**JAIN UNIVERSITY**

**Academic Year-2014-16**

**Master of Management Studies (MMS) - BA/BL**

**Duration of the Course: 2 Years Full-time (4 semesters)**

**Specialisations:**

* **Business Analytics**

**OR**

* **Business Leadership**

**Course Objective**

**Specialisation: BUSINESS ANALYTICS**

Most industry sectors have recognized the value that Business Analytics can provide in not only driving compelling Business Solutions, but also in helping them to differentiate themselves to customers, investors and regulators. The global Business Analytics is a USD 105 billion market, growing at a CAGR of 8%. India, with its surfeit of talent, has become the Analytics hub for organizations across the world. Large corporate like Walmart, Target, Citibank, ICICI Bank, Airtel, Vodafone are increasingly adopting analytics in their processes. Consulting giants like PwC, IBM, Accenture, Infosys have large teams offering Analytics solutions to their clients. All of these translate into a huge global and domestic demand for Business Analytics professionals.

**Curriculum:**

The curriculum is designed to expose students to facets of Management – Marketing, Finance and HR with strong skills in Business Analytics**.**

**Course Objective**

**Specialisation: BUSINESS LEADERSHIP**

All managers are leaders.  All leaders are managers.  Which of these statements is true? The words are often confused. This course will distinguish between managers and leaders, and it will provide students with the resources to be both a competent manager and a good leader. It is believed the highest position in an organization is given to one who knows the most about the business, but in reality these positions are reserved for leaders whose leadership skills transcend business acumen. This course will help students in developing their business and leadership skills. Upon successful completion of the course, the student may not be a leader, but will certainly have a better understanding of the qualities of management and leadership.

**Curriculum:**

The curriculum is designed to expose students to facets of Management – Marketing, Finance and HR with a leadership perspective**.**

**Semester III**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject** | **Credits** | | | **Total Marks** | | | **Total Marks** |
| **T** | **P** | **Total** | **IA** | **CA** | **UE** |
| MMSS301 | Sales and Advertising Management | 3 |  | 3 | 30 |  | 70 | 100 |
| MMSS302 | Consumer Behavior and CRM | 3 |  | 3 | 30 |  | 70 | 100 |
| MMSS303 | Indian Economic Environment | 3 |  | 3 | 30 |  | 70 | 100 |
| MMSS304 | Business Process Engineering | 3 |  | 3 | 30 |  | 70 | 100 |
| MMSS305 | Specialisation 1.7/2.7 | 3 | - | 3 | 30 | - | 70 | 100 |
| MMSS306 | Specialisation 1.8/2.8 | 3 | - | 3 | 30 | - | 70 | 100 |
| MMSS307 | Specialisation 1.9/2.9 | 2 | 1 | 3 | 20 | 30 | 50 | 100 |
| MMSS308 | Specialisation 1.10/2.10 | 2 | 1 | 3 | 20 | 30 | 50 | 100 |
| MMSS309 | Specialisation 1.11/2.11 | 2 | 1 | 3 | 20 | 30 | 50 | 100 |
| MMSS310 | Specialisation 1.12/2.12 | 3 | - | 3 | 30 | - | 70 | 100 |
| MMSSP1 | Project I | - | - | 3 | 30 | - | 50 **(P)**  20 **(V)** | 100 |
|  | **TOTAL** | **-** | **-** | **33** | **-** | **-** | **-** | **1100** |

For Theory 1 credit = 10 learning hours; For Practical 1 credit = 30 learning hours

T = Theory; P = Practical; CA = Continuous Assessment; (P) = Project; (V) = Viva Voce

**Specialisations**

|  |  |  |  |
| --- | --- | --- | --- |
| **Specialisation 1 - Business Analytics** | | **Specialisation 2- Business Leadership** | |
| Specialisation 1.7 | Banking and Financial Services | Specialisation 2.7 | Marketing Communication and Brand Management |
| Specialisation 1.8 | Data Mining for Business Analytics | Specialisation 2.8 | Business Innovation and Strategy |
| Specialisation 1.9 | Multivariate Data Analysis – 1 | Specialisation 2.9 | Business Analytics and Intelligence |
| Specialisation 1.10 | Advanced Analytics – 1 | Specialisation 2.10 | Investment Analysis and Portfolio Management |
| Specialisation 1.11 | Predictive Modeling using SAS | Specialisation 2.11 | International Finance |
| Specialisation 1.12 | Data Visualization | Specialisation 2.12 | International HRM |

**Semester IV**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject Code** | **Subject** | **Credits** | | | **Total Marks** | | | **Total Marks** |
| **T** | **P** | **Total** | **IA** | **CA** | **UE** |
| MMSS401 | International Marketing | 3 | - | 3 | 30 | - | 70 | 100 |
| MMSS402 | Corporate Governance and Business Ethics | 3 | - | 3 | 30 | - | 70 | 100 |
| MMSS403 | Financial Modeling | 3 | - | 3 | 30 | - | 70 | 100 |
| MMSS404 | Specialisation 1.13/2.13 | 3 | - | 3 | 30 | - | 70 | 100 |
| MMSS405 | Specialisation 1.14/2.14 | 3 | - | 3 | 30 | - | 70 | 100 |
| MMSS406 | Specialisation 1.15/2.15 | 3 | - | 3 | 30 | - | 70 | 100 |
| MMSS407 | Specialisation 1.16/2.16 | 2 | 1 | 3 | 20 | 30 | 50 | 100 |
| MMSS408 | Specialisation 1.17/2.17 | 2 | 1 | 3 | 20 | 30 | 50 | 100 |
| MMSS409 | Specialisation 1.18/2.18 | 3 | - | 3 | 30 | - | 70 | 100 |
| MMSSP2 | Project II | - | - | 6 | 60 | - | 100 **(P)**  40 **(V)** | 200 |
|  | **TOTAL** | **-** | **-** | **33** | **-** | **-** | **-** | **1100** |

|  |  |
| --- | --- |
| **Grand Total** | **Credits 120** |

For Theory 1 credit = 10 learning hours; For Practical 1 credit = 30 learning hours

T = Theory; P = Practical; CA = Continuous Assessment; (P) = Project; (V) = Viva Voce

**Specialisations**

|  |  |  |  |
| --- | --- | --- | --- |
| **Specialisation 1 - Business Analytics** | | **Specialisation 2 - Business Leadership** | |
| Specialisation 1.13 | Data Analysis and Business Modeling | Specialisation 2.13 | Wealth Management and Financial Planning |
| Specialisation 1.14 | Big Data Analytics | Specialisation 2.14 | Training and Development |
| Specialisation 1.15 | Business Intelligence | Specialisation 2.15 | Strategic Leadership and Change Management |
| Specialisation 1.16 | Multivariate Data Analysis – 2 | Specialisation 2.16 | Project and Program Management |
| Specialisation 1.17 | Advanced Analytics-2 | Specialisation 2.17 | Performance Management and Competency Mapping |
| Specialisation 1.18 | Analytics with R | Specialisation 2.18 | Organizational Change and Development |

**Semester III**

**MMSS301: Sales and Advertising Management**

Learning hours: 30

Credits: 3

**Objectives:**

* To expose students to the principles and practices of advertising and sales promotion and develop the conceptual abilities in this functional area of marketing.
* To develop the skills of the students, which will help them to prepare effectively for a career in the advertising and sales promotion function of any company or in the advertising agency.

**Unit 1 8 hours**

**Advertising in a Developing Economy**

Changing concept, role of advertising in a developing economy, a critical appraisal, types of advertisement consumer, industrial, institutional, retail, trade and professional, advertisement in marketing mix.

Advertising department and advertisement manager, objectives and functions - Role of advertisement agencies functioning of advertisement agencies. Advertising agency skills and service, client agency relationship.

**Unit 2 6 hours**

**Advertising and Media**

Characteristics, media selection, optimizing and non optimizing approaches, media scheduling, media research- Sources of themes: Adapting presentation to medium campaign, USP, brand image, positioning, purchase proposition and creative interpretation, insertions, contract

Types, determining optimal expenditure, decision models, sales response and decay, communication, state, competitive share.

**Unit 3 6 hours**

**Different Types of Advertisements**

Message development – Different types of advertisements – Layout – Design appeal – Copy structure – Advertisement production – Print – Radio. T.V. and Web advertisements – Media Research – Testing validity and Reliability of ads – Measuring impact of advertisements – case studies.

**Unit 4 6 hours**

**Publicity**

Definition, role, types, consumer sales promotion, dealer display contests, discounts, bonus offers, retail merchandising techniques. Publicity: Public relations campaign, use of press, radio and TV, opinion building, customer service and community service.

**Unit 5 4 hours**

**Sales Promotion**

Sales promotion – Requirement identification – Designing of sales promotion campaign – Involvement of salesmen and dealers – Out sourcing sales promotion national and international promotion strategies – Integrated promotion – Coordination within the various promotion techniques – Online sales promotions- case studies.

**Reference Books:**

1. Wells, Moriarty & Burnett, Advertising, Principles & Practice, Pearson Education 7th Edition, 2007.
2. Kenneth Clow. Donald Baack, Integrated Advertisements, Promotion and Marketing communication, Prentice Hall of India, New Delhi, 2003.
3. S. H. H. Kazmi and Satish K Batra, Advertising & Sales Promotion, Excel Books, New Delhi, 2001.
4. George E Belch and Michael A Belch, Advertising & Promotion, McGraw Hill, Singapore, 1998
5. Julian Cummings, Sales Promotion, Kogan Page, London 1998.
6. George E. Belch and Michael, Advertising and Promotion, McGraw Hill, 2003.
7. Jaishri Jethwaney, Advertising Management Oxford, 2008.
8. Spiro, Stanton & Rich: Management of Sales Force, TMH, 2009
9. Batra : Advertising Management 5/e Pearson Education, 2003
10. Jobber: Selling and Sales Management 6/e Pearson Education
11. Roderick White, Advertising, Tata McGraw Hill, New Delhi
12. Kuegler Jr. Web Advertising and Marketing, Prentice Hall of India (P) Ltd, New Delhi.

**MMSS302: Consumer Behaviour and CRM**

Learning hours: 30

Credits: 3

**Objectives:**

Objective of this course on Consumer Behaviour and Customer Loyalty is to present a comprehensive coverage of the subject with examples from the Indian Scenario. This course also challenges students to understand the complexities of consumer needs and perceptions and translate them into effective Marketing Strategies. The course will be focusing on real life case-studies from Indian environment.

**Unit 1 6 hours**

**Overview of Consumer Behaviour**

Understanding Consumer Behaviour- Meaning and Concept of Consumer and Customer, Consumer Learning, Different Models in Consumer Behaviour, Consumer Decision making process-Concept of Consumer Decision; Levels of Consumer Decision Making; Consumer Decision Making Model, Changing Indian Consumer Behaviour-Drivers of Change; Changing Consumer Trends; Rural Consumer Behaviour; New Consumption Patterns, Organizational Buying Behaviour.

**Unit 2                      6 hours**

**Factors Influencing Consumer Buying Decision**

Influence of Culture on Consumer Behaviour-Concept of Culture; The measurement of Culture; Indian Core Values; Cultural aspects of emerging markets, Values, Lifestyles, and Psychographics- Impact of Values, Lifestyles and Psychographics on buying behaviour; Demographics, Lifestyles and Psychographics; Values and Value Systems, Group Influence on Consumption- Role of reference groups; Effect of reference groups on consumer decision making; Celebrity endorsements.

**Unit 3          6 hours**

**Customer Loyalty Comprehension**

Meaning and definition of customer loyalty, Significance of Customer Loyalty, Customer Loyalty Ladder, Loyalty Principles, Benefits of Customer Loyalty, Customer Loyalty and its relationship with customer satisfaction, Customer retention and Brand Loyalty, Factors affecting customer loyalty formation, Rai Srivastava model of customer loyalty formation, Drivers of Customer Loyalty.

**Unit 4      6 hours**

**Customer Loyalty Outcomes**

Characteristic Features of Behavioural Loyalty, Attitudinal Loyalty and Cognitive Loyalty, Role of Customer Loyalty outcomes in business decisions, Significance of Customer Loyalty for Marketers, Relationship Influencers of Customer Loyalty including factors mediating customer loyalty relationship with other relationship influencers, Customer Affinity, Customer Engagement.

**Unit 5            6 hours**

**Customer Loyalty Measurement and Application**

Measuring Customer Loyalty, Customer Loyalty measurement models and scales, Influence of Service Quality on Customer Loyalty, Customer Loyalty in Retail Industry, Customer Loyalty in Banking and Insurance Industry, Customer Loyalty Application in Aviation Industry.

**Reference Books:**

1. Hawkins, Best, Coney: Consumer Behaviour Building Marketing Strategy, Tata McGraw Hill.
2. H.Peer Mohammed: Customer Relationship Management, Vikas.
3. Panwar, J.S. Beyond Consumer Marketing, Sage Response Books, New Delhi.
4. Mukesh Chaturvedi and Abhinav Chaturvedi: Customer Relationship Management An Indian Perspective. Excel Books.
5. Deon – Buyer Behaviour, Oxford University Press.

**MMSS303: Indian Economic Environment**

Learning hours: 30

Credits: 3

**Objectives:**

This subject aims at giving students a reasonable introduction to Indian economy. The course will concentrate on both the achievements and the issues of the economy.

**Unit 1 10 hours**

**Introduction to Indian Economy**

Basic Features of Indian Economy, Indian Economy in World Economy. Economic Development and Human Development in India –An Analytical View, Selected Indicators of Economic Development and Human Development in India. Macro Economic Parameters and issues related to Balance of Trade, Balance of Payments, Fiscal Deficit, Infra–Structure etc.

**Unit 2 4 hours**

**National Income**

National Income in India: Method of National Income Estimates, Trends in the Composition and, Growth of National Income and Per Capital Income, Limitations of National Income Estimates, Trends, of Domestic Savings and Capital Formation, Problem of Mobilisation of Saving in India. Trends of, Domestic Consumption Pattern in Rural and Urban India. Trends in Investment in India.

**Unit 3 6 hours**

**Demography and Economy**

Demography and Economic Development : The Applicability of the theory of Demographic Transition, in India, Size and Growth Rate of Population, Emerging Demographic Trends and Issues, Urbanisation, and Economic Growth, Increase in Population-Speed barrier of Economic Development. Population, Policy and Family Welfare Strategies and Population Projections., Critical Analysis of New Agriculture Strategy ; Agriculture And WTO, Issues related to Agriculture, Reforms in India. Rural Indebtedness and Organization of Rural Credit.

**Unit 4 6 hours**

**Economic Planning**

Economic Planning in India : Socio –Economic objectives, strategy of development during different, plans, Models of development : Gandhian vs Nehruvian, Rao-Man mohan model, Review of Indian, planning. Role of planning in India in changed economic scenario., Important problems of Indian economy : The problem of poverty, unemployment, inequality and, disparities in the distribution of wealth and incomes, inflation and rising prices. Food security and, public distribution system in India.

**Unit 5 4 hours**

**Economic Development**

Industrial Development : Strategy of economic development, ownership pattern, structural, transformation, major drawbacks and problems of Industrial Development, Unorganized sector, Rural, and Small Scale Industries –role & importance ; progress and problems and remedial measures. New, industrial policy and industrial sickness in India. Privatisation and Disinvestment –Globalisation and, Swadeshi.

**Reference Books:**

1. Misra & Puri : Indian Economy (Himalaya Publishing House)
2. Dutta & Sundharam : Indian Economy
3. Dhingra, I.C. : Indian Economy
4. Laxminarayan Nathuramka: Indian Economy
5. Wadhwa Charanjeet: Indian Economy
6. Agrawal, A.N. : Indian Economy
7. Agrawal, Anupama : Indian Economy

**MMSS304: Business Process Engineering**

Learning hours: 30

Credits: 3

**Objectives:**

This course has been designed to develop an appreciation of process view of business and redesign thereof. The participants would be able to develop an understanding of the use of information technology for process redesign.

**Unit 1 6 hours**

**Business Process Re-engineering – An Introduction**

Introduction to BPR: Concept, Philosophy of BPR, Fundamental tenets of BPR, Benefits & pitfalls of BPR, myths of BPR and Drivers of BPR.

**Unit 2 6 hours**

**Reengineering Process**

Process reengineering framework: Opportunity assessment, planning the process re-engineering project. Organizing for process reengineering, Process analysis and design:

a) Process analysis

(b) Process design.

**Unit 3 6 hours**

**BPR Transition and Implementation**

Planning and implementing the transition: Planning the transition, implementing the transition, tracking and measuring process performance.

BPR implementation methodology, Success factors of BPR and Barriers to BPR. Risk and Impact measurement.

**Unit 4 6 hours**

**BPR Tools and Techniques**

Tools and techniques used in BPR: Case tools, Work flow systems, Imaging technology, Floware, Business design facility tools, and Change management tools. BPR in Manufacturing industry, BPR &ERP.

**Unit 5 6 hours**

**Change management**

Change management in BPR: Introduction, Nature, process of change, Management of Change in BPR. Strategic aspects of BPR.

**Reference Books:**

1. Carr. D K and Johansson, H. J. Best Practice in Re-engineering. New York, McGraw Hill, 1995
2. Champy, James Re-Engineering Management; The mandate for New Leadership London, Harper Collins 1995
3. Coulson-Thomas. C. Business Process Re-engineering: Myth and Reality. London, Kogan Page, 1994
4. Davenport, T.H. Process Innovation: Re-engineering Work Through Information Technology. Boston, Harvard Business school Press, 1993
5. Hammer, Michael, Re-engineering the Corporation: a Manifesto for Business Revolution. London, Nicholas Brealey, 1993
6. Jayaraman, M S. Business Process Re-engineering. New Delhi, Tata McGraw Hill, 1994
7. Peppard, J and Rowland P. the Essence of Business Process Reengineering. New York, Prentice Hall Inc., 1995

**SPECIALISATION: BUSINESS ANALYTICS**

**Specialization 1.7**

**MMSS305: Banking and Financial Services**

Learning hours: 30

Credits: 3

**Learning Objectives:**

At the end of this Subject, students will be able to familiarize with the banks, its evolution, importance of banks in day to day life, different types of services provided by bank, reasons - why banking is not a business, knowledge about monetary policy and also the current liquidity position in India, retail banking, KYC, credit card, growth of credit card industry, frauds of credit cards, Bancassurance, mutual funds, insurance.

**Unit 1**

**Introduction to Banking and Banking Activities 13 hours**

* Introduction to Banking and banking activities: Introduction, Definition of Banking, Evolution of Banking, Structure of banking system in India, Regulators of Banking.
* Evolution and Developments of Indian Banking: Introduction, Trends in Commercial Banks, Pre-Reform Era, History on Banking Sector Reforms, Nationalisation of Banks.
* Nature and Functions of Commercial Banks: Introduction, Primary Functions of Commercial Banks, Secondary Functions, Agency and General Utility Services provided by Modern Commercial Banks, RBI and its Role. Functions of RBI, Services of Banks in Modern Times, e-Banking.
* Current Monetary and Liquidity Position: Introduction, Definition of Monetary Policy, Current Monetary Position, Growth in Key Monetary Aggregates, Current Liquidity Position in India: Need for Credit Policy, components of Credit Policy, Credit Policy Pursued by the Govt. Credit Culture.

**Unit 2 Retail Banking 10 hours**

* Introduction to Retail Banking: Introduction, Structure of Retail Banking, Definition of Retail Banking, Retail Banking in India, Scope of Retail Banking in India.
* Retail Banking Business: Drivers of Retail Banking Businesses in India, The Treasury income of the banks, Role of the Government, Initiatives Taken by the Banks, Special Schemes, Advantages and Disadvantages of Retail Banking, Credit Growth in India.
* Current Issues of Retail Banking: Introduction, Issues/Challenges of Retail Banking in India Money Laundering Risks, Know Your Customer, Rural Orientation, Customer Service, Price Bundling, Retail Banking in the Post 2009 Period

**Unit 3**

**Merchant Banking and Investment Banking 9 hours**

Merchant Banking -Definition, origin of Merchant Banking, Merchant Banking in India, Investment Banking Services - Merchant Banking Services-Issue Management-Preissue and Post issue obligations, Functions of Lead managers, and SEBI regulations for merchant bankers.

**Unit 4**

**Introduction to Financial Services 18 hours**

* Meaning, Nature & Scope of Financial Services, Fund Based and Fees Based Services **,**Different Kind of Services Available in the Market. Security Trading and Depository Participant: Introduction, Stock Exchanges in India, Depository Services in India, Depository Services (Demat), Dematerialisation.
* Factoring, Leasing and Hire Purchase Services: Meaning, Concept and Evolution of Factoring; Functions of a Factor Types of Factoring Advantages of Factoring: Forfeiting – an overview. Meaning Concept and Agreement, Types of Leasing, Advantages and Disadvantages of Leasing, Financial Evaluation Related to Lease vs. Buy/borrow decisions, Legal Aspects of Leasing; Lease vs. Hire-Purchase. Problems on leasing and Hire purchase.
* Venture Capital Financing and Securitisation: Meaning, Concept of VCF, Features of VCF Features, Need, Stages of Financing, Exit routes, Role in the Development of Industry/Economy, Meaning and Features of Securitisation.
* Issues and Challenges in Financial Services.

**Unit 5**

**Credit Rating 9 hours**

* Credit Rating: Introduction – Concept of Credit rating – Meaning of Credit rating – Definition, Scope – need and Importance of credit rating in developing countries – Types of credit rating –Kinds of instruments rated – Credit rating symbols – Credit Rating advantages and disadvantages.
* Credit rating agencies in India – CRISIL, CARE, ICRA and Fitch India – Process of Credit Rating and Methodology by Indian credit rating agencies – services rendered by credit rating agencies –Solicited rating and unsolicited rating – Equity assessments vs Equity grading – rating methodology for Financial services, Manufacturing companies, Banks and financial companies, Mutual funds, Insurance companies and IPO grading – Registration and Regulation of Credit rating agencies.

**Reference Books:**

1. Gomez, Clifford. (2008). *Financial Markets, Institutions and Financial Services*. PHI Publications.
2. Bhole, L. M. (2009). *Financial Institution and Market* (5th ed.). McGraw Hill.
3. Sengar, Shailendra. (2010). *Banking, Insurance and Financial Services* (1st ed.). Anmol Publications Pvt Ltd.
4. Smith, Roy C. (2012). *Global Banking* (3rd ed.). New York: Oxford University Press.
5. Khan, M. Y. (2011). *Indian Financial System* (7th ed.). McGraw Hill Publishing.
6. Gurusamy, S. (2012). *Financial Services and System* (2nd ed.) McGraw Hill Publishing.
7. Gordon & Natarajan. (2011). *Financial Markets and Services* (7th ed.). Himalaya publishing.
8. Machiraju, H. R. (2010). *Merchant Banking: Principles and Practice*. New Age International.

**Specialization 1.8**

**MMSS306: Data Mining for Business Analytics**

Learning hours: 30

Credits: 3

**Objectives:**

At the end of this Subject, students will:

* familiarize with what the goals and objectives of data mining are and how to conduct a data mining project.
* have sound knowledge of popular classification techniques, such as decision trees, support vector machines and nearest-neighbor approaches.
* know the most important association analysis techniques.
* obtain practical experience in designing and implementing data mining algorithms.

**Unit 1**

**Introduction to Data Mining 6 hours**

Data Mining for Business Intelligence, Data Mining Goes to Hollywood!, Data Mining Concepts and Definitions, Definitions, Characteristics, and Benefits, How Data Mining Works, Data Mining Applications.

**Unit 2**

**Data Mining Process 6 hours**

Data Mining Process, Step 1: Business Understanding , Step 2: Data Understanding, Step 3: Data Preparation, Step 4: Modeling Building, Step 5: Testing and Evaluation, Step 6: Deployment, Other Data Mining Standardized Processes and Methodologies.

**Unit 3**

**Data Mining Methods 6 hours**

Data Mining Methods, Classification, Estimating the True Accuracy of Classification Models, Cluster Analysis for Data Mining.

**Unit 4**

**Artificial Neural Networks 6 hours**

Association Rule Mining, Artificial Neural Networks for Data Mining, Elements of ANN, Applications of ANN.

**Unit 5**

**Data Mining Software Tools 6 hours**

Data Mining Software Tools, Data Mining Myths and Blunders.

**Reference Books:**

1. Turban, Sharda Efraim; Ramesh, Dursun Delen and King, David. (2011). *Business Intelligence: A Managerial Approach*, 2nd Edition. Publisher: Prentice Hall.
2. Han, Jiawei and Kamber, Micheline. (2012). *Data Mining: Concepts and Techniques*, 3rd edition. Morgan Kaufman Publishers.
3. Tang, P.N., Steinback, M. and Kumar, V. (2006). *Introduction to Data Mining*. Addison Wesley.
4. Myatt, Glenn and Johnson, Wayne. (2009). *Making Sense of Data II.* John Wiley& Sons.
5. Rajaraman, Anand. (2011). *Mining of Massive Datasets.* New York: Cambridge University Press.

**Specialization 1.9**

**MMSS307: Multivariate Data Analysis – 1**

Learning hours: 20 Theory + 30 Lab

Credits: 3

**Objectives:**

By the end of the subject, students should be able to understand the theory behind the statistics, Select the appropriate methods in function of the research question, Apply those methods to their data, Interpret and report the results from the analysis, Develop critical thinking of statistics.

**Unit 1**

**Overview of Multivariate Statistics 4 hours**

What is Multivariate Analysis?, Multivariate Analysis in statistical terms, some basic concepts of Multivariate Analysis, a classification of Multivariate Techniques, types of Multivariate Techniques**,** Canonical Correlation, Guidelines for Multivariate Analyses and interpretation, a structured approach to Multivariate model building.

**Lab hours = 6 hours**

**Unit 2**

**Data Cleaning and Multivariate Techniques 4 hours**

Graphical examination of the Data, missing data, outliers, testing the assumptions of Multivariate Analysis, incorporating Nonmetric data with dummy variables, a managerial overview of the results.

**Lab hours = 6 hours**

**Unit 3**

**Factor Analysis 4 hours**

What is factor analysis, a hypothetical example of Factor Analysis, Factor Analysis decision process, an illustrative example, a managerial overview.

**Lab hours = 6 hours**

**Unit 4**

**Multiple Regression 4 hours**

What is Multiple regression analysis?, an example of simple and multiple regression analysis, a decision process for multiple regression analysis, Regression: Mediation & Moderation, a managerial overview.

**Lab hours = 6 hours**

**Unit 5**

**Multiple Discriminant Analysis and Logistic Regression 4 hours**

What are Discriminant Analysis and Logistic Regression?, analogy ith regression and MANOVA, hypothetical example of Discriminant Analysis, the decision process for Discriminant Analysis, logistic regression: regression with a Binary dependent variable, Dichotomous Dependent Variables, an illustrative example of logistic regression, a managerial overview.

**Lab hours = 6 hours**

**Reference Books:**

1. Hair, J. F. et al. (2006). *Multivariate Data Analysis*, 6th edition. NJ: Prentice Hall.
2. Aiken, L. S., & West, S. G. (1991). *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park, CA: Sage.
3. Menard, S. (2002). *Applied Logistic Regression Analysis*. Thousand Oaks, CA: Sage.
4. Tabachnick, B. and Fidell, L (2007). *Using Multivariate Statistics*, 5th edition. New York: Allyn & Bacon.
5. Cohen, J., & Cohen, P. (1983). *Applied Multiple Regression/Correlation Analysis for the Behavioural Sciences*, 2nd edition. Hillsdale, N.J.: Erlbaum.
6. Stevens, J. (1992). *Applied Multivariate Statistics for the Social Sciences*, 2nd edition. Hillsdale, N.J.: L. Erlbaum Associates.

**Specialization 1.10**

**MMSS308: Advanced Analytics – 1**

Learning hours: 20 Theory + 30 Lab

Credits: 3

**Objectives:**

By the end of the subject, students should be able to:

* Familiarize with Univariate and multivariate models of stationary and nonstationary time series in the time domain.
* Develop a comprehensive set of tools and techniques for analyzing various forms of univariate and multivariate time series, and for understanding the current literature in applied time series econometrics.
* Survey some of the current research topics in time series econometrics.

**Unit 1**

**Forecasting Time Series 4 hours**

Time Series Components: Irregular, Seasonal & Cyclic Variations & Trend of Time Series; Forecasting through Averaging and Exponential Smoothing; Holt’s model. Forecasting evaluation through MAD (Mean Absolute Deviation) & MSE (Mean Square Error).

**Lab hours = 6 hours**

**Unit 2**

**Financial Returns and Volatility Patterns 4 hours**

Introduction to financial time series: basic returns data characteristics, asymmetry and fat tails, historical volatility, volatility estimator used by RISKMETRICS model, high frequency volatility.

**Lab hours = 6 hours**

**Unit 3**

**Univariate Time Series Modelling and Forecasting 4 hours**

Autocorrelation, stationarity, identification of ARMA models, seasonality, tests of random walk (weak market efficiency), spurious regression, unit root tests, ARIMA models, parameter (in)stability.

**Lab hours = 6 hours**

**Unit 4**

**Multivariate Time Series Models, Modelling Long Run Relationships in Finance**

**4 hours**

Granger causality, Cointegration, VARs: estimation and testing, impulse response and variance decomposition, error-correction models: estimation and testing, relationship between international stock indices.

**Lab hours = 6 hours**

**Unit 5**

**Time Series Volatility ARCH/GARCH Models with Extensions 4 hours**

ARCH, GARCH, asymmetric GARCH and other extensions, options implied volatility versus GARCH, value at risk (VaR), downside risk (expected shortfall ES), credit risk.

**Lab hours = 6 hours**

**Reference Books:**

1. Hamilton, J. D. (1994). Time Series Analysis. Princeton University Press.
2. Enders, W. (2010). *Applied Econometric Time Series*. Hoboken, NJ: John Wiley & Sons.
3. Zivot, Eric and Jiahui (Jeffery). (2002). Modeling Financial Time Series with S-PLUS. Wang: Springer-Verlag.
4. Brooks, Chris. (2008). *Introductory Econometrics for Finance.* Cambridge University Press.

**Specialization 1.11**

**MMSS309: Predictive Modeling using SAS**

Learning hours: 20 Theory + 30 Lab

Credits: 3

**Objectives:**

By the end of the subject, students should be able to:

* familiarise with the concepts of a SAS Enterprise Miner project and explore data graphically.
* modify data for better analysis results.
* build and understand predictive models such as decision trees and regression models.
* compare and explain complex models.
* generate and use score code.
* apply association and sequence discovery to transaction data.
* use other modeling tools such as rule induction, gradient boosting and support vector machines.

**Unit 1**

**Introduction 4 hours**

Introduction to SAS Enterprise Miner, Accessing and Assaying Prepared Data: Creating a SAS Enterprise Miner project, library and diagram, Defining a data source, Exploring a data source.

**Lab hours = 6 hours**

**Unit 2**

**Introduction to Predictive Modeling with Decision Trees 4 hours**

Cultivating decision trees, Optimizing the complexity of decision trees, Understanding additional diagnostic tools.

**Lab hours = 6 hours**

**Unit 3**

**Introduction to Predictive Modeling with Neural Networks and Other Modeling Tools 4 hours**

Introduction to neural network models, Input selection, Stopped training, Other modeling tools.

**Lab hours = 6 hours**

**Unit 4**

**Model Assessment 4 hours**

Model fit statistics, Statistical graphics, Adjusting for separate sampling, Profit matrices, Model Implementation: Internally scored dataset, Score code modules.

Introduction to Pattern Discovery: Cluster analysis, Market basket analysis .

**Lab hours = 6 hours**

**Unit 5**

**Special Topics 4 hours**

Ensemble models, Variable selection, Categorical input consolidation, Surrogate models.

**Lab hours = 6 hours**

**Specialization 1.12**

**MMSS310: Data Visualization**

Learning hours: 30

Credits: 3

**Objectives:**

By the end of the subject, students should be able to:

* familiarise with scientific data manipulation, summarization and analysis.
* familiarise with common statistical tests and procedures
* understand more advanced statistical modeling approaches.
* understand meta-analysis & systematic reviews.
* understand best practices for organizing end-to-end scientific analyses.
* explain key scientific workflow concepts and their importance.
* apply data visualization for data inspection and error checking.
* familiarise with concepts of clear conveyance of results.
* familiarise with different strategies for illustrating trends and statistical results.
* differentiate between examples of poor and effective visualizations.

**Unit 1 6 hours**

Data representation: Strategies for illustrating trends and results. Sample data visualization exercise.

**Unit 2 6 hours**

Introduction to systematic reviews and meta-analyses. Use of data visualization in systematic reviews. Synthesis tools lab: systematic review and meta-analyses. Synthesis tools lab: systematic review and meta-analyses.

**Unit 3 6 hours**

Design fundamentals for data visualization. Review of data visualization software. Data visualization exercise. Presentation and discussion.

**Unit 4 6 hours**

Thinking like a statistical modeller. A survey of advanced statistical approaches. Advanced data manipulation and reformatting. Combining and splitting datasets. Continued activity on class assignment.

**Unit 5 6 hours**

Case study and discussion of planning an end-to-end analysis. Representation of class assignment as workflow. Develop script to re-run analysis from class assignment. Review/discuss workflow scripts. Discussion of emerging graphical workflow software applications. Presentation of analysis results for class assignment.

**Reference Books:**

1. Few, Stephen. (2009). N*ow You See It: Simple Visualization Techniques for Quantitative Analysis*. Analytic Press.
2. Dalgaard, Peter. (2008). *Introductory Statistics with R*, 2nd Edition. California: Springer.
3. Koricheva, J., Gurevitch, J. and Mengersen, K. (2013). *Handbook of Meta-analysis in Ecology and Evolution*.

**SPECIALISATION: BUSINESS LEADERSHIP**

**Specialisation 2.7**

**MMSS305: Marketing Communication and Brand Management**

Learning hours: 30

Credits: 3

**Objectives:**

* To provide a basic understanding of how and why marketers integrate the different types of communications
* Explain how effective creative strategies are developed and implemented.
* Provide an understanding of the key issues in building and maintaining brands and brand equity.
* Learn and apply key elements of crafting and driving brand strategy, evaluating strategic options,and exposure to Marketing’s role and accountabilities in brand and strategy decision-making.

**Unit 1 8 hours**

**Marketing Communication Campaigns**

Elements of IMC & Developing respective communication campaign. - Advertising – Classification of advertising, types, advertising appropriation advertising campaigns - Sales Promotion – Different types of Sales Promotion, relationshipbetween Sales promotion and advertising - Publicity – Types of Publicity, relationship between advertising and publicity - Personal Selling - Direct marketing and direct response methods - Event Management - E-Commerce - Corporate Communication - Public Relations – Types of PR - Media relations - Community relations - Industrial relations and - Government relations - Employee relations (House Journals / Newsletter) - Crisis Management - Trade Fairs and Exhibitions.

**Unit 2 6 hours**

**Communication Models**

Basic Communication Model, Traditional Communication Response Hierarchy Models, Consumer Involvement, The FCB Planning model, Kim Lord Model, Elaboration Likelihood Model.

Planning an advertising campaign - Setting the advertising objective, Sales vs Communication Objective, DAGMAR, Defining the target audience, Apportioning the advertising budget.

**Unit 3 6 hours**

**Creativity and Advertising**

Creative Strategy - Role of Creativity in Advertising, Research inputs to the creative process, Relevance of Brand Positioning & USP, Advertising appeals, Finding the Big Idea, Creative Execution themes -Demonstration, Testimonial etc, Creative Execution in Print Advertising, Creative Execution in TV Advertising.

**Unit 4 6 hours**

**Media Strategy**

Media Strategy - Types of media, Media characteristic, Using Indexes (Brand Development Index & Category Development Index) to determine where to promote, Establishing the Media Objective, Factors affecting Media Selection, Media Scheduling, Establishing Reach & Frequency objectives, Audience Measurement, Media selection and scheduling, Media Buying.

**Unit 5 4 hours**

**Categorization**

Categorization, Creating New Categories or Subcategories — Four Tasks, How Categorization Affects Information Processing and Attitudes, Empirical Evidence, Subway – Case Study, Making Competition Less Relevant, Effects of Wide Variety of Choice for Consumers, The Rules for Offering Choice, Cirque du Soleil – Case Study, Fuel-efficient Japanese cars – Case Study, Best Buy – Case Study, Toyota’s Prius Hybrid – Case Study.

**Reference Books:**

1. Advertising and Promotions; An IMC Perspective, Belch & Belch, McGraw Hill
2. Advertising and Promotions, An IMC Perspective, Shah & D’Souza, McGraw Hill
3. Advertising and Sales Promotion ,Kazmi and Batra, Excel Publishing
4. Integrated Advertising Promotion and Marketing Communications ,Clow and Baack, Prentice Hall
5. Advertising Management, Jethwaney& Jain, Oxford Publishing
6. Branding Concepts- Pati, Debashish
7. Brand Positioning Strategies for Competitive Advantage- Subroto Sengupta
8. The New Strategic Brand Management: Advanced Insights and Strategic Thinking - Kapferer, Jean-Noel
9. Brand Management Perspectives and Practices- Das, Naveen
10. Total Brand Management: An Introduction- Chaturvedi, B.M

**Specialisation 2.8**

**MMSS306: Business Innovation and Strategy**

Learning hours: 30

Credits: 3

**Objectives:**

To provide a framework for future managers and entrepreneurs to identify, access and manage business opportunities & strategies in either their own companies or in existing organizations.

**Unit 1 6 hours**

**Understanding Innovation**

Understanding Innovation: the need for innovation in the service, manufacturing, public and other sectors, Creating Customer-focused Ideas: understanding customers’ hidden needs through enhanced methods for market research, People and Organization: building a culture of innovation, Developing an Innovation Strategy, Boosting Innovation Performance.

**Unit 2 6 Hours**

**The Innovation Process**

Managing the innovation process, Different types of innovation and their implications for businesses, Strategic management of innovation, Business model innovation, Technologies for innovation, Innovation in a globalized and networked world, Innovation in Services, User-driven innovation and co-creation.

**Unit 3 6 hours**

**Environment Appraisal in Strategic Management**

Environmental Appraisal, Characteristics of Environment, Internal versus External Environment, Environmental Scanning, Factors Affecting Environment Appraisal, Structuring Environment Appraisal, Identifying the Environmental Factors, Tools and Techniques for Strategic Analysis, SWOT Analysis, Porter's Five Force Model, TOWS Matrix, General Electric 9 cell Model, BCG Analysis.

**Unit 4 6 hours**

**Strategy Formulation**

Strategy Formulation, Corporate-Level Strategies, Strategic Alternatives and Reasons for Adopting Them, Concentration Strategies, Integration Strategies, Diversification Strategies, Business-Level Strategies, Factors that Determine Choice of Competitive Strategy, Generic Business Strategies, Cost Leadership, Differentiation, Focus, Functional Strategies, Concept of Core Competencies, Production Strategy, Research and Development Strategy, Human Resource Strategy.

**Unit 5 6 hours**

**Strategy Implementation& Evaluation**

Evaluation and Control, Strategy Implementation, Structure and Strategy, Interaction between Structure and Strategy – A Case Study, Types of Organisational Structures, Stages of Development of Organisation, Structures for Strategies.

Strategy and Leadership, Organisational Values and Strategy, Resource Allocation – A Vital Part of Strategy

Strategic Evaluation and Control, Strategic Evaluation, Strategic Control, Operational Control, Process of Operational Evaluation, Evaluation Techniques for Operational Control, Strategic Control versus Operational Control.

**Reference Books**

1. Drucker, P. Innovation and Entrepreneurship, New York: Harper Business, 2006
2. Strategic Management, A South-Asian perspective, 9th edition, by Hitt, Ireland, Hoskisson, Manikutty, Cengage Learning India Pvt, 2011.
3. Strategic Management, Concepts & cases, by Fred R David, 13th edition, Prentice Hall
4. Strategic Management - Analysis, Implementation and Control, Vikas Publishing House; First edition, 2011
5. Contemporary Strategy Analysis, by R. M. Grant, 6th Edition, Blackwell Publishing, 2008.
6. Strategy and the Business Landscape, by Pankaj Ghemawat, 3rd Edition, Prentice Hall, 2009.

**Specialisation 2.9**

**MMSS307: Business Analytics and Intelligence**

Learning hours: 50

Credits: 3

**Learning Objectives:**

The objective of this subject is to provide foundational knowledge associated with the domain of business analytics, to familiarise the students with all concepts including what problems the technology of Data Warehouse (DW) /Business Intelligence (BI) /Advanced Analytics (AA) solve for businesses and when an organisation is ready for DW/BI/AA.

**Unit 1**

**IT and Business Analytics 12 hours**

Business View of Information Technology Applications, Business Enterprise Organization, Its Functions, and Core Business Processes, Baldrige Business Excellence Framework (Optional Reading) , Key Purpose of Using IT in Business, The Connected World: Characteristics of Internet-ready IT Applications, Enterprise Applications (ERP/CRM, etc.) and Bespoke IT Applications, Information Users and Their Requirements.

**Unit 2**

**Digital Data, OLTP and OLAP 12 hours**

Types of Digital Data, Getting to Know Structured Data, Getting to Know Unstructured Data, Getting to Know Semi-Structured Data, Difference Between Semi-Structured and Structured Data. Introduction to OLTP and OLAP, OLTP (On-Line Transaction Processing), OLAP (On-Line Analytical Processing), Different OLAP Architectures, OLTP and OLAP, Data Models for OLTP and OLAP, Role of OLAP Tools in the BI Architecture, Should OLAP be Performed Directly on Operational Databases?, A Peek into the OLAP Operations on Multidimensional Data, Leveraging ERP Data Using Analytics.

**Unit 3**

**Business Intelligence 12 hours**

Getting Started with Business Intelligence, Using Analytical Information for Decision Support, Information Sources Before Dawn of BI?, Business Intelligence (BI) Defined, Evolution of BI and Role of DSS, EIS, MIS, and Digital Dashboards, Need for BI at Virtually all Levels, BI for Past, Present, and Future, The BI Value Chain, Introduction to Business Analytics.BI Definitions and Concepts, BI Component Framework, Who is BI for?, BI Users, Business Intelligence Applications, BI roles and Responsibilities, popular BI tools.

**Unit 4**

**Data Integration and Modeling 12 hours**

Basics of Data Integration, Need for Data Warehouse, Definition of Data Warehouse, What is a Data Man?, What is Then an ODS?, Ralph Kimball's Approach vs. Who Inmon's Approach, Goals of a Data Warehouse, What Constitutes a Data Warehouse?, What is Data Integration?, Data Integration Technologies, Data Quality, Data Profiling. Multidimensional Data Modeling, Types of Data Model, Data Modeling Techniques, Fact Table, Dimension Table, Typical Dimensional Models, Dimensional Modeling Life Cycle.

**Unit 5**

**Performance Management and Enterprise Reporting 12 hours**

Understanding Measures and Performance Measurement System Terminology, Navigating a Business Enterprise, Role of Metrics, and Metrics Supply Chain "Fact based Decision Making" and KPIS , KPI Usage in Companies, Where Do Business Metrics and KPIS Come From, Connecting the Dots: Measures to Business Decisions. Basics of Enterprise Reporting, Reporting Perspectives Common to All Levels of Enterprise, Report Standardization and Presentation Practices, Enterprise Reporting Characteristics in OLAP World, Balanced Scorecard, Dashboards, How Do You Create Dashboards?, Scorecards vs. Dashboards, The Buzz Behind Analysis.

**Reference Books:**

1. Prasad, R. N., and Acharya, Seema. (2011). *Fundamentals of Business Analytics*, 1st Edition. New Delhi: Wiley India.
2. Shmueli, Galit, Patel, Nitin R. and Bruce, Peter C. (2011). *Data Mining for Business Intelligence*. New Delhi: Wiley-India.
3. Kimball, Ralph and Ross, Margy. (2011). *Practical Tools for Data Warehousing and Business Intelligence*, 2nd Edition. New Delhi: Wiley-India.
4. Biere, Mike. (2003*). Business Intelligence for the Enterprise*, First Edition. IBM Press.

**Specialisation 2.10**

**MMSS308: Investment Analysis and Portfolio Management**

Learning hours: 50

Credits: 3

**Learning Objectives:**

At the end of this subject, student will be able to familiarise with mathematical tools used in various company related analysis before buying & selling of securities, power of compounding and how long term wealth can be created through equities; to explain how a particular company is analyzed from the fundamental analysis perspective, debt-equity ratios, valuations, capital asset pricing model and how a portfolio is managed by various fund & portfolio managers.

**Unit 1 10 Hours**

**Investment Basics**

Investment Alternative: Non-marketable financial Assets, Money market instruments, bonds or debentures and equity shares. An overview of security market. An overview of macroeconomic and industry analysis.

**Unit 2 9 Hours**

**Risk and Return**

Return, Risk, measuring historical return, measuring historical risk, measuring expected (Ex Ante) return and risk.

**Unit 3 11 Hours**

**Portfolio Theory and CAPM**

Diversification of portfolio risk, portfolio return and risk, measurement of comovements in security returns, calculation of portfolio risk, efficient frontier. CAPM: inputs required for applying CAPM, empirical evidence on CAPM, Arbitrage pricing theory and multifactor models.

**Unit 4 11 Hours**

**Company Analysis**

Financial Analysis: Earning and Dividend Level- return on equity, the book value per share, the earning per share, the dividend payout ratio and the dividend per share; Growth Performance- Compound annual growth rate of sales, earnings per share and dividend per share, sustainable growth rate; Risk exposure – Beta and volatility of return on equity.

**Unit 5 9 Hours**

**Portfolio Revision and Evaluation**

Specification of investment objectives and constraints, selection of asset mix, formulation of portfolio strategy, selection of security, portfolio execution and portfolio evaluation.

**Reference Books:**

1. Chandra, Prasanna. (2011). *Investment Analysis and Portfolio Management (*4th ed.). McGraw Hill.
2. Bodie, Kane, Marcus and Mohanty. (2009). *Investments* (8th ed.). Tata Mc. Graw Hill.
3. Taxman. (2011). *Securities Markets & Products, Finance Indian Institute of Banking* (2nd ed.). Taxman Publications.
4. Kevin, S. (2009). *Portfolio Management* (2nd ed.). Phi Learning.
5. Frank, Fabozzi J. (2009). *Institutional Investment Management* (2nd ed.). John Wiley and Sons.
6. Smithson, Charles. (2003). *Credit Portfolio Management* (2nd ed.). John Wiley and Sons.
7. Strong, Robert A. (2009). *Portfolio Construction, Management, and Protection* (5th ed.). South Western Cenage Learning.
8. Hull, John C. (2013). *Fundamentals of Futures and Options Markets* (8th ed.). Prentice Hall.

**Specialisation 2.11**

**MMSS309: International Finance**

Learning hours: 50

Credits: 3

**Learning Objectives:**

At the end of this subject student will be able to familiarize with the environment of international finance and its implications on international business and analyse the nature and functioning of foreign exchange markets, determination of exchange rates and interest rates and their forecasting, define and measure foreign exchange risks and to identify risk management strategies, explore the sources of long term finance and design financial strategies and integrate the global developments with the changing business environment in India.

**Unit 1 10 Hours**

**Introduction to International Finance**

Meaning, Importance, Nature and characteristics of International Business, Globalization and India's financial sector reforms, Scope of International finance, Role of World Bank, IMF and SDR. Trade settlement methods, Export Finance, Balance of payments(determination of current account, capital account & ORA)-[International Trade](http://www.indiastudychannel.com/resources/36505-VTU-MBA-Syllabus-INTERNATIONAL-FINANCIAL.aspx) flows-International, Capital Flows-Agencies that facilitate International flows – Equilibrium, disequilibrium & adjustment of Balance of payment & Trade deficits.

**Unit 2 10 Hours**

**The Foreign Exchange Market**

Function and Structure of the FOREX markets, Foreign exchange market participants, Types of transactions and Settlements dates, Exchange rate quotations, Nominal, Real and Effective exchange rates, and determination of exchange rates in Spot markets. Exchange rates determinations in Forward markets. Exchange rate behavior -Cross Rates- -Arbitrage profit in foreign exchange markets, Swift Mechanism and Triangular arbitrage.

**Unit 3 9 Hours**

**Foreign Exchange Exposure**

Meaning of exposure. Management of Transaction exposure - Translation exposure - Economic exposure - Political Exposure and Interest rate exposure.

**Unit 4 11 Hours**

**International Parity Relationship and International Monetary System**

Interest rate parity - Purchasing power parity - Fishers effect and International Fishers effect. Monetary Models: Meaning, The basic background to the monetary models of exchange-rate determination, evolution, The common characteristic and significant differences between the models, The flexible-price monetary model, The sticky-price monetary model, The real interest-rate differential model, Implications of the monetary views of exchange rate determination.

**Unit 5 9 Hours**

**Foreign Exchange Risk Management**

Hedging against foreign exchange exposure – Forward Market- Futures Market- Options Market- Currency Swaps-Interest Rate Swap- Hedging through currency of invoicing- Hedging through mixed currency invoicing – Country risk analysis.

**Reference Books:**

1. Madura, Jeff. (2011). *International Financial Management* (2nd ed.). Cengage Learning.
2. Sharan, Vyuptakesh. (2011). *International Financial Management* (5th ed.). PHI.
3. Apte, P. G. (2010). *International Finance Management* (1st ed.). McGraw Hill.
4. Holland, John. (1997). *International Finance Management* (2nd ed.). Oxford: Blackwell Publication.
5. Shapiro. (2008). *International Finance* (1st ed.). Wiley India Pvt Ltd.

**Specialisation 2.12**

**MMSS310: International HRM**

Learning hours: 30

Credits: 6

**Objectives:**

Globalization, growing presence of multinationals with expatriate managers, cross border, mergers and acquisitions and increasing diversity of workforce demands human resource to, be more sensitive to cross-cultural issues and understanding of international approaches to, dealing with people in organisations. The course seeks to look at HRM in a broader, comparative and international perspective to deal with complex issues and manifold risks.

**Unit 1 6 hours**

**HR strategies**

International HR architecture, the new roles in global human resource management, alignment of global business strategies with Human Resource solutions, the strategic importance of people, bottom-line performance excellence, HR decision-making within International business environments, identifying HRM issues, Organisational learning in international organisations, etc.

Identifying International HRM issues and developing International HR action plans, communicating change from long distance, solving critical HRM problems and leading changes from central HR quarters, Long distance interaction with executives and employees, connecting HR activities to competitive advantages in global environment

**Unit 2 6 hours**

**HR Policies and -Practices**

Design, implementation and delivery of international HR policies, programs, practices and processes that support the company’s International business model, reward management, performance management, HR Intranets, communication, Knowledge Management, social compliance.

**Unit 3 6 hours**

**HR Development (HRD)**

International Performance Management, development of effective international HR processes, elevation of individual and team performance, organizing and implementing International training programmes, competencies development, alignment and design, Creating Competitive Advantage Through People, etc.. Cross Cultural Theories

**Unit 4 6 hours**

**Recruitment Strategies**

Supervision, planning and direction of international recruiting and retention strategies, preparing and classifying international job descriptions, international hiring processes and procedures, elements of search and selection, recruiting, tracking vacancies and the recruitment processes involved on each one, measure the performance of recruitment suppliers and internal recruitment processes, identifying bottlenecks that hinder the recruitment process.

**Unit 5 6 hours**

**Cultural awareness**

Including National culture’s impact on HR-policies and HR practices, impact of differing cultures, Hofstede’s 4 Dimensions, tools, models and skills needed to make diversity interventions within your international organization. Identifying the Spectrum of Values Among Cultures, Trompenaar’s 7 Dimensions. Managing cultural diversity, Cross Cultural and Multinational Teambuilding, Storytelling, Organisational Culture.

**Reference Books:**

1. N Sengupta& Mousumi S Bhattacharya – International Human Resource Management
2. Peter Dowling and Denice Welch, International Human Resource Management, Cengage Learning
3. Tony Edwards International Human Resource Management, Pearson, Education
4. P. L. Rao International Human Resource Management – Text and Cases, Excel Books
5. Anne-WilHarzing&Joris Van Ruyosseveldt (eds.), International Human Resource Management – SagePublications, New Delhi.
6. Dowling, International HR Management, Cengage, ND
7. SPS Bedi, &M.Kishore, Global HRM, Widom, Delhi
8. Tayeb – International HRM, Oxford University Press
9. C.S.VenkataRatnam, Globalisation and Labour Management Relations, Sage, New Delhi.
10. PS Rao, International HRM, Himalaya, Mumbai
11. Lawrence Kleiman, Human Resource Management, Wiley India, New Delhi.

**Semester IV**

**MMSS401: International Marketing**

Learning hours: 30

Credits: 3

**Objectives:**

The course aims at making the student understand the concept and techniques of international marketing and train them to develop and implement plans and marketing strategies for entering into international markets and managing overseas operations.

**Unit 1** **5 hours**

**International Marketing – An overview**

Framework of International Marketing: Scope of International Marketing, International Marketing vs Domestic Marketing, Trade Barriers such as Tariff and Non-Tariff Barriers, Transition from Domestic to International Business, Pre-export behaviour, Motivation to export, Special difficulties in International Marketing, Advantages or importance of International Marketing,

International markets – Definition – Basic modes of entry – Nature of International MarketingBenefits - of International Marketing-– International Marketing Task.

**Unit 2** **5 hours**

**International Marketing Environment**

Business culture around the world- language, customs, attitudes - marketing strategy adjustments -product adaptations. Geographic Description of Market – Political risk – Political Environment -Import quotas – tariffs - customs restrictions - required licenses – registrations – permits.

Development and scope of International law – INCOTERMS – WTO – GATT - Current economicconditions of the country or countries involved - credit worthiness of the international buyer/seller –Regional economic groupings its influences in market.

**Unit 3**  **6 hours**

**International Market Selection**

International Market Selection – Factors influencing – Process – Strategies and approaches – Competition-International Marketing research – Global scene- International marketing research procedure – Techniques – survey – interview techniques – Analysis of field data – Research report-International Marketing Planning and Control – Framework – marketing control – Control sequence.

**Unit 4** **8 hours**

**Pricing, Distribution and Promotional Decisions for International Markets**

Factors affecting international price determination, International pricing process and policies, Delivery terms and currency for export price quotations, Transfer pricing.

International Distribution Decisions: Distribution channel strategy-International distribution channels, their roles and functions, Selection and management of overseas agents, International distribution logistics inventory management transportation, warehousing and insurance.

International Promotion Strategies: Communications across countries-complexities and issues, International promotion tools and planning – Advertising, personal selling, publicity and sales promotion, Developing international promotion campaign, Standardisation vs. adaptation issue, Planning for direct mail, sales literature, trade fairs and exhibitions.

**Unit 5 6 hours**

**Trends and Implementation of International Marketing**

Implementation of marketing at international scenario – Changing regulations and other challenges in the market – Trends in International marketing.

**Reference Books**:

1. Cateora, Phillip R. and John L. Grahm, International Marketing, 10 th ed., Irwin McGraw Hill, Boston, 1999.
2. Global Marketing, Third Edition, by Warren J. Keegan and Mark C. Green, Prentice Hall, N.J. 2003.
3. Fair-weather, John International Marketing, Prentice Hall of India Private Ltd., New Delhi.
4. Bhattacharya, B., Export Marketing Strategies for Success, Global Business Press, New Delhi, 1991.
5. Isobel Doole and Robin Lowe, International Marketing Strategy, 2/e, Thomson Learning, 2003.

**MMSS402: Corporate Governance and Business Ethics**

Learning hours: 30

Credits: 3

**Objectives:**

To familiarize students with the understanding of issues and practices of corporate governance in the global and Indian context.

**Unit 1 8 hours**

**Framework of Corporate Governance**

Conceptual Framework of Corporate Governance: Meaning, Theories of Corporate Governance, Models of Corporate Governance, Governance vs Good Corporate Governance, Corporate Governance vs Corporate Excellence, Insider Trading, Rating Agencies, Whistle Blowing, Benefits of Good Corporate Governance, Corporate Governance Reforms, Initiatives in India.

**Unit 2 4 hours**

**Corporate Governance Model in India**

Indian Model of Corporate Governance: Director, Board Role, Responsibilities, Powers, Number of Directors, Disqualifications, Board Meetings, Regulatory Framework of Corporate Governance in India, SEBI Norms based on KM Birla Committee, Clause 49 of Listing Agreement, Corporate Governance in Public Sector Undertakings.

**Unit 3 6 hours**

**Board Committees and their Functions**

Board Committees and their Functions, Remuneration Committee, Nomination Committee, Compliance Committee, Shareholders Grievance Committee, Investors Relation Committee, Investment Committee, Risk Management Committee, and Audit Committee.

**Unit 4 4 hours**

**Legal and Regulatory Setting**

The Legal and Regulatory Setting: Company Law, SEBI Regulations, FEMA – Banking and Capital Market Regulations, Takeover Code and Corporate Governance Issues. Tools for ensuring Corporate Governance: Cost Audit Methodology and Corporate Governance, Statutory Audit for Governance, An introduction to e-governance and XBRL, Corporate governance in India: Reforming BOD- Birla Committee- Naresh Chandra Committee Narayana murthy committee-Audit committee-Corporate governance code.

Major Corporate Governance Failures: Junk Bond Scam (USA), Bank of Credit and Commerce International (UK), Maxwell Communication Corporation and Mirror Group Newspapers (UK), Enron (USA), WorldCom (USA), Tyco (USA), Andersen Worldwide (USA), Kirch Media (Germany), Vivendi (France), Parmalat (Italy) and Satyam Computer Services Ltd (India); Common Governance Problems Noticed in various Corporate Failures, Is Corporate Governance always the Cause for Corporate Failures?.

**Unit 5 8 hours**

**Ethics in Business**

Ethics and Business: Values and attitudes for professional accountants, Legal frameworks, regulations and standards for business, Nature of ethics and its relevance to business and the accountancy profession, Rules based and framework approaches to ethics, Personal development and lifelong learning, Personal qualities of reliability, responsibility, timeliness, courtesy and respect, Ethical principles of integrity, objectivity, professional competence, due care and confidentiality, Concepts of independence, scepticism, accountability and social responsibility, The CIMA and IFAC codes of ethics for professional accountants

Ethical Conflict: Relationship between ethics, governance, the law and social responsibility, Unethical behaviour, Ethical dilemmas and conflicts of interest.

**Reference Books:**

1. Francis Cherunilam International Business Environment, 2010, Himalaya Pub. House
2. K.Ashwathapa, A.Trehan, Global Business Environment, 2011Tata McGraw Hill
3. Parthasarthy Corporate Governance, Bizetantra
4. Sumit Khurana, Corporate Governance Dreamtech,4
5. 1989 McGregor, Lynn, The human face of Corporate Governance, Palgrave
6. Bharat Law House Pvt. Ltd., 2010 Edn.
7. Cadbury, Adrian, Corporate Governance and Chairmanship: a personal view, Oxford
8. Chandratre, K R and A N Navare, Corporate Governance – A Practical Handbook,
9. Daniels, Globalization &Business, PHI Learning
10. Das, Subhash Chandra, Corporate Governance in India: An Evaluation, PHI Learning
11. Gupta, L.C., Corporate Boards and Nominee Directors, Oxford University Press,
12. Hamilton The International Business Environment, Oxford Press
13. Mandal, SK Ethics in Business and Corporate Governance 1e2010Tata McGraw Hill
14. Tamer Cavusgil-International Business-(Indian Reprint) Pearson
15. University Press, 2003
16. V. Sharan-International Business-(Indian Original) Pearson

**MMSS403: Financial Modelling**

Learning hours: 30

Credits: 3

**Objectives:**

* Implement financial models using Excel and VBA;
* Familiarise with a number of financial modelling methods, including present and future value, matrix calculations, optimisation, regression analysis, simulation and the event study methodology. (These methods are applied to a range of practical problems in finance, including portfolio optimisation, financial statement modelling, performance measurement, risk management and option pricing.).

**Unit 1 6 hours**

**Introduction**

Understanding Finance Functions present in Excel: Annuity Functions, Investment analysis functions, Bond Functions, Depreciation Functions. Making Decisions: Examples of creating Decision making formulas (Income tax calculator), Looking up values and conditional formatting.

Analysing databases using Sort, Filter and Pivot Tables.

**Case Exercises/ Practical Assignments/Activities**.

**Unit 2 6 hours**

**Sensitivity Analysis using Excel**

Scenario Manager, Other Sensitivity Analysis Features, Goal Seek, Data Tables

**Case Exercises/ Practical Assignments/Activities**.

**Unit 3 6 hours**

**Simulation using Excel**

Different Statistical Distributions used in Simulation.  
Generating Random Numbers that follow a particular distribution.  
Building Models in Finance using Simulation.    

**Case Exercises/ Practical Assignments/Activities**.

**Unit 4 6 hours**

**Financial Models Part-1**

Preparing common size statements directly from Trial Balance , Forecasting Financial Statements using Excel, Analysing Financial Statements by using Spreadsheet Model.

**Case Exercises/ Practical Assignments/Activities**.

**Unit 5 6 hours**

**Financial Models Part-2**

* Time Value of Money: Loan Ammortization Table
* Financial Planning & Investments: Retirement Planner, Portfolio Structuring
* Bond Pricing
* Option and Option Portfolio: Option Payoffs at Expiration

**Case Exercises/ Practical Assignments/Activities**.

**Reference Books:**

1. Benninga, S. Financial Modelling, 3rd edition, Massachusetts: MIT Press, 2008.
2. Jonathan Swan, Practical Financial Modelling a guide to current practice, 2nd edition, CIMA publishing Publication, 2005.
3. MarekMusiela, MarekRutkowski, Models in Financial Modelling. 2ndEdition, Springer, 2005.
4. ChandanSengupta, Financial Analysis and Modeling Using Excel and VBA, Wiley, 2014

**Semester IV**

**SPECIALISATION: BUSINESS ANALYTICS**

**Specialization 1.13**

**MMSS404: Data Analysis and Business Modeling**

Learning hours: 30

Credits: 3

**Objectives:**

At the end of this Subject, students will:

* Explain what the goals and objectives of data mining are and how to conduct a data mining project.
* Have sound knowledge of popular classification techniques, such as decision trees, support vector machines and nearest-neighbor approaches.
* Familiarise with Machine learning models.

**Unit 1 6 hours**

Data Mining for Business Intelligence, Data Mining Concepts and Definitions, Characteristics, and Benefits, How Data Mining Works, Data Mining Applications. Classification of Data Science solutions for Business Problems, Data Requirements.

**Unit 2 6 hours**

Preparing data for mining, Preprocessing of data: Identifying invalid data items, outliers, handling missing values, derived variables, binning, data reduction techniques etc., Unsupervised vs supervised techniques. Examples, Case study: Workhorse of Industry: Logistic regression – use and limitations and Why Machine Learning Tools?, Preparing Model Data: Training, Validation and testing data sets, Handling imbalanced sample problem, Evaluation of Model: Various measures to assess the performance of the model such as Confusion matrix, ROC, Lift chart, decile analysis, Cross-Validation etc., Case Study

**Unit 3 6 hours**

Machine learning models vs classical models : Concept of Machine Learning tools, Tree-based models: Classification and regression Tress, CHAID, Pruning of trees, Robustness of Trees, Issues in Tree-based models. Use of trees in feature selection, Case study-I : Classification Trees, Case study-2: Regression trees

**Unit 4 6 hours**

Introduction: brief history and logic of Artificial Neural Network, Training of neural network using Back Propagation method, Radial Basis Function Network, Issues in Training and Implementation of Neural Network in practice: Preparing model data and Starting values for training Neural Network, Over fitting and number of hidden layers, Interpreting the output, Case study.

**Unit 5 6 hours**

Logic behind Support Vector Machines and Types of Kernels, Computations of support vectors, SVM for classification and regression, Issues in SVM, Case study : Comparison of NN,SVM and Logistic regression, Random forests and its implementation, Variable Importance, Measures for accuracy of Random forest, Comparison of Random forest with Trees and SVM: Case study, Occam’s Razor, Model Selection and Deployment Issues.

**Reference Books:**

1. Turban, Sharda Efraim; Ramesh, Dursun Delen and King, David. (2011). *Business Intelligence: A Managerial Approach*, 2nd Edition. Publisher: Prentice Hall.
2. Han, Jiawei and Kamber, Micheline. (2012). *Data Mining: Concepts and Techniques* (3rd ed.). Morgan Kaufman Publishers.
3. Tang, P.N., Steinback, M. and Kumar, V. (2006). *Introduction to Data Mining*. Addison Wesley.
4. Myatt, Glenn and Johnson, Wayne. (2009). *Making Sense of Data II.* John Wiley& Sons.
5. Rajaraman, Anand. (2011). *Mining of Massive Datasets.* New York: Cambridge University Press.

**Specialization 1.14**

**MMSS405: Big Data Analytics**

Learning hours: 30

Credits: 3

**Learning Objectives:**

By the end of the course, the student will be able to:

* Deploy a structured lifecycle approach to data science and big data analytics projects.
* Select techniques and tools to analyze big data and create statistical models.

**Unit 1**

**Introduction 6 hours**

Big Data Overview, Definition with Real Time Examples, How BigData is generated with Real Time Generation, Use of BigData, Future of BigData!, the challenges for processing big data, technologies supporting big data,

**Unit 2**

**Hadoop 6 hours**

Why Hadoop?, What is Hadoop?, Hadoop vs RDBMS, Hadoop vs BigData, Brief history of Hadoop, Problems with traditional large-scale systems, Requirements for a new approach, Anatomy of a Hadoop cluster

**Unit 3**

**Hadoop Distributed File System (HDFS) 6 hours**

Concepts & Architecture, Data Flow (File Read , File Write), Fault Tolerance, Shell Commands, Java Base API, Data Flow Archives, Coherency, Data Integrity, Role of Secondary NameNode

**Unit 4**

**MapReduce 6 hours**

Theory, Data Flow (Map – Shuffle - Reduce), MapRed vs MapReduce APIs, Programming [ Mapper, Reducer, Combiner, Partitioner]

**Unit 5**

**HIVE, PIG and HBase 6 hours**

Architecture, Installation, Configuration, Hive vs RDBMS, Tables, DDL & DML, Partitioning & Bucketing, Hive Web Interface, Why Pig, Use case of Pig, Pig Components

Data Model, Pig Latin

RDBMS Vs NoSQL, HBase Introduction, HBase Components Scanner, Filter Hbase POC, Introduction to MongoDB.

**Reference Books:**

1. Tan, Pang-Ning, Steinbach, Michael and Kumar, Vipin. (2005). *Introduction to Data Mining*. Addison-Wesley.
2. Lin, Jimmy and Dyer, Chris. (2010). *Data-Intensive Text Processing with MapReduce.* Morgan & Claypool Publishers.
3. Rajaraman, Anand and Ullman, Jeff. (2008). *Mining of Massive Datasets*. New York: Cambridge Press.
4. Han, Jiawei and Kamber, Micheline. (2000). *Data Mining: Concepts and Techniques*. The Morgan Kaufmann Series in Data Management Systems, Jim Gray, Series Editor Morgan Kaufmann Publishers.

**Specialization 1.15**

**MMSS406: Business Intelligence**

Learning hours: 30

Credits: 3

**Objectives:**

By the end of the course, the student will be familiarised with Business Intelligence, including the processes, methodologies, infrastructure, and current practices used to transform business data into useful information and support business decision-making. Students will understand the Business Intelligence concepts and be able to apply these concepts in various business contexts and through hands-on exercises with leading software applications.

**Unit 1**

**Introduction to Business Intelligence 6 hours**

Norfolk Southern Uses Business Intelligence for Decision Support to Reach Success, Changing Business Environments and Computerized Decision Support, The Business Pressures- Responses- Support Model, A Framework for Business Intelligence (Bl), Definitions of Bl, A Brief History of Bl, The Architecture of Bl, Styles of Bl, The Benefits of Bl, Event-Driven Alerts, Intelligence Creation and Use and Bl Governance, A Cyclical Process of Intelligence Creation and Use, Intelligence and Espionage, Transaction Processing versus Analytic Processing, Successful Bl Implementation, The Typical Bl User Community, Appropriate Planning and Alignment with the Business Strategy, Real-Time, On-Demand Bl Is Attainable, Developing or Acquiring Bl Systems, Justification and Cost-Benefit Analysis, Security and Protection of Privacy, Integration of Systems and Applications , Major Tools and Techniques of Business Intelligence , The Tools and Techniques, Selected Bl Vendors.

**Unit 2**

**Business Performance Management 6 hours**

Double Down at Harrah's, Business Performance Management (BPM) Overview, BPM Defined, BPM and Bl Compared, Strategize: Where Do We Want to Go?, Strategic Planning, The Strategy Gap, Plan: How Do We Get There?, Operational Planning, Financial Planning and Budgeting, Monitor: How Are We Doing?, Diagnostic Control Systems, Pitfalls of Variance Analysis, Act and Adjust: What Do We Need to Do Differently?, Performance Measurement, KPls and Operational Metrics, Problems with Existing Performance Measurement Systems, Effective Performance Measurement, BPM Methodologies, Balanced Scorecard (BSC) , Six Sigma, BPM Technologies and Applications, BPM Architecture, Commercial BPM Suites, BPM Market versus the Bl Platform Market, Performance Dashboards and Scorecards, Dashboards versus Scorecards, Dashboard Design, What to Look for in a Dashboard.

**Unit 3**

**Text and Web Mining 6 hours**

Mining Text for Security and Counterterrorism, Text Mining Concepts and Definitions, Natural Language Processing, Text Mining Applications, Marketing Applications, Security Applications, Biomedical Applications , Academic Applications.

Text Mining Process: Task 1: Establish the Corpus, Task 2: Create the Term-Document Matrix, Task 3: Extract the Knowledge. Text Mining Tools, Commercial Software Tools , Free Software Tools.

Web Mining Overview,Web Content Mining and Web Structure,Web Usage Mining, Web Mining Success Stories.

**Unit 4**

**Business Intelligence Implementation 6 hours**

Integration and Emerging Trends, Bl Eastern Mountain Sports Increases Collaboration and Productivity, Implementing Bl: An Overview, Bl Implementations Factors, Managerial Issues Related to Bl Implementation , Bl and Integration Implementation, Types of Integration, Why Integrate?, Levels of Bl Integration, Embedded Intelligent Systems, Connecting Bl Systems to Databases and Other Enterprise Systems, Connecting to Databases, Integrating Bl Applications and Back-End Systems, Middleware, On-Demand Bl, The Limitations ofTraditional Bl, The On-demand Alternative, Key Characteristics and Benefits, Issues of Legality, Privacy, and Ethics, Legal Issues, Privacy, Ethics in Decision Making and Support.

**Unit 5**

**Emerging Trends in BI 6 hours**

Emerging Topics in Bl: An Overview,The Future of Business Intelligence, The Web 2.0 Revolution, Representative Characteristics of Web 2.0,Web 2.0 Companies and New Business Models, Online Social Networking: Basics and Examples 250 ADefinition and Basic Information, Mobile Social Networking, Major Social Network Services: Facebook, Implications of Business and Enterprise Social Networks, Virtual Worlds , Social Networks and Bl: Collaborative Decision Making, The Rise of Collaborative Decision Making, Collaboration in Virtual Teams' Decision Making, RFID and New Bl Application Opportunities, Reality Mining.

**Reference Books:**

1. Turban, Sharda Efraim; Ramesh, Dursun Delen and King, David. (2011). *Business Intelligence: A Managerial Approach*, 2nd Edition. Publisher: Prentice Hall.
2. Han, Jiawei and Kamber, Micheline. (2009). Data Mining: Concepts and Techniques, Second Edition. San Francisco: Morgan Kaufmann Publishers.
3. Cody, W.F. et al. (2002). *The Integration of Business Intelligence and Knowledge Management.* IBM Systems Journal.
4. Moss, L.T. and Atre, S. (2003). *Business Intelligence Roadmap: The Complete Project Lifecycle for Decision-Support Applications*. Boston, MA: Addison-Wesley.

**Specialization 1.16**

**MMSS407: Multivariate Data Analysis – 2**

Learning hours: 20 Theory + 30 Lab

Credits: 3

**Objectives:**

By the end of the subject, students should be able to understand the theory behind the statistics, Select the appropriate methods in function of the research question, Apply those methods to their data, Interpret and report the results from the analysis, Develop critical thinking of statistics.

**Unit 1**

**Cluster Analysis 4 hours**

What is Cluster Analysis, Cluster Analysis as a multivariate technique, conceptual development with Cluster Analysis, necessity of conceptual support in Cluster Analysis, how does Cluster Analysis work? Objective versus subjective considerations, Cluster Analysis decision process, objective of Cluster Analysis, research design in Cluster Analysis, assumptions in Cluster Analysis, deriving clusters and assessing overall fit, interpretation of the clusters, validation and profiling of the clusters, an illustrative example.

**Lab hours = 6 hours**

**Unit 2**

**Multidimensional Scaling and Correspondence Analysis 4 hours**

What is Multidimensional Scaling? MDS works, comparing MDS to other interdependence techniques, a decision framework for perceptual mapping Overview of Multidimensional Scaling, Correspondence Analysis, illustrations of MDS and Correspondence Analysis.

**Lab hours = 6 hours**

**Unit 3**

**MANOVA 4 hours**

MANOVA: Extending Univariate Methods for Assessing Group Differences, a hypothetical illustration of MANOVA, a decision process for MANOVA, illustration of MANOVA analysis, example 1: difference between two independent groups, example 2: difference between K independent groups, example 3: a factorial design for MANOVA with tow independent variables, a managerial overview of the results.

**Lab hours = 6 hours**

**Unit 4**

**Structural Equation Modeling Part I 4 hours**

What is Structural Equation Modeling?, SEM and other multivariate techniques, the role of theory in structural equation modelling, history of SEM, a sample example of SEM, developing a modelling strategy, six stages in structural equation modelling, what is confirmatory factor analysis, SEM stages for testing measurement theory validation with CFA, advanced topics in CFA, advanced CFA illustration.

**Lab hours = 6 hours**

**Unit 5**

**Structural Equation Modeling Part II 4 hours**

What is structural model, a sample example of structural model, an overview of theory testing with SEM, stages in testing structural theory, SEM illustration.

**Lab hours = 6 hours**

**Reference Books:**

1. Hair, J. F. et al. (2006). *Multivariate Data Analysis*, 6th edition. NJ: Prentice Hall.
2. Aiken, L. S., & West, S. G. (1991). *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park, CA: Sage.
3. Menard, S. (2002). *Applied Logistic Regression Analysis*. Thousand Oaks, CA: Sage.
4. Tabachnick, B. and Fidell, L (2007). *Using Multivariate Statistics*, 5th edition. New York: Allyn & Bacon.
5. Cohen, J., & Cohen, P. (1983). *Applied Multiple Regression/Correlation Analysis for the Behavioural Sciences*, 2nd edition. Hillsdale, N.J.: Erlbaum.
6. Stevens, J. (1992). *Applied Multivariate Statistics for the Social Sciences*, 2nd edition. Hillsdale, N.J.: L. Erlbaum Associates.

**Specialization 1.17**

**MMSS408: Advanced Analytics-2**

Learning hours: 20 Theory + 30 Lab

Credits: 3

**Objectives:**

By the end of the subject, students should be able to:

* gain an understanding of how managers use business analytics to formulate and solve business problems and to support managerial decision making.
* become familiar with the processes needed to develop, report, and analyze business data.
* Compare and contrast different BA techniques.
* Interpret, analyze and validate the results.

**Unit 1**

**Social Media Analytics 4 hours**

Social Media Is Multidimensional, Understanding Social Media Analytics: Useful Concepts, Is Social Media about Brand or Direct Response?, Social Media “Brand” and “Direct Response” Analytics, Social Media Tools, Social Media Analytical Techniques, Social Media Analytics and Privacy.

The Competitive Intelligence Mandate: Competitive Intelligence Defined, Principles for CI Success.

**Lab hours = 6 hours**

**Unit 2**

**Mobile Analytics 4 hours**

Understanding Mobile Analytics Concepts, How Is Mobile Analytics Different from Site Analytics? Importance of Measuring Mobile Analytics, Mobile Analytics Tools, Business Optimization with Mobile Analytics.

**Lab hours = 6 hours**

**Unit 3**

**Effective Analytics Communication Strategies 4 hours**

Communication: The Gap between Analysts and Executives, An Effective Analytics Communication Strategy, Analytics Communication Tips, Communicating through Mobile Business Intelligence.

Business Performance Tracking:, Execution and Measurement: Analytics’ Fundamental Questions, Analytics Execution, Business Performance Tracking, Analytics and Marketing.

**Lab hours = 6 hours**

**Unit 4**

**Analytics and Innovation 4 hours**

What Is Innovation? What Is the Promise of Advanced Analytics?, What Makes Up Innovation in Analytics? Intersection between Analytics and Innovation.

Unstructured Data Analytics, The Next Frontier: What Is Unstructured Data Analytics? The Unstructured Data Analytics Industry, Uses of Unstructured Data Analytics, How Unstructured Data Analytics Works, Why Unstructured Data Is the Next Analytical Frontier, Unstructured Analytics Success Stories.

**Lab hours = 6 hours**

**Unit 5**

**The Future of Analytics 4 hours**

Data Become Less Valuable, Predictive Becomes the New Standard, Social Information Processing and Distributed Computing, Advances in Machine Learning, Traditional Data Models Evolve, Analytics Becomes More Accessible to the Nonanalyst, Data Science Becomes a Specialized Department, Human-Centered Computing, Analytics to Solve Social Problems, Location-Based Data Explosion, Data Privacy Backlash.

**Lab hours = 6 hours**

**Reference Books:**

# Isson, Jean-Paul and Harriott, Jesse. (2012). *Win with Advanced Business Analytics: Creating Business Value from Your Data*, 1st edition. New York: Wiley.

1. Shmueli, Galit, Patel, Nitin and Bruce, Peter. (2010). *Data Mining for Business Intelligence*. New York: Wiley.
2. Hand, David, Mannila, Heikki and Smyth, Padhraic. (2001). *Principles of Data Mining*. MIT.
3. Han, Jiawei and Kamber, Micheline. (2012). *Data Mining: Concepts and Techniques*, 3rd edition. Morgan Kaufman Publishers.
4. Myatt, Glenn and Johnson, Wayne. (2009). *Making Sense of Data II.* New York: John Wiley& Sons.
5. Rajaraman, Anand. (2011). *Mining of Massive Datasets.* New York: Cambridge University Press.

**Specialization 1.18**

**MMSS409: Analytics with R**

Learning hours: 30

Credits: 3

**Objectives:**

By the end of the subject, students will learn how to program in R and how to use R for effective data analysis.

**Unit 1**

**Introduction to R 6 hours**

* An Introduction to R: What is R?, Installing R, Help and Documentation, Data Objects in R, Data Import and Export, Basic Data Manipulation, Computing with Data, Organising an Analysis.
* Data Analysis Using Graphical Displays: Introduction, Initial Data Analysis, Analysis Using R.

**Unit 2**

**Inferential Statistics 6 hours**

* Simple Inference: Introduction, Statistical Tests, Analysis Using R.
* Conditional Inference: Introduction, Conditional Test Procedures, Analysis Using R.
* Analysis of Variance: Introduction, Analysis of Variance, Analysis Using R.

**Unit 3**

**Regression and Recursive Partitioning 6 hours**

* Simple and Multiple Linear Regression: Introduction, Simple Linear Regression, Multiple Linear Regression, Analysis Using R.
* Logistic Regression and Generalised Linear Models: Introduction, Logistic Regression and Generalised Linear Models, Analysis Using R.
* Density Estimation: Introduction, Density Estimation, Analysis Using R.
* Recursive Partitioning: Introduction, Recursive Partitioning, Analysis Using R.
* Smoothers and Generalised Additive Models: Introduction, Smoothers and Generalised Additive Models, Analysis Using R.

**Unit 4**

**Survival Analysis 6 hours**

* Introduction, Survival Analysis, Analysis Using R.
* Analysing Longitudinal Data: Introduction, Analysing Longitudinal Data, Linear Mixed Effects Models, Analysis Using R, Prediction of Random Effects, The Problem of Dropouts.
* Analysing Longitudinal Data II: Introduction, Methods for Non-normal Distributions, Analysis Using R: GEE, Analysis Using R: Random Effects.
* Simultaneous Inference and Multiple Comparisons: Introduction, Simultaneous Inference and Multiple Comparisons, Analysis Using R.

**Unit 5**

**Meta-Analysis**  **6 hours**

* Introduction, Systematic Reviews and Meta-Analysis, Statistics of Meta-Analysis, Analysis Using R, Meta-Regression, Publication Bias.
* Principal Component Analysis: Introduction, Principal Component Analysis, Analysis Using R.
* Multidimensional Scaling: Introduction, Multidimensional Scaling, Analysis Using R.
* Cluster Analysis: Introduction, Cluster Analysis, Analysis Using R.

(The public domain software R will be used extensively throughout the course. This software can be freely downloaded from http://www.r-project.org/.)

**Reference Books:**

1. Dalgaard, Peter. (2008). *Introductory Statistics with R,* 2nd edition. California: Springer.
2. Chambers, M. John. (2008). *Software for Data Analysis: Programming with R (Statistics and Computing)*. California: Springer.
3. Hothorn, Torsten and Everitt, Brian S. (2005). *A Handbook of Statistical Analyses Using R*, Second Edition. Chapman and Hall.
4. Albert, Jim and Rizzo, Maria. (2012). *R by example: Concepts to Code*. California: Springer.
5. Allerhand, Mike. (2011). *Tiny Handbook of R*. California: Springer.

**Semester IV**

**SPECIALISATION: BUSINESS LEADERSHIP**

**Specialisation 2.13**

**MMSS404: Wealth Management and Financial Planning**

Learning hours: 30

Credits: 3

**Objectives:**

At the end of this Subject, student will be able to implement the Financial Planning process; understand the economic, social, political, and technological environment and be able to determine how Financial Plans should accommodate those environments; understand the potential goals a client may have, help them enunciate their goals and evaluate strategies to help clients achieve their goals; understand basic investment topics (including investment types, risk and return, diversification, passive versus active management) and specific investment strategies necessary to allow clients a mechanism to achieve realistic goals; structure and choose the optimal business format for the delivery of Financial Planning services for services for specific for specific target client markets.

**Unit 1 5 hours**

**Financial Planning Process 1**

Establishing client-planner relationships: Explain issues and concepts related to overall Financial Planning process, as appropriate to the client, Explain services provided, the process of planning, documentation required, and disclosure statements.

Gathering client data and determining goals and expectations: Obtain information from client through interview/questionnaire about financial resources & obligations. Determine client’s personal and financial goals, needs and priorities , Assess client’s values, attitudes and expectations , Determine client’s time horizons , Determine client’s risk tolerance level , Collect applicable client records and documents.

Analyse Client Objectives, Needs and Financial Situation: Analysis of relevant information ; Need for specialist advice , Issues that require further clarification.

**Unit 2 5 hours**

**Financial Planning Process 2**

Developing appropriate strategies and presenting the Financial Plan: Client's risk tolerance , Assessment of options , Research, analysis, Draft Financial Plan , Presenting and reviewing the plan with the client , Collaborating with the client to ensure that plan meets the goals and objectives of the client, and revising as appropriate, Implementing the Financial Plan, Assist the client in implementing and recommendations , Coordinate as necessary with other professionals, such as accountants, attorneys, real estate agents, investment advisors, stock brokers and insurance agents.

Monitoring the Financial Plan: Monitor and evaluate soundness of recommendations , Review the progress of the plan with the client , Discuss and evaluate changes in client’s personal circumstances, (e.g., birth/ death, age, illness, divorce, retirement) , Review and evaluate changing tax law and economic circumstances , Make recommendations to accommodate new or changing circumstances..

**Unit 3 5 hours**

**General Principles 1**

Assessment of risk and client behaviour: Client attitudes, Client knowledge, Client behaviour, Health of client, Occupation, Hazardous activities.

Cash flow planning: Short term cash flow planning, Cash budgeting, Preparing monthly household budgets, Long term cash flow planning, Budgeting, Forecasting, Cash management, Emergency fund planning, Debt management/ users of debt, Liquidity, Monitor and evaluate budgets, Compliance.

(Practical: Based no the data collected, develop a budget for the client)

**Unit 4 5 hours**

**General Principles 2**

* Personal use asset management: Home equity, Types of mortgages, Buy vs. lease, Refinancing, Hire- purchase, etc., Consumer loans, Credit cards.
* Personal Financial Statement Analysis: How to create personal financial statements, The personal [cash flow](http://www.investopedia.com/terms/c/cashflow.asp) statement, The personal [balance sheet](http://www.investopedia.com/terms/b/balancesheet.asp).
* The Ratio Analysis Technique Applied to Personal Financial Statements: Liquid assets/monthly expenditures , Liquid and other financial assets/monthly expenditