*. AMACOM Div American Mgmt Assn.
4. T. Koller, M. Goedhart, and D. Wessels, *Valuation: measuring and managing the value of companies* (Vol. 499). John Wiley and Sons, 2015.
5. B.S. Petitt, K.R. Ferris, *Valuation for Mergers and Acquisitions*, FT Press, 2013.
6. R.S. Aurora, K. Shetty and S.R. Kale, *Mergers and acquisitions*. Oxford University Press, 2011.

MS7137D MERGERS, ACQUISITIONS AND DIVESTMENTS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total Hours: 39

Brief Syllabus:

Introduction: Mergers, Acquisitions and Divestments; Mergers and Acquisitions (M & A) Activities; Characteristics, and drivers; Mergers and acquisitions as a corporate strategy; Success rate, Merger waves; Mergers; Feasibility analysis; Public tender offer; Method of payment and financing mergers and acquisitions; Theory of takeovers, tactics and defenses; Futures of mergers and acquisitions; Acquisitions and Divestments Process; Application of financial modelling techniques to Mergers and Acquisitions; Amalgamation, absorption, reconstruction accounting; Valuation Methodologies for M&A; Synergy and value creation in mergers.

MS7141D MARKETING OF SERVICES

Pre-requisite: MS6102D Marketing Management: Concepts and Applications

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Analyse and contrast marketing models for services vis-à-vis those for products.
- CO2: Develop analytic ability in quantifying consumer satisfaction from services
- CO3: Understand marketing variable's distinctive impact on service Organisations
- CO4: Apply models of buyer and brand behaviour to intangible

Module 1: (12 hours)

Industrial marketing; Strategic variables; Market selection and product planning, Pricing strategy, distribution strategy; Role and importance of services marketing; Strategic variables - price, Promotion strategies.

Module 2: (14 hours)

Mapping attributes comparison of brands; Positioning options; Product and promotions related strategies. Perceived value components; Generating attribute lists, Mapping methods; Satisfaction & value; Post-purchase processes; Measuring satisfaction and value; Value/Satisfaction delivery process and programs; Satisfaction and retention; Quality and satisfaction.

Module 3: (13 hours)

Buyer seller relations; Organisational buyer behaviour models; Determinants of buyer behaviour and framework of buyer behaviour; Overview of the stages in the choice process; Factors affecting each stage, and need recognition.

References:

1. W. Stanton, *Fundamentals of Marketing*, McGraw Hill, 2010.
2. C. E. Raymond, *Industrial Marketing - Cases and Concepts*, Prentice Hall, 2008.
3. C. H. Lovelock, *Services Marketing*, Prentice Hall, 2013.

MS7141D MARKETING OF SERVICES

Pre-requisite: MS6102D Marketing Management: Concepts and Applications

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Industrial marketing; Service marketing; Role and importance of services marketing; Mapping attributes; Perceived value components; Satisfaction & value post-purchase processes; Measuring satisfaction and value; Value/Satisfaction delivery process and programs; Buyer seller relations; Determinants of buyer behaviour.

MS7142D ADVERTISING AND SALES PROMOTION

Pre-requisite: MS6102D Marketing Management: Concepts and Applications

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Appreciate the range of tools available for marketing communications.

CO2: Understand the basic principles of planning and execution in marketing communication

CO3: Develop a managerial perspective and an informed decision-making ability for effective and efficient tackling of promotional situations.

CO4: Develop creative pursuits in advertising and promotion

Module 1: (12 hours)

The crisis of advertising, Marketing and the communications Mix, The decision to Buy, The brand system, Planning communications, Research in marketing communications, Cultural and ethical Concerns in advertising.

Module 2: (16 hours)

Advertising management; advertiser, facilitating institutions, perspectives on advertising, Advertising planning and decision-making, situation analysis, Marketing program, Segmentation strategies, Social and legal factors, Budget decision, Advertising objectives, Image and competitive position, Attitude and market structure, Behavioural objectives.

Module 3: (11 hours)

Communications, Persuasion and market processes, Copy decisions, Copy testing, Media decisions, Media research: The message, the target and the media, Economic, social and legal constraints.

References:

1. D. A. Aaker and J. G. Myers, *Advertising Management*, Prentice-Hall of India, 2012.
2. C. R. Martin Jr. (Ed.), *Current Issues and Research in Advertising*, Ann Arbor Michigan, University of Michigan, 2013.
3. W. L. Wilkie, *Consumer Research and Corrective Advertising*, Mass Marketing Science Institute, Cambridge, 2003.

MS7142D ADVERTISING AND SALES PROMOTION

Pre-requisite: MS6102D Marketing Management: Concepts and Applications

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

The Crisis of advertising; Marketing and the communications mix; The decision to buy; The brand system; Advertising management; Advertising objectives; Communications; Media decisions; The message, the target and the media.

MS7143D CUSTOMER RELATIONSHIP MANAGEMENT

Pre-requisite: MS6102D Marketing Management: Concepts and Applications

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Examine the value of Customer Relationship Management and to describe the major concepts.
CO2: Analyze the benefits delivered by customer relationship management and the technologies that are deployed in the implementation of customer relationship management.
CO3: Evaluate customer satisfaction, customer loyalty, and the effectiveness of customer loyalty programs.
CO4: Assess and apply the various CRM technologies and analytics to measure marketing performance and design customer relationship management program.

Module 1: (14 hours)

Introduction to Customer Relationship Management (CRM), Evolution and growth of CRM, CRM and Information Technology (IT) revolution, Factors driving the CRM industry, CRM and database marketing, Satisfaction-Loyalty-Profit Chain, Customer management orientation, CRM strategy, CRM implementation process, CRM success factors, CRM value chain, Components of customer satisfaction, Customer satisfaction index, Concept of customer loyalty, Defining customer loyalty, Customer loyalty ladder, Dimensions of customer loyalty, Differentiating customer loyalty.

Module 2: (14 hours)

Real time segmentation and program development, Data analytics; RFM (Recency, Frequency, Monetary) value analysis, Data capture, Data warehousing, Data mining and data analysis, Business value of data mining, Data mining, Sales strategy and CRM, CRM technology and sales, Deployment of sales resources, Marketing strategy and CRM, Customer lifetime value analysis, Managing customer experience, CRM action programs & tools, CRM technology, CRM software, Sourcing and implementation.

Module 3: (11 hours)

Strategic CRM and integration with supply chain management and Enterprise Resource Planning, Strategic goals of CRM, Risk factors for CRM, CRM risk analysis, CRM Evaluation, CRM program measurement and tools, privacy, ethics and future of CRM.

References:

1. E. Peelen and R. Beltman, *Customer Relationship Management*, 2nd ed. Pearson, USA, 2014.
2. F. Buttle, *Customer Relationship Management: Concepts and Technologies*, 2nd ed. Butterworth Heinemann, USA, 2008.
3. D.Peppers, and M.Rogers, *The One-to-one Future: Building Relationships One Customer at a Time*, 1st ed. Delacorte Press, USA, 1996.
4. V. Kumar, and W. Reinartz, *Customer Relationship Management: Concept Strategy and Tools*, 2nd ed. Springer-Verlag, 2012.

MS7143D CUSTOMER RELATIONSHIP MANAGEMENT

Pre-requisite: MS6102D Marketing Management: Concepts and Applications

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Evolution and growth of CRM, CRM and database marketing, Satisfaction-Loyalty-Profit Chain, Customer management orientation, CRM strategy, CRM implementation process, Customer satisfaction index, Customer loyalty, Real time segmentation and program development, RFM (Recency, Frequency, Monetary) value analysis, Data capture, Data warehousing, Data mining and data analysis, Sales strategy and CRM, Marketing strategy and CRM, Customer lifetime value analysis, integration with supply chain management and Enterprise Resource Planning, Ethics in CRM.

MS7144D PRODUCT POLICY AND BRAND MANAGEMENT

Pre-requisite: MS6102D Marketing Management: Concepts and Applications

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Appraise the various dimensions of product management such as product-line decisions, product platform and product life cycle.

CO2: Examine the relationship between corporate strategy and product and brand management.

CO3: Knowledge of important concepts in branding such as brand equity, brand positioning, brand value chain, brand associations and brand architecture.

CO4: Ability to apply the concepts and tools in branding to maximize brand equity.

Module 1: (15 hours)

Introduction to product management, Corporate strategy and product planning, Product levels, Product classification, Product differentiation, Product hierarchy, Product mix, Product line decisions, Developing product strategy, Planned Obsolescence, Product life cycle and marketing strategies, Utility and critique of product life cycle concept. New product development, Idea generation, Screening, Design process, Market testing, Accelerated Life Testing, Warranty, Commercialization aspects.

Module 2: (11 hours)

Introduction to brand management, Branding concepts, Strategies to manage brands, Branding challenges and opportunities, Strategic brand management process, Brand equity concept, Customer based brand equity, Sources of brand equity, Brand equity models, Brand positioning, Brand identity, Building brands, Creating customer value

Module 3: (13 hours)

Choosing brand elements to build brand equity, Options and tactics for brand elements; Marketing programs to build brand equity, Product strategy, Pricing strategy, Channel strategy; Marketing communication to build brand equity. Brand value chain, Brand tracking studies; Measuring sources of brand equity, Brand audit, Brand architecture, Brand hierarchy, Brand extensions, Co-branding, Corporate branding, Brand personality, Brand management tools, Contemporary issues in managing brands.

References:

1. K.V Keller, M.G. Parameswaran and I. Jacob, *Strategic Brand Management: Building, Measuring, and Managing Brand Equity*, Pearson, 4th Edn, 2011.
2. J.N. Kapferer, *The New Strategic Brand Management: Creating and Sustaining Brand Equity*, 4th ed. Kogan Page, UK, 2004.
3. D.R. Lehmann and R.S. Winer, *Product Management*, 5th ed. McGraw-Hill, USA, 2004.
4. M.J. Baker and R. McTavish, *Product Policy and Management*, 2nd ed., The MacMillan Press, UK, 2010.

MS7144D PRODUCT POLICY AND BRAND MANAGEMENT

Pre-requisite: MS6102D Marketing Management: Concepts and Applications

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Corporate Policy and Product Policy, Product Planning, Product Level, Product Hierarchy, Product Mix, Product Line, Perceptual Mapping, Product Life-cycle, New Product Development, Testing and Commercialization. Branding concepts, Brand Building, Brand Elements, Brand personality, Brand positioning, Branding strategies, Brand equity, Brand Identity, Brand Image, Product strategy, Pricing Strategy, Promotion Strategy, Brand Value Chain, Brand audit, Brand architecture, Brand Extension, Co-branding.

MS7145D BUSINESS TO BUSINESS (B2B) SALES AND DIGITAL MARKETING

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Identify, formulate and solve buyer related problems and improve sales planning in B2B and B2C networks.

CO2: Understand the need for engaging in continuous research of current market trends, including key accounts management and to accomplish common goals in sales, as individual and team.

CO3: Adapt concrete approaches to digital marketing and effective budget planning apart from analysis of effectiveness.

CO4: Apply latest trends in technology to design marketing plan to increase web traffic.

Module 1: (15 hours)

Business to Business (B2B) Sales, Nature of business markets, Similarities and differences between B2B and B2C (Business to Consumer), buyer behaviour, Buyer decisions, Effect of Information Technology (IT) on purchase behaviour, B2B sales strategy, Sales planning, Segmentation, Targeting, Positioning and value proposition, Sales process, Components of a sales process, Sample sales process, Metrics in a sales process.

Researching business to business markets, Marketing communication, Relationship communication, Direct marketing, Personal selling, Hiring sales team, Sales team composition, Managing a sales team, Relationship portfolios and key account management, B2B product offerings, Managing product offerings, Marketing channels, Price setting, Sales reporting and metrics.

Module 2: (12 hours)

Introduction to digital marketing, Pros and cons of digital marketing, Display advertisement, Advt. format and features, Creative formats, Campaign planning, Tracking campaigns, Campaign budget and optimizing, E-mail marketing, Creating web presence, Online marketing plan, Content marketing, Digital marketing strategy, Planning concepts, Situation analysis, Target audience, Integrated digital marketing plans.

Module 3: (12 hours)

Content marketing, Search engine marketing, Search Engine Optimization (SEO) concepts, Pay per click concepts, Pros and cons of pay per click, Key words, Digital ad copy, Landing pages, Targeting, Budgets, Campaign management, Conversion tracking, Analytics, Mobile marketing concepts, Mobile advertisement, Mobile apps, Proximity marketing, Social media marketing concepts, Setting goals, Facebook, Twitter, LinkedIn, Google plus, Social media challenges, Apps & plug ins, Key performance indicator measurement, Reporting metrics, Google analytics, Measuring web traffic, Increasing web traffic, E-Commerce.

References:

1. R. Brennan and M. L. L. Canning, *Business to Business Marketing*, Sage, UK, 2010.
2. G. L. Lilien, and R. Grewal, *Handbook on Business to Business Marketing*, Edward Elgar Publishing, Cheltenham, 2012.
3. N. Ellis, *Business-to-Business Marketing: Relationships, Networks and Strategies*, Oxford University Press, UK, 2011.
4. D. Ryan, and C. Jones, *Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation*, 2nd ed. Kogan Page, 2012.
5. E. Greenberg, and K. Alexander, *Strategic Digital Marketing*, McGraw-Hill, USA, 2013.

MS7145D BUSINESS TO BUSINESS (B2B) SALES AND DIGITAL MARKETING

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Business to Business (B2B) Sales, Similarities and differences between B2B and B2C (Business to Consumer), buyer behaviour, Buyer decisions, Effect of Information Technology (IT) B2B sales strategy, Sales planning, Segmentation, Targeting, Positioning and value proposition, Sales process, Components of a sales process, Direct marketing, Personal selling, Introduction to digital marketing, Advt. format and features, Creative formats, Campaign planning, Tracking campaigns, Online marketing plan, Content marketing, Digital marketing strategy, Planning concepts, Search Engine Optimization (SEO) concepts, Mobile advertisement, Social media marketing concepts, Google analytics.

MS7146D RETAIL AND MALL MANAGEMENT

Pre-requisite: MS6102D Marketing Management: Concepts and Applications

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Provide students with a better understanding of different formats in retailing

CO2: Expose students to conceptual issues as applied to retailing

CO3: Develop awareness about mall mode of retailing

CO4: Develop awareness about current and future developments

Module 1: (12 hours)

Overview of retailing; Theories of retailing; Location & site selection; Decisions store design; Layout and visual merchandising.

Module 2: (16 hours)

Pricing & promotion decisions; Decisions on stock keeping units; Understanding segmentation & positioning; National/Regional brands Vs store; Brands internet & electronic retailing; Role of technology in retailing; Future trends & innovation in retailing; Strategic concerns.

Module 3: (11 hours)

Formation, measurement and modification of consumer attitude; Concept of attitude, Measurement methods, data analysis and identification of problem areas; Attitude change methods, Market opportunity and promotional activities to assess markets and changing attitudes towards products and brands; Situational determinants of buyer behavior,

References:

1. M. Levy and B. A. Weitz, *Retail Management*, Irwin McGraw Hill, 2015.
2. B. Berman and J. R. Evass, *Retail Management – A Strategic Approach*, 2011.
3. D. Gilbert, *Retail Marketing Management*, Financial Times – Prentice Hall, 2009.

MS7146D RETAIL AND MALL MANAGEMENT

Pre-requisite: MS6102D Marketing Management: Concepts and Applications

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Overview of retailing; Theories of retailing, Location & site selection, Decisions store design; Layout and visual merchandising; Pricing & promotion decisions; Decisions on stock keeping units; Formation, measurement and modification of consumer attitude; Concept of attitude, Attitude change methods; Market opportunity and promotional activities to assess markets and change attitudes towards products and brands.

MS7147D CONSUMER BEHAVIOUR

Pre-requisite: MS6102D Marketing Management: Concepts and Applications

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Proficiency in understanding buyer behaviour.

CO2: Develop familiarity with the advances in consumer research in deciphering buyer motivation, and behaviour.

CO3: Equipped with frameworks to analyze consumers behaviour.

CO4: Apply in designing marketing strategies and in enhancing the effectiveness of marketing.

Module 1: (13 hours)

Consumer behaviour: Introduction, Outcomes, Consumer psychology, Consumer motivation, Perception stimuli, Appeals, Gestalt principles, Marketing communication, Positioning, Learning, Attitude formation and change, Memory, Recall, Associations, Emotions.

Module 2: (14 hours)

The consumer's culture: Sub-culture, Reference groups, Psychographics, VALS and grouping consumers; Segmentation, targeting and positioning based on self and brand images; Self-concept, Needs & brand choice; Need recognition process; Gaps in self-image and ideal image; Why certain attributes are used for evaluating brands; Importance of attributes and need strength; Identifying need areas, Consumer behaviour outcomes; Consumer welfare; Need identification and classification; Use of personality; Purchase pattern to understand needs and segment markets.

Module 3: (12 hours)

Categorizing and comprehending information: Information gathering & evaluation; Perceptual Mapping & Positioning; Value perception, Information search, Defining criterion for choice, Mapping perceptions and value perceptions of consumers; Alternative search, Evaluation rules used by consumers, Process of decision making, Post-decision processes, Post-purchase evaluation.

References:

1. D. I. Hawkins, Mothersbaugh, and A. Mookerjee, *Consumer Behavior*, Tata McGraw Hill, 2011.
2. V. C. Jannsen-Boyd, *Consumer Psychology*, McGraw-Hill, 2010.

MS7147D CONSUMER BEHAVIOUR

Pre-requisite: MS6102D Marketing Management: Concepts and Applications

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Consumer behaviour, Consumer psychology, Consumer motivation, Perception stimuli, Recall, associations, Emotions, Self-concept, Needs & brand choice, Information gathering & evaluation; Perceptual mapping & positioning; Value perception, Information search, Defining criterion for choice, Alternative search, Evaluation rules used by consumers, Process of decision making.

MS7148D RESEARCH IN MARKETING DECISIONS

Pre-requisite: MS6117D BUSINESS RESEARCH METHODS

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Develop an understanding of business and marketing research

CO2: Operationalize different methods from both user's and researchers' perspective.

CO3: Develop an understanding of marketing research through examples of applications in different industrial and business contexts

CO4: Demonstrate variety of concepts and tools that are used for marketing research

Module 1: (12 hours)

Marketing Research - A Conceptual framework, Relevance of Marketing Research, Research Planning, Design, and Data Sources, Qualitative Research, Exploratory Research, Causal Research, Measurement and Scaling.

Module 2: (11 hours)

Questionnaire Design, Sampling Methods and Data Collection, Field Investigation – Planning, Implementation, and Issues, Organisational, Technological and Ethical Issues. Project Report Preparation and Presentation

Module 3: (16 hours)

Data Analysis Technique, Univariate, Bivariate, Tabulation and Analysis, Multivariate Data Analysis and applications, Segmenting and Positioning, New Product Development . Pricing Research, Media Research, Strategy Formulation, Brand Value, Selling the Idea of MR, Reporting and Concluding Integration

References:

1. N. K. Malhotra, *Marketing Research – An applied orientation*, 3rd ed., Addison Wesley Longman, 1999.
2. G.C. Beri, *Marketing Research*, 3rd ed., Tata McGraw-Hill, 2001.
3. T. Proctor, *Essentials of Marketing Research*, 2nd ed. Pitman, London, 2000.

MS7148D RESEARCH IN MARKETING DECISIONS

Pre-requisite: MS6117D BUSINESS RESEARCH METHODS

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Marketing Research, Research Planning, Design, and Data Sources, Qualitative Research, Exploratory Research, Causal Research, Measurement and Scaling, Questionnaire Design, Sampling Methods and Data Collection, Field Investigation, Data Analysis, Multivariate Data Analysis and applications, Segmenting and Positioning, New Product Development, Pricing Research, Media Research, Strategy Formulation, Brand Value.

MS7149D MARKETING ANALYTICS

Pre-requisite: MS6117D BUSINESS RESEARCH METHODS

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Develop marketing strategies and resource allocation decisions driven by quantitative analysis.

CO2: Develop understanding of issues related to pricing and digital marketing

CO3: Build understanding of issues related to integrated marketing communications and quantitative analysis

CO4: Provide orientation in cutting edge techniques of market basket analysis

Module 1: (15 hours)

Multivariate Data Analysis and applications - Multiple Regression Analysis, Factor Analysis, Perceptual maps, Logistic Regression

Module 2: (10 hours)

Machine Learning, Association rule learning. Market mix models, Market basket analysis. RFM analysis, Discriminant Analysis, Cluster Analysis, Conjoint Analysis, Multi-Dimensional Scaling, Pre-processor to MDS

Module 3: (14 hours)

Collaborative filtering, Text analytics, NVivo and other Text Mining Softwares, Spatial regression, Using Geo-spatial Data, Attribution models, Reporting and Concluding Integration

References:

1. V. Rajkumar, P. Farris and R. T. Wilcox, *Cutting-edge marketing analytics: Real World Cases and Data sets for Hands on Learning*, Pearson, 2014.
2. S. Stephan, *Marketing Analytics: Strategic Models and Metrics*, Admiral Press, 2013.

MS7149D MARKETING ANALYTICS

Pre-requisite: MS6117D BUSINESS RESEARCH METHODS

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Multivariate Data Analysis and applications, Multiple Regression Analysis, Factor Analysis, Perceptual maps, Logistic Regression, Machine Learning, and Association rule learning. Market mix models, Market basket analysis, RFM analysis, Collaborative filtering, Text analytics

MS7150D MARKETING DECISION MODELS

Pre-requisite: MS6106D DECISION MODELS IN MANAGEMENT

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Enable to use analytical techniques in enhancing marketing decision making in modern enterprises.

CO2: Formulate long term marketing strategy with sound analytical judgment.

CO3: Expose students to numerous examples demonstrating the value of the analytic approach to marketing decision-making.

Module 1: (12 hours)

Response modeling, Market segmentation, Choice based segmentation, Positioning analysis, Market response models, Customer profitability, Social media, Paid search advertising.

Module 2: (14 hours)

Research framework; Strategic marketing decisions, Portfolio analysis, New product design, Forecasting sales of new products, Advertising decisions, Sales force decisions.

Module 3: (13 hours)

Distribution decisions; Pricing decisions, Promotion decisions, Strategy decisions, Organisational buying model, Product recommendation systems, Mobile geo-location analysis, Media attribution models, Resource allocation.

References:

1. G.L. Lilien, P. Kotler and K.S. Moorthy, *Marketing Models*. Prentice Hall, 2015.
2. Leeflang, *Building Models for Marketing*, Springer, 2000.

MS7150D MARKETING DECISION MODELS

Pre-requisite: MS6106D DECISION MODELS IN MANAGEMENT

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Response modelling, Market segmentation, Choice based segmentation, Positioning analysis, Research framework, Strategic marketing decisions, Portfolio analysis, New distribution decisions, Pricing decisions, Promotion decisions, Strategy decisions, Organisational buying model, Product recommendation systems.

MS7151D INDUSTRIAL RELATIONS AND LABOUR LAWS

Pre-requisites: MS6113D Human Resources Management

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Realize the importance of Industrial Relations (IR) and associate with the current scenario of IR especially in India

CO2: Critically evaluate the importance of unionized labour force in a national and international context

CO3: Examine and evaluate the cause of industrial and individual disputes

CO4: Assess the scope of various laws governing the labour force in Indian scenario

Module 1: (13hours)

Industrial relations; Overview of Industrial Relations (IR), Meaning and scope of IR, Perspectives/approaches to IR, Major stake holders 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.

Module 2: (12 hours)

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,

Module 3: (14 hours)

Labour Legislations; Evolution and importance of labour legislation in India, Influence of ILO 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 practical overview, Compliances to be done before setting up a factory.

References:

1. P.N. Singh and K. Neeraj, *Employee Relations Management*, Pearson, 2011.
2. B.D. Singh, *Industrial Relations and Labour Laws*, Excel Books, 2008.
3. M. Arun, R. Nambudiri, and P. Selvaraj, *Industrial Relations and Labour Laws*, Tata McGraw-Hill, 2012.
4. S.C. Srivastava, *Industrial Relations and Labour Laws*, 5th ed. Vikas, 2007.
5. C.S. Venkata Ratnam, and M. Dhal, *Industrial Relations*, 2nd ed. Oxford Publications, 2017

MS7151D INDUSTRIAL RELATIONS AND LABOUR LAWS

Pre-requisites: MS6113D Human Resources Management

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Industrial relations, Perspectives/approaches to IR, Trade Unionism, Unions and Strikes, NCL Recommendations, Industrial dispute and individual dispute, Dispute resolution methods and machinery, Work committee, grievance, Disciplinary enquiries, Collective bargaining, ILO, Labour Legislations, ID Act-1947, Factory Act-1948, Wage Legislations Social Security Legislation

MS7152D STRATEGIC HUMAN RESOURCES MANAGEMENT

Pre-requisites: 1. MS6113D Human Resources Management
2. MS6116D Strategic Management

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Formulate and define human resource management (HRM) from a systemic, strategic perspective and identify the key HRM functions and operations
- CO2: Demonstrate an advanced understanding of the chain of links between management intentions in HRM and Organisational outcomes
- CO3: Elaborate the knowledge of employee benefit concepts, plan design, administrative considerations and regulations governing employee benefit practices
- CO4: Develop aptitude to aid the Organisation in analyzing its external environment and internal capabilities and develop a strategic HR plan to enhance its performance

Module 1: (13hours)

Framework of Strategic Human Resource Management (SHRM), Human Resource Management (HRM) defined, Models of HRM, Aims and characteristics of HRM, Issues in HRM, Concept of strategy, Formulation of strategy, Meaning of SHRM, Approaches to SHRM and the limitations. Definition of human resource strategy, Different types, Strategic review, Implementation, Impact of HRM strategies on Organisational performance, Role of top level management in SHRM, Frontline management, Role of HR specialists.

Module 2: (13 hours)

Strategies for improving Organisational effectiveness, Organisational development, Transformation, Culture and commitment, Quality management; Total Quality Management (TQM), Customer service management, SHRM approach to resourcing, Integrating business and resourcing Strategies, Components, Retention strategy, Talent management.

Module 3: (13 hours)

Organisational learning strategies, Learning Organisations, Individual learning, Performance management; Purpose and concerns, Performance management process, Characteristics of reward strategy, Guiding principles, Effective reward strategies, Formulating strategies for Employee relations, Introduction to knowledge management

References:

1. M. Armstrong, and A. Baron, *Handbook of Strategic HRM*, Jaico Publishing, 2005.
2. J.A. Mello, *Strategic Human Resource Management*, 2nd ed. Thomson South Western, 2007.
3. R. Regis, *Strategic Human Resource Management and Development*, Excel Books, 2008.
4. T. Agarwala, *Strategic Human Resource Management*, Oxford UP, 2007.
5. R.L. Dhar, *Strategic Human Resource Management*, Excel Books, 2008.

MS7152D STRATEGIC HUMAN RESOURCES MANAGEMENT

- Pre-requisites: 1. MS6113D Human Resources Management
2. MS6116D Strategic Management

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Framework of Strategic Human Resource Management (SHRM), Models of HRM, Concept of strategy, Formulation of strategy, Meaning of SHRM, Approaches to SHRM and the limitations. Definition of human resource strategy, Strategies for improving Organisational effectiveness, Organisational development, Quality management, Resourcing Strategies, Components, Retention strategy, Talent management. Organisational learning strategies, Performance management; Purpose and concerns, Characteristics of reward strategy, Formulating strategies for Employee relations, Knowledge management

MS7153D RECRUITMENT SELECTION AND COMPENSATION MANAGEMENT

Pre-requisite: MS6113D Human Resources Management

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Comprehend concept of Human Resource planning and apply its various analysis methods and models to determine Human Resource planning.
- CO2: Determine and devise recruitment process in different market conditions, through an understanding the policies and procedures of recruitment.
- CO3: Design a suitable selection process and apply selection methods to determine selection and post selection activities.
- CO4: Analyse and evaluate job performance, design salary structure and incentive measures including competency based compensation.

Module 1: (11 hours)

Human Resource Planning: Concept, Significance, Evolution, Objectives and steps, Influencing factors (technological, social, economic and political environment) of Human Resource Planning, Job Analysis, Job Description, Job Specification, Analysis of human resource demand and supply, Wastage analysis, Labour turnover index, Attrition Analysis, Stability index, Cohort analysis, Census analysis, Human Resource Planning models; Markov models, Renewal models, Cambridge model.

Module 2: (14 hours)

Recruitment: Importance, Sources, Procedures and Policies, Approaches & stages of recruitment, Equal opportunity and recruitment, Recruitment in fluctuating labour markets and in different Organisations. Recruitment Channels, Head-hunting, Social Media in Recruitment, Selection: Processes, Methods and final decision, Assessment Centres, Psychometric tests, Post selection activities like induction, Placement, Promotion, Transfer policies & types, Career development, Concepts, Stages and methods of development program, Employee development, Career management.

Module 3: (14 hours)

Compensation: Concept & elements, Total Rewards, Types of compensations, Base & supplementary Compensation, Concept & techniques of job analysis & job evaluation, , Concept of internal equity & external parity, Designing pay ranges & bands, Human resource audit and its implications, Theories of wages, Labour market, Wage policy, legal framework, Wage determination, Pay commission, Wage boards & adjudication, Compensation strategy at company level, Pre-requisites of effective incentive scheme, Types of incentive system, Individual and Group incentives, Bonus, Gainsharing, Salary structure, Salary progression, Allowances, Competency based compensation, Benefits, International Compensation.

References:

1. G. Dessele and B. Varkkey, *Human Resource Management*, Pearson Education, 14th ed. 2009.
2. C.B. Mamoria and S.V. Gankar, *A Textbook of Human Resource Management*, Himalaya Publishing, 2010.
3. T. Deb, *Compensation Management: Text and Cases*, Excel Books, 2012.
4. G. McBeath and D.N Rands, *Salary Administration*, 3rd ed. Business Books, 1976.
5. B.D. Singh, *Compensation and Reward Management*, Sterling, 2012.

MS7153D RECRUITMENT SELECTION AND COMPENSATION MANAGEMENT

Pre-requisite: MS6113D Human Resources Management

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Human Resource Planning, Job Analysis, Analysis of human resource demand and supply, Recruitment Strategies and Policies, Approaches & stages of recruitment, Recruitment Channels, Social Media and recruitment, Selection Processes, Methods, Assessment centres, psychometric tests, Career management. Compensation: Concept & elements, Job evaluation, Theories of wages, Benefits, legal framework, Compensation strategy at company level, Salary structure, Salary progression, Allowances, Competency based compensation.

MS7154D LEARNING AND DEVELOPMENT

Pre-requisite: MS6113D Human Resources Management

L	T	P	C
3	0	0	3

Total hours: 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 requirement.

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

CO4: Familiarize with the various methods of L&D and utilize the tools and techniques for Organisational learning and development

Module 1: (12 hours)

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, L&D Communities

Module 2: (15 hours)

Planning a learning approach, Designing L&D in an Organisation, Competency based L&D, Vocational Education and Training, Implementing effective L&D Interventions, Technical and soft-skill adaptation, Computer Assisted Learning, Integrated Learning Systems, Internal and External training, e-learning, Leveraging MOOC, Design workshops, course plan and content creation, materials for L&D, delivery methods, Distance Learning, Gamification, Audio-Visual Aids, Vendor and consultant engagement, budgeting, resource management, scheduling, Evaluation of L&D programs, Feedback and Surveys, Learning Management Systems,

Module 3: (12 hours)

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

References:

1. R. Harrison, *Learning and Development*, CIPD Publishing, 2005
2. G. Dessler and B. Varkkey, *Human Resource Management*, 14th ed. Person Education, 2016
3. S. Riasuden, *Human Resource Development: Theory and Practice*, LAP, 2014
4. B. Janakiram. *Training and Development*, Dreamtech Press, 2007
5. R.P. Lynton and U. Pareek, *Training for Development*, 3rded. Sage Publications

MS7154D LEARNING AND DEVELOPMENT

Pre-requisite: MS6113D Human Resources Management

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Difference between training and learning, Learning need analysis, Learning Curve, Adult learning, L&D communities, Design and implement L&D programs, Content development, budgeting, planning, scheduling, Learning Management System, e-Learning, gamification in L&D, , Evaluation of L&D programs, Employee engagement, Human Resource Development Capacity Building Organisation Development, Knowledge Management, Organisational Learning, Leadership Development

MS7155D TALENT AND PERFORMANCE MANAGEMENT

Pre-requisites: MS6113D Human Resources Management

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Identify and evaluate talent by systematic analysis of employee performance

CO2: Devise suitable strategies to calibrate individual performance to enhance productivity

CO3: Design effective methods for periodic performance evaluation

CO4: Develop and implement appropriate action plans based on employees' performance strengths and weaknesses

Module 1: (13hours)

Performance management process; Objectives of performance management system; Historical development in India; Performance management and performance appraisal; Linkage of performance management system with other HR practices, Concept and approaches of talent management; Framework of talent management; Talent identification, integration, and retention; Building the talent pipeline; Managing employee engagement; Key factors and different aspects of talent management; Using talent management processes to drive culture of excellence; Talent management in India; Future directions in talent management practice and research.

Module 2: (11 hours)

Performance planning; Ongoing support and coaching; Performance measurement and evaluation; Performance management and appraisal; Methods of performance appraisal; Appraisal Communication; Counselling, Identifying potential for development; Linking pay with performance: Competency and Team based PMS, Competency based Performance Management System : Managerial skills and competencies, Developing competencies, Competency Identification and Assessment Process, Competency models, Operationalising change through performance management.

Module 3: (15 hours)

Implementing performance management system-: Strategies and challenges; Characteristics of effective performance metrics; Role of HR professionals in performance management; Performance management as an aid to learning and employee empowerment; Performance management documentation; Performance management audit; Ethical and legal issues in performance management; Use of technology and e-PMS, Performance management practices in Indian Organisations, Decisions based on Performance, Performance based Compensation: Concepts of compensation, Performance related compensation and benefits, skill based pay, competency based pay, Executive compensation: Performance based Career Planning, Career Development and Succession planning

References:

1. M. Armstrong, *Performance Management: Key Strategies and Practical Guidelines*, 3rd ed. Kogan Page Limited, 2006.
2. H. Aguinis, *Performance management*, 3rd ed. Pearson, 2013.
3. U.S. Bititci, T. Turner, and C. Begemann, Dynamics of Performance Measurement Systems, *International Journal of Operations & Production Management*, 20 (6), 2000, 692 – 704.
4. A.K. Merchant and W.A. Van der Stede, *Management Control Systems: Performance Measurement, Evaluation and Incentives*, Second Edition, Pearson Education Limited, 2007.
5. M. Armstrong and A. Baron, *Managing Performance: Performance Management in Action*. London: Chartered Institute of Personnel and Development, 2005.

MS7155D TALENT AND PERFORMANCE MANAGEMENT

Pre-requisites: MS6113D Human Resources Management

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Performance management, Performance management and performance appraisal, talent management, Performance planning, Coaching, Counselling, Pay and performance, Performance Management System, performance metrics, audit, technology and e-PMS, Competency models, Decisions based on Performance, Performance based Compensation, Executive compensation, Performance based Career Planning

MS7156D HUMAN RESOURCES ANALYTICS

Pre-requisites: 1. MS6113D Human Resources Management

2. MS6192D Information Technology Laboratory

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Ability to understand the importance of analytics applied to human resource management discipline.
- CO2: Demonstrate knowledge and undertake application of analytical techniques to evaluate and resolve HR issues.
- CO3: Demonstrate ability to formulate decision making scenarios, identify possible areas for analysis and conduct data analysis process.
- CO4: Offer recommendations and prescriptions for HR decision making situations by interpreting the data.

Module 1: (13 hours)

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.

Module 2: (13 hours)

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

Module 3: (13 hours)

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

References:

1. M.R. Edwards and K. Edwards, *Predictive HR Analytics: Mastering the HR Metric*, Kogan Page, 2016.
2. J.C. Sesil, *Applying advanced analytics to HR management decisions: Methods for selection, developing incentives, and improving collaboration*. Pearson Education, 2014.
3. S. Ramesh and S. Kuldeep, *Wining on HR Analytics: Leveraging Data for Competitive Advantage*, Sage Publications, 2016.
4. Jac Fitz-Enz, *The New HR Analytics*, Amacom, 2010.

MS7156D HUMAN RESOURCES ANALYTICS

Pre-requisites: 1. MS6113D Human Resources Management

2. MS6192D Information Technology Laboratory

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Frameworks in HR Analytics, PCMM, HR Analytics Maturity Model, HR Audit, HR Accounting, HR Metrics, Descriptive, Predictive and Prescriptive Analytics, HRMS, HR Information Systems, Data Analysis Process, Basics of Probability and Statistics, Data Visualization, HR Dashboard, Interpretation and Reporting. Analytics in: HR Planning, Manpower demand and supply, Recruitment, Selection, Performance Evaluation, Compensation, Benefits, Surveys, Employee Engagement, Turnover Intention, Attrition.

MS7157D INDIVIDUAL AND ORGANISATIONAL TRANSFORMATION

Pre-requisites: 1. MS6113D Human Resources Management
2. MS6103D Organisational Behaviour
3. MS6116D Strategic Management

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Assess Individual personality, and design strategies for performance sustenance and enhancement through justifiable methods
CO2: Comprehend 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 channelize it for individual and Organisation development

Module 1: (13 hours)

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,

Module 2: (14 hours)

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.

Module 3: (12 hours)

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. R. Paton and J .McCalman, *Change Management: A Guide to Effective Implementation*, SAGE Publicatins, New Delhi, 2008
2. R.J. Gareth and M. Mary. *Organisational Theory, Design and Change*, 5thed. Pearson Education, 2008.
3. J.M Hiatt, ADKAR: A Model for Change in Business, Government and Our Community, Prosci Research, 2006
4. Daniel G. *Emotional Intelligence: Why It Can Matter More Than IQ*, Bloomsbury Publications, 1996.
5. D. W. Organ, P.M. Podsakoff, S.B. MacKenzie, *Organisational Citizenship Behavior: Its Nature, Antecedents, and Consequences*, SAGE Publications, 2006.

MS7157D INDIVIDUAL AND ORGANISATIONAL TRANSFORMATION

Pre-requisites: 1. MS6113D Human Resources Management
2. MS103D Organisational Behaviour
3. MS6116D Strategic Management

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Individual Personality, Emotional Intelligence, Impression Management, Collaboration and Networking, Organisation Citizenship Behaviour, Organisation Development, Organisation Politics and change, Nature, Types and Effect of Change, TROPICS, Model of change, Force Field Theory, Resistance to change, Change Agents, Interventions, Learning Organisations

MS7161D KNOWLEDGE MANAGEMENT

Pre-requisites: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Describe different types of support system for explicit knowledge management

CO2: Use tools to develop knowledge system

CO3: Evaluate different methods and techniques for explicit knowledge management

CO4: Describe different methods and techniques for handling of knowledge in administrative systems

Module 1: (13 hours)

Introduction, Knowledge Management (KM) myths, KM Life Cycle, Understanding knowledge: Knowledge economy, knowledge engineering, Cognition and KM; Challenges in building KM systems, Conventional vs. Knowledge Management Systems Life Cycle (KMSLC), Knowledge Modelling: Visualization, Meta knowledge, diffuse domains.

Capturing knowledge: Evaluating the expert, Developing a relationship with experts, Fuzzy reasoning and the quality of knowledge.

Module 2: (14 hours)

Knowledge capturing techniques: Brain storming, Protocol analysis, Consensus decision making, Repertory grid; concept mapping, black boarding.

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.

Module 3: (12 hours)

Deployment issues, User training, Post implementation.

Knowledge transfer and sharing, Transfer methods, Role of the internet, Knowledge transfer in e-world, KM system, Tools, Neural network, Association rules, Classification trees, Data mining and business intelligence; Decision making architecture; Data management, Knowledge management protocols, Managing knowledge workers.

References:

1. E. M. Awad, and H. M. Ghaziri, *Knowledge Management*, Pearson Education, New Delhi, 2004.
2. G. Schreiber, H. Akkermans, A. Anjewierden, R. Hoog, N. R. Shadbolt, W.V. Velde, and B.J. Wielinga, *Knowledge Engineering and Management*, Universities Press, Hyderabad, 2001.
3. C. W. Holsapple, *Handbooks on Knowledge Management, International Handbooks on Information Systems*, Vol. 1 and 2, Springer, Berlin, 2003.
4. A. Jashapara, *Knowledge Management: An Integrated Approach*, Financial Times/Prentice Hall, 2nd Ed. 2011

MS7161D KNOWLEDGE MANAGEMENT

L	T	P	C
3	0	0	3

Pre-requisite: Nil

Total hours: 39

Brief Syllabus:

Knowledge Management (KM) Life Cycle, Understanding knowledge: Knowledge economy, knowledge engineering - Challenges in building KM systems, Conventional vs. Knowledge Management Systems Life Cycle (KMSLC), Knowledge Modelling - Capturing knowledge - Fuzzy reasoning - . Knowledge capturing techniques - Knowledge codification – Approaches to logical testing – Knowledge transfer and sharing, Transfer methods – Tools - Data mining and business intelligence

MS7162D BUSINESS INTELLIGENCE

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Understand the importance of business intelligence in business decision making

CO2: Develop models in business intelligence

CO3: Generate data and apply tables to extract and transform data for decision making

CO4: Explain the impact of uncertainties in business decisions

Module 1: (11 hours)

Introduction, Business Intelligence (BI) definitions and concepts, Trends in BI, An overview of BI technologies, Competing on analytics, Goals of business intelligence, Business value of BI; Business Intelligence: Tasks and analysis formats, Data task, Modelling task, Analysis task, Evaluation and reporting task, Analysis formats; Applications of business intelligence – cases.

Module 2: (14 hours)

Modelling in Business Intelligence: Logical and Algebraic structure, Graph structures, Analytical structures; Models and data; Forms of digital data, sources, features, challenges and strategies to manage each form, Online Transaction Processing (OLTP) vs. Online Analytical Processing (OLAP),

Dimension tables and fact tables, Schemas (star, snowflake, galaxy), Data Integration: Multidimensional analysis, OLAP architectures, Multidimensional analysis and pivoting, Use of pivot tables, Data pre-processing, Characteristics and goals of data warehouses; Different approaches to build data warehouses, Data warehousing; Extraction, Transformation and Loading

Module 3: (14 hours)

Introduction to Weka, Arff file format, Introduction to classification using Weka, Filtering techniques, Test options; Difference between various options, Classification algorithms, Zero R and One R, Discretization, Over fitting,

Decision trees, Constructing and visualizing decision trees, computing information gain, Concept of entropy, Data Mining association rules.

References:

1. W. Grossmann, Stefanie Rinderle-Ma, *Fundamentals of Business Intelligence*, Springer, 2015.
2. T. H. Davenport, and J .G. Harris, *Competing on Analytics: The New Science of Winning*, Harvard Press, 2007.
3. G. H. N. Laursen and J. Thorlund, *Business Analytics for Managers: Taking Business Intelligence Beyond Reporting*, Wiley, 2010.
4. O.P. Rud, *Business Intelligence Success Factors: Tools for Aligning your Business in the Global Economy*, Wiley, 2009.
5. K. P. Soman, S. Diwakar and V. Ajay, *Insight into Data Mining Theory and Practice*, Prentice Hall, New Delhi, 2006.
6. C. Vercellis, *Business Intelligence: Data mining and Optimization for Decision Making*, Wiley, UK, 2009.
7. S. Williams and N. Williams, *The Profit Impact of Business Intelligence*, Morgan Kaufmann, 2007.
8. I. H. Witten, E. Frank and M. A. Hall, *Data Mining: Practical Machine Learning Tools and Techniques*, Morgan Kaufmann, USA, 2011.

MS7162D BUSINESS INTELLIGENCE

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Business Intelligence (BI) definitions and concepts – An overview of BI technologies, Business Intelligence – Applications of Business intelligence – Cases – Modeling in Business Intelligence – Models and data – Data Integration – Dimension tables and fact tables – Data warehousing - Extraction, Transformation and Loading – filtering – Decision trees – Data Mining and rules.

MS7163D ADVANCED TOOL FOR DECISION SUPPORT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Develop ability to understand data driven decision making for business problems
- CO2: Develop ability to understand data visualization and data pre-processing
- CO3: Demonstrate ability to implement machine learning in managerial decision making
- CO4: Understand data driven decision support using case based method

Module 1: (14 hours)

Introduction to decision support systems, Human decision making, Decision support systems – types, classifications, typical components, New trends and role of statistics. Data driven decision making and data science. Case discussion. The elements of data science. Types of data, Data manipulation, Data quality check, Data cleaning, Missing value and outlier detection., K Nearest Neighbours (KNN) algorithm for data imputation. Case discussion. Introduction to the Machine learning. Supervised vs. unsupervised learning. Cross validation. Unsupervised learning. Cluster analysis and types. Case discussion.

Module 2: (13 hours)

Supervised learning. Modern Regression: LASSO. Support vector machine (SVM). Case discussion. Recommender Systems, Collaborative Filtering. Bootstrap Aggregating (Bagging), Random forest, Adaptive boosting, gradient boosting. Market analytics. Association rule learning. Market mix models. Market basket analysis. RFM analysis. Case discussion.

Module 3: (12 hours)

Analysis of unstructured data: text mining and sentiment analysis, analysis of machine generated data. Case discussion. Introduction to neural networks; rule based expert systems. Introduction to artificial neural networks (ANN); Back-propagation algorithm; Multi-layer Neural Networks Deep learning algorithms: Convolutional networks; Recurrent nets; Auto-encoders; Deep Learning Platform. Case discussion.

References:

1. T. Hastie, R. Tibshirani and J. Friedman, *The Elements of Statistical Learning: Data Mining, Inference, and Prediction*, New York: Springer, 2013.
2. P. Nakamoto, *Deep Learning: Deep Learning explained to your granny A guide for beginners*, CreateSpace Independent Publishing Platform, 2018.
3. C. C. Aggarwal, *Recommender systems: The Text Book*, Springer, 2016.

MS7163D ADVANCED TOOL FOR DECISION SUPPORT

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Introduction to decision support systems, Human decision making, Decision support systems. Data driven decision making and data science. Data pre-processing and Data visualization. Machine learning. Supervised vs. unsupervised learning. Recommender Systems. Market analytics. Association rule learning. Analysis of unstructured data. Introduction to neural networks and Deep learning.

MS7164D ENTERPRISE RESOURCES PLANNING

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Understand the challenges of developing an ERP system

CO2: Design a framework for ERP implementation

CO3: Develop the different modules of ERP system with its supporting and related technologies

CO4: Understand, implement and stabilize an ERP system

Module 1: (13 hours)

Enterprise Systems: Enterprise Resources Planning (ERP); An Overview, Benefits of ERP, ERP and related technologies, Business Process Re-engineering (BPR), Data warehousing, Data mining, OLAP, SCM. Features, Selection criteria, Merits, Issues and challenges in implementation, Supply Chain Management (SCM), features, modules in SCM, Customer Relationship Management (CRM). Designing ERP Systems, Problem case, Implementation of the basic design of ERP, Version control, modifications and enhancements, piloting/simulation.

Module 2: (13 hours)

ERP implementation lifecycle, Implementation methodology, Hidden costs, Organizing the implementation; Business modules in an ERP package, Finance, Manufacturing, Human resources, Plant maintenance, Materials management, Quality management, Sales and distribution; ERP Market; Market place, SAP AG, Peoplesoft, Baan, JD Edwards, Oracle, QAD, SSA.

Module 3: (13 hours)

ERP system Installation Options; Risk identification analysis, System projects, Demonstration of the system failure method, System architecture and ERP (David L'Olson) Post-Live stabilization; 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.

References:

1. V. K. Garg and N. K. Venkitakrishnan, *Enterprise Resource Planning: Concepts and Practice*, 2nd ed. Prentice Hall, 2011.
2. A .Leon, *ERP Demystified*, Tata McGraw-Hill, 2008.
3. J. A. Brady, E. F. Monk and B. Wagner, *Concepts in Enterprise Resource Planning*, 4th ed. Course Technology, 2012.
4. D. L'Olson, *Managerial Issues of Enterprise Resource Planning Systems*, Tata McGraw-Hill, 2012.
5. D. P. Goyal, *Enterprise Resource Planning*, Tata McGraw-Hill, 2012.
6. J. N. Vaman, *ERP Strategies for Steering Organizational Competence and Competitive Advantage*, Tata McGraw-Hill, 2008.

MS7164D ENTERPRISE RESOURCES PLANNING

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Enterprise Systems - Business Process Reengineering (BPR), - Supply Chain Management (SCM), Customer Relationship Management (CRM) - Designing ERP Systems - ERP implementation methodology, Business modules in an ERP package - ERP Market – ERP system Installation Options; Risk identification analysis, System projects, Demonstration of the system failure method, System architecture and ERP Support mechanism and activities, ERP and related technologies - Product Data Management - Electronic Data Interchange, E-commerce, Enabling technologies.

MS7165D BIG DATA ANALYTICS

Pre-requisite: MS6107D Business Statistics

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Develop practical data analysis skills, which can be applied to practical context

CO2: Develop fundamental knowledge of concepts underlying data science projects.

CO3: Enable a hands-on experience with real-world data analysis.

CO4: Develop applied experience with data science software, programming, applications and processes.

Module 1: (12 hours)

Types of Digital Data, Introduction to Big Data, Big Data Analytics, History of Hadoop, Apache Hadoop, Analysing Data with Unix tools, Analysing Data with Hadoop, Hadoop Streaming, Hadoop Echo System, IBM Big Data Strategy, Introduction to Infosphere, Big Insights and Big Sheets

Module 2: (14 hours)

Big data storage and retrieval: noSQL, GraphDB, Big data distributed computing: Map reduce, Spark, Anatomy of a Map Reduce Job Run, Failures, Job Scheduling, Shuffle and Sort, Task Execution, Map Reduce Types and Formats, Map Reduce Features

Module 3: (13 hours)

Neural networks and deep learning, Feature Generation, Feature Selection algorithms (Filters, Wrappers, Decision Trees, Random Forests) and use in applications, Recommendation Engine (dimensionality reduction, singular value decomposition, principal component analysis).

References:

1. J. Liebowitz, *Big Data and Business Analytics*, Auerbach Publications, CRC press, 2013.
2. T. Plunkett and Mark Hornick, *Using R to Unlock the Value of Big Data: Big Data Analytics with Oracle R Enterprise and Oracle R Connector for Hadoop*, McGraw-Hill/Osborne Media, Oracle press, 2013.
3. T. White, *Hadoop: The Definitive Guide*, 3rd ed. O'Reily Media, 2012.
4. S. Acharya and S. Chellappan, *Big Data Analytics*, Wiley, 2015.

MS7165D BIG DATA ANALYTICS

Pre-requisite: MS6107D Business Statistics

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Types of Digital Data, Introduction to Big Data, Big Data Analytics, Hadoop, Big data storage and retrieval, Map reduce, Neural networks and Deep learning, Feature Generation, Feature Selection algorithms and use in applications, Recommendation Engine.

MS7166D DATA SCIENCE FOR BUSINESS DECISIONS

Pre-requisite: MS6107D Business Statistics

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Develop practical data analysis skills, which can be applied to practical context

CO2: Develop fundamental knowledge of concepts underlying data science projects.

CO3: Explain how linear algebra and calculus can contribute to building better algorithms and software

CO4: Develop practical skills needed in modern analytics

Module 1: (12 hours)

Data Visualization, Understanding business scenarios by analyzing patterns in data, linear patterns, curved patterns, Normal models, linear models and nonlinear models, Visualizing higher dimensional data, Extrapolating and Smoothing, Exploratory Data Analysis

Module 2: (14 hours)

Decision Trees and Value of information: Review concepts from probability and discuss construction of decision trees. Applications include use of decision trees to evaluate options.

Module 3: (13 hours)

Classification: General approach to solve a classification problem. Evaluating performance of a classifier. Rule based classification, nearest-neighbour classifiers and Bayes classifiers. Applications include Anomaly detection, fraud detection in credit card etc.

References:

1. G. James , D. Witten, T. Hastie and R. Tibshirani, *An Introduction to Statistical Learning with Applications in R*, Springer, 2013
2. J. Han, M. Kamber and Pei, *Data Mining Concepts and Techniques*, Morgan Kaufmann, 2011.
3. T. Hastie., R. Tibshirani and J. Friedman. *The Elements of Statistical Learning*, 2nd ed. Springer, 2009.
4. K. Murphy, *Machine Learning: A Probabilistic Perspective*, MIT Press, 2012.
5. N. Zumel and J. Mount, *Practical Data Science with R*. Manning, 2014.

MS7166D DATA SCIENCE FOR BUSINESS DECISIONS

Pre-requisite: MS6107D Business Statistics

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Data Visualization, Normal models, Linear models and Non-linear models, Visualizing higher dimensional data. Decision Trees and Value of information, Classification and General Approach to solve a classification problem, Rule based classification, Nearest-neighbour classifiers and Bayes classifiers.

MS7167D ECONOMETRICS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Understand the basic principles of econometrics and the fundamental techniques in linear regression models.

CO2: Understand the assumptions underlying the classical linear regression model and to deal with their violations.

CO3: Analyse and interpret real world economic data in economic policy formulation and business decisions.

CO4: Develop a solution for econometric problems in business disciplines such as economics, finance and marketing in a micro and macro perspective.

Module 1: (16 hours)

Introduction to Econometrics: Definition, Scope and Goals of Econometrics, Methodology of Econometric Research, the Structure of Economic Data. The Simple Linear Regression Model: Definition, Deriving the Ordinary Least Square (OLS) estimates, Properties of OLS estimates, Goodness of fit. The Multiple Linear Regression Model: Assumptions, Estimation of parameters of multiple regression, Properties of multiple regression model OLS estimates, coefficient of determination, R^2 ; Hypothesis testing, Comparing two R^2 values: the adjusted R^2 . Functional forms of Regression models: How to measure elasticity-the log linear model, comparing linear and log-linear regression models, How to measure growth rate- The semi-log model, and Reciprocal models.

Module 2: (12 hours)

Violating the Assumptions of Classical Linear Regression Model (CLRM): Autocorrelation, Heteroscedasticity, and Multicollinearity; nature, consequences, detection and remedial measures. Types of specification errors.

Module 3: (11 hours)

Dummy Variables and Simultaneous Equation Models: Describing qualitative information, A Single Dummy Independent Variable, the uses of dummy variables, dummy variable trap. Simultaneous Equation Models: introduction, structural and reduced form equations consequences of ignoring simultaneity, simultaneous equation bias, the Identification Problem, Estimation of simultaneous equation model.

References:

1. D. N. Gujarati and D. C. Porter, *Essentials of Econometrics*, McGraw Hill, 4th Edition, International Edition, 2009.
2. D. N. Gujarati, D. C. Porter and S. Gunasekar, *Basic Econometrics*, Tata McGraw-Hill Education Pvt. Ltd., 5th Edition, 2011.
3. A. Koutsoyiannis, *Theory of Econometrics*, 2nd Edition, Macmillan Press Ltd., 1977.
4. J. M. Wooldridge, *Introductory Econometrics: A Modern Approach*, South-Western College Publishers, 6th Edition, 2015.
5. C. Dougherty, *Introduction to Econometrics*, Oxford University Press, 3rd Edition, Indian Edition, 2007.
6. W. H. Greene, *Econometric Analysis*, Pearson Education, Inc., 5th Edition, 2003.
7. J. Kmenta, *Elements of Econometrics*, Indian Reprint, Khosla Publishing House, 2nd Edition, 2008.

MS7167D ECONOMETRICS

Pre-requisites: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Introduction to Econometrics, methodology, the classical linear regression models simple linear and multiple linear-estimation and properties of estimates. Functional forms of Regression models. Econometric problems- Autocorrelation, Heteroscedasticity, and Multicollinearity, Dummy Variables, Simultaneous Equation Models-estimation, and the problem of identification.

MS7168D E-COMMERCE

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Explain the business model and product/services offered
- CO2: Select a process on the value chain and examine its digital transformation
- CO3: Understand the process of B2B Ecommerce and supply chain
- CO4: Develop a framework for Ecommerce security and payment

Module 1: (13 hours)

Electronic commerce (e-commerce): Introduction and origin, Critical success factors of e-commerce, Value chains and electronic commerce opportunities, Categories of e-commerce, Advantages and disadvantages of e-commerce, Growth of e-commerce in India.

Business Models and Strategic Analysis; E-commerce Business Models and Concepts; E-commerce infrastructure; Web page request and delivery protocols, e-mail protocols, Markup languages, Different connection options to the internet.

Module 2: (13 hours)

E-marketing; Revenue models (Example; Web catalogue, Digital content, Advertising supported, Advertising subscription mixed, Fee based), Marketing on the web and trust, Complexity and media choice, Communicating with different market segments, Customer relationship intensity and the customer relationship life cycle, Using advertising on the web, E-mail marketing, Technology-enabled customer relationship management, Creating and maintaining brands on the Web, Search engine positioning and domain name selection. E-commerce Policies and IPR; E-service; B2B E-commerce and Supply Chain

Module 3: (13 hours)

E-commerce security and payment: Elements of a security policy, Security protocols at client computers, Symmetric and asymmetric key cryptography, Secure electronic transactions, Payment systems for electronic commerce, Different methods of online payment, Payment gateways, Legal environment of electronic commerce, Click-wrap and Web-wrap contract acceptances, Use and protection of Intellectual property in online business, Online crime, Privacy rights and obligations, Salient features of Indian law, Case laws.

References:

1. K. C. Laudon, Carol Guercio Traver, *E-commerce: Business, Technology, Society*, Prentice Hall, 4th ed., 2008
2. B. Bharat., *Electronic Commerce: Framework, Technologies and Applications*, McGraw-Hill, New Delhi, 2013.
3. C. Dave, *E-business and E-commerce Management: Strategy, Implementation and Practice*, New Delhi, Pearson, 2013.
4. K.C Laudon, and C.G. Traver, *E-commerce: Business, Technology, Society 2012*, 7th ed. Prentice Hall, 2012.
5. A. Meier, and H. Stormer, *E Business and ECommerce: Managing the Digital Value Chain*, Springer, Germany, 2009.
6. G.P. Schneider, *Electronic Commerce*, Cengage, USA, 2011.
7. E. Turban, D. King, J. Lee, and Liang, Teng-Peng, *Electronic Commerce: Managerial and Social Networks Perspectives*, Pearson, USA. 2011.

MS7168D E-COMMERCE

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Electronic commerce (e-commerce) - Value chains and electronic commerce opportunities - Technology infrastructure for e-commerce - Business Models and Strategic Analysis - E-commerce Business Models and Concepts - E-marketing - Revenue models- Marketing on the web and trust - Customer relationship intensity and the customer relationship life cycle - Using advertising on the web- E-commerce Policies and IPR; E-service - B2B E-commerce and Supply Chain - E-commerce security and payment.

ME6111D MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE

Pre-requisites: ME6102D or equivalent

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Illustrate the basic concepts and techniques of Machine Learning and Artificial Intelligence.
CO2: Comprehend the complexity of Machine Learning algorithms and modern notions in data analysis oriented computing
CO3: Perform the techniques of well-known supervised and unsupervised learning algorithms.
CO4: Apply machine learning algorithms for solving practical problems.

Module 1: (14 hours)

Relation between Machine Learning and Statistics. Introduction to Algorithms in Machine Learning – Classification, Supervised machine learning – linear regression, Multiple linear regression, Logistic regression – Model representation, Discriminant Analysis, Classification Trees, Support Vector Machine.

Module 2: (11 hours)

Introduction to unsupervised learning - Clustering – types of clustering, Dimensionality Reduction, Principal Component Analysis algorithm, Factor analysis.

Module 3: (14 hours)

Era of Intelligent Systems - The Fourth Industrial Revolution Impact, The Technology of the Fourth Industrial Revolution, Introduction to Artificial Intelligence and Cognition. Application of artificial intelligence (AI) techniques: Meta-heuristics: Genetic Algorithm, Scatter Search, Tabu Search, Particle Swarm Intelligence, Ant Colony Optimization; Artificial Neural Networks; Fuzzy Logic Systems; Case based reasoning.

References

1. J.F. Hair, W.C. Black, B. J. Babin, and R.E. Anderson, *Multivariate Data Analysis*. 7thEdn. Pearson New International, 2015.
2. T. Hastie, R. Tibshirani, J. Friedman, *The elements of statistical learning*. 2nd Edn. New York: Springer, 2017.
3. E. Rich, K. Knight, S. B. Nair, *Multivariate Data Analysis*. 3rd Edn. Pearson New International, 2012.
4. M. Gardener, *Beginning R: The statistical programming language*. Wiley India Publication, 2012.
5. R.A. Johnson, and D.W. Wichern, *Applied Multivariate Statistical Analysis*. 6thEdn. Pearson New International, 2015.
6. J.S. Hurwitz, M. Kaufman, and A. Bowles, *Cognitive Computing and Big Data Analytics*, Wiley 2005.
7. M. Skilton, and F. Hovsepian, *The 4th Industrial Revolution*, Palgrave Macmillan, 2017.

ME6111D MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE

Pre-requisites: ME6102D or equivalent

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Relation between Machine Learning and Statistics. Introduction to Algorithms in Machine Learning, Supervised machine learning – linear regression, Multiple linear regression, Logistic regression, Discriminant Analysis, Classification Trees. Introduction to unsupervised learning – Clustering, Dimensionality Reduction, Principal Component Analysis (PCA) algorithm, Factor analysis. Era of Intelligent Systems - The Fourth Industrial Revolution Impact, Introduction to Artificial Intelligence and Cognition. Application of artificial intelligence (AI) techniques, Meta-heuristics, Artificial Neural Networks, Fuzzy Logic Systems, Case based reasoning.

ME6135D SYSTEM MODELLING AND SIMULATION

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1: Explain the system concept and the characteristics, keywords, phrases, and concepts of system simulation.
- CO2: Apply simulation approach to model static and dynamic systems, and illustrate the principles of experimental simulation design and inferential procedure.
- CO3: Examine the underlying assumptions to validate simulation models and evaluate the performance of real-world systems by analysing the output of the model under various conditions.
- CO4: Apply simulation methods for solving different types of real-life problems in manufacturing/service industries utilizing appropriate software tools and develop insightful reports.

Module 1: (14 hours)

System Concept: Systems and system environment, Types of system study, System modelling - Types of models; System Simulation - Technique of simulation, Comparison of simulation and analytical methods, Types of system simulation, Steps in simulation study; Monte Carlo simulation: Examples of Simulation modelling and analysis of queueing systems and inventory systems; Concepts in Discrete Event Simulation: Event scheduling/Time advance algorithm, Modelling world views; Simulation programming: Comparison and selection of simulation languages;

Module 2: (13Hours)

Random Number Generation: Linear congruential method, Tests for random numbers; Random variate generation: Inverse transformation technique, Convolution method, Acceptance-rejection technique.

Input Modelling for Simulation: Data collection, Identify the distribution of the data, Parameter estimation, Goodness of fit tests.

Verification and Validation of Simulation Models: Verification, calibration and validation of models.

Output Analysis for a Single Model: Measures of performance and their estimation, Optimal number of replications.

Module 3: (12 hours)

Output analysis for terminating simulations and steady state simulations.

Metamodelling: Regression models, simulation-optimization.

Simulation modelling and analysis of typical manufacturing systems, Supply chains, Healthcare systems, PERT networks.

References:

1. J. Banks, J. S. Carson, B. L. Nelson and D. M. Nicol, *Discrete-Event System Simulation*, 3rd ed. Pearson Education, Dorling Kindersley (India) Pvt. Ltd., 2014.
2. N. Deo, *System Simulation with Digital Computer*, Prentice Hall of India, 1997.
3. A. M. Law, *Simulation Modelling and Analysis*, 4th ed. McGraw-Hill Education, 2017.
4. M. D. Rossetti, *Simulation Modelling and ARENA*, 2nd ed. Wiley-Blackwell, 2015.
5. S. Robinson, *Simulation: The Practice of Model Development and Use*, John Wiley & Sons Ltd., England, 2004.

ME6135 SYSTEM MODELLING AND SIMULATION

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Systems and system environment, System Simulation, Monte Carlo simulation, Discrete Event Simulation, Comparison and selection of simulation software, Random number generation, Random variate generation, Input modelling for simulation, Verification and validation of Simulation Models, Output analysis for a single model, Output analysis for terminating simulations and steady state simulations, Metamodelling, Simulation-optimization, Simulation modelling and analysis of typical manufacturing systems, Supply chains, Healthcare systems, PERT networks.

MS7171D CONSTITUTIONAL LAW OF INDIA AND HUMAN RIGHTS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

- CO1. Understand the structure of the Indian Constitution, its quasi-federal set up, the Directive Principles of the State policy, fundamental rights assured by the Constitution.
- CO2. Demonstrate knowledge on the constitutional rights, duties, ethics and human rights to apply it for their professional requirements.
- CO3. Understand the dimensions of the Indian Constitution and the basic human rights to be maintained in the workplace environment.
- CO4. Understand the duties and professional ethics as the citizens of India and the dimensions of human rights.

Module 1: (14 hours)

The concept of Constitutionalism: The evolution of the concept and the movement of Constitutionalism- the contribution of American Constitutional system and English Common Law System to the concept of constitutionalism, the meaning and the stability of the Constitution, the sources and kinds of the Constitution, the position of Indian constitution in the conspectus of the Indian legal system, Indian Constitutional Assembly: Indian Federalism: Constitutional Scheme of Distribution of Powers between the Union and the States: The subject wise division of legislative powers- Emergency- the Amendment of the Constitution- power of the Parliament to amend the Constitution, the Executive- the Constitutional position of President and Governor- powers- the parliamentary privileges- the Judiciary- the State and Central Judiciary- the Special Status of Jammu & Kashmir- Freedom of Trade and Commerce in India.

Module 2: (12 hours)

Fundamental Rights: Different Perspectives: The nature and constitutional scheme of the Fundamental Rights-The Constitutional scheme of Fundamental Rights-Fundamental rights and the preamble- The Right to Equality- The right to formal equality- the doctrine of equality and the concept of anti-arbitrariness- the doctrine of substantive equality(Art: 15,16, 38, 46, 335, 336, 338, 340-342), the Doctrine of positive discrimination- the Right to freedom (Art: 19-30)- the Directive Principles.

Module 3: (13 hours)

Understanding Human Rights, Evolution of human rights, *Magna Carta*, The brief history of Human Rights- International and national perspectives b) Provision of the charters of the United Nations c) Universal Declaration of Human Rights- Significance-Preamble d) Civil and Political Rights-(Art. 1-21) e) Economic, Social and Cultural Rights-(Art.22-28) f) Duties and Limitations-(Art. 29) g) Final Provision (Art. 30). Human Rights and Women's Rights –International and National Standards b) Human Rights of Children-International and National Standards, Special Provision for SC & ST, Special Provision for Women, Children & Backward Classes, Emergency Provisions. The need for Professional Ethics, The scope and aims of Professional ethics, Medical ethics, Engineering ethics, Management ethics; Global standards and practices.

References:

1. G. Austin, *The Constitution of India: Cornerstone of a Nation*, Oxford Publication, 1999.
2. G. Austin, *Working a Democratic Constitution: Indian Experience*, Oxford Publication, 1999.
3. M. Khosla, *Oxford Short Introduction to Indian Constitution*, Oxford Publication, 2012.
4. S. C. Kashyap, *On Indian Constitution*, National Book Trust, Reprint 2013.
5. C. P. Patterson, *The Evolution of Constitution*, pp.427-457, 1948.
6. A. K. Rai, *The Concept of State and Fundamental Rights*, 1996.

MS7171D CONSTITUTIONAL LAW OF INDIA AND HUMAN RIGHTS

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Concept of Constitutionalism-constitutional rights and duties, sources and kinds of constitution, fundamental right, Directive Principles, Indian Federalism, Legislative powers, Emergency- Judiciary-Legislature-Executive, Human Rights-Evolution, *Magna-carta* United Nations-Universal Declaration-Women's Rights-Special Provision. Professional ethics, Medical ethics, Engineering ethics, Management ethics.

MS7172D GLOBALISATION AND CULTURE

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Course Outcomes:

CO1: Develop ability to outline different viewpoints on globalization

CO2: Evaluate the impact of globalisation on culture worldwide and understand its problems and prospects for community development.

CO3: Analyse the influence of globalisation on community, poverty, ethnicity, gender, race, and politics.

CO4: Formulate a vocabulary, imagery and analysis of culture in relationship to globalisation.

Module 1: (13 hours)

Globalisation: The historical and social context, Distinctive characteristics and dimensions: Economic, technological, social and cultural. Globalisation: a contested concept-Debate on positives and negatives of globalisation. Global capitalism: Capital, power, and transnationalism.

Module 2: (13 hours)

Culture: Examination of the concepts-Attitudes; beliefs; values; aesthetics; dietary preferences; language and communication. High and low context cultures- Hofstadter's Cultural Typology-The Self - Reference Criterion and Perception. Diffusion Theory.

Cultures in Motion: Culture, Connectivity, and Globalization. Cultural globalizations -Global culture and cultural Flows-Cultural Differentialism, Hybridization, Convergence, Imperialism, World Culture, McDonaldization

Module 3: (13 hours)

The Ethos of globalization (Individualism, Freedom, Consumerism, Inequality and Power redistributions). Migration, Urbanisation, and Environmental dimensions of cultural globalisation. The impact of globalisation on poverty, gender, sexual identities, community and politics with special attention to India. Future of Globalisation.

References:

1. M. Steger, *Globalization: A Very Short Introduction*, Oxford University Press, 2013.
2. J. Garten, *From Silk to Silicon: The Story of Globalization through Ten Extraordinary Lives*, Harper Collins, 2016.
3. T. L. Friedman, *The World Is Flat 3.0: A Brief History of the Twenty-first Century*, 3rd ed. Picador, 2007.
4. T. Brown and B. Katz, *Change by Design*, Harper Business, 2009.
5. G. Ritzer, and P. Dean, *Globalization: A Basic Text*, John Wiley and Sons, 2015.

MS7172D GLOBALISATION AND CULTURE

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

Brief Syllabus:

Historic and social context of globalization –Distinctive characteristics and dimensions of globalization- Debate on globalization- understanding cultural globalizations-national cultural typology- Ethos of globalization- The impact of globalisation on poverty, gender, sexual identities, community and politics with special attention to India.

MS7173D ENTREPRENEURSHIP AND NEW VENTURE CREATION

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total hours: 39

CO1: Acquaint with starting new ventures and introducing new product and service ideas.

CO2: Investigate and internalize the process of founding a startup.

CO3: Develop bootstrap and guerilla tactics to gather resources.

CO4: Enable the creation of venture capitalists, consultants to new firms or in new business development units of larger corporates.

Module 1: (15 hours)

The Early Career Dilemmas of an Entrepreneur: Discover ourselves, The Entrepreneur's Role, Task and Personality, A Typology of Entrepreneurs: Defining Survival and Success, Entrepreneurship as a Style of Management, The Entrepreneurial Venture and the Entrepreneurial Organisation, Identify Problems Worth Solving, Customer Identification, Choosing a Direction Opportunity recognition and entry strategies: Business model identification, validation, New product, Franchising, Partial Momentum, Sponsorship and Acquisition, The Strategic Window of Opportunity: Scanning, Positioning and Analysing, Intellectual Property: Creation and Protection

Module 2: (14 hours)

Opening the Window: Gaining Commitment, Gathering the Resources you don't have, The Business Plan as an Entrepreneurial Tool, Financial Projections: how to do them the right way, Debt, Venture Capital and other forms of Financing, Sources of External Support, Developing Entrepreneurial Marketing: Competencies, Networks and Frameworks, Closing the Window: Sustaining Competitiveness, Maintaining Competitive Advantage, The Changing Role of the Entrepreneur: Mid-Career Dilemmas, Harvesting Strategies versus Go for Growth

Module 3: (10 hours)

Characteristics and special needs, Business/project planning, Business Plan preparation, Implementation Process, Planning support systems (enterprise operation), Legal Issues (licensing, patents, contracts etc.)

References:

1. S. S. Khanka, *Entrepreneurial Development*, S.Chand &Co. 2006.
2. G. Kawasaki, L. Filby, *The Art of the Start 2.0: The Time-Tested, Battle-Hardened Guide for Anyone Starting Anything*, Penguin, 2015.
3. R. Bansal, *Connect the Dots*, Westland, 2011.
4. S. Blank and B. Dorf, *Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company*, K&S Ranch Publishing, 2012.
5. E. Ries, *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*, Crown Business, 2011.
6. B. R. Barringer and D. Ireland, *Entrepreneurship*, Prentice Hall, 2009.

MS7173D ENTREPRENEURSHIP AND NEW VENTURE CREATION

Pre-requisite: Nil

L	T	P	C
3	0	0	3

Total Hours: 39

Brief Syllabus:

The Early Career Dilemmas of an Entrepreneur, The Entrepreneur's Role, Task and Personality, A Typology of Entrepreneurs, The Entrepreneurial Venture and the Entrepreneurial Organization, Business model identification, The Strategic Window of Opportunity, Opening the Window, Financial Projections, Developing Entrepreneurial Marketing, Closing the Window, The Changing Role of the Entrepreneur, Characteristics and Special Needs, Business/project Planning, Business Plan preparation, Implementation Process, Planning Support Systems.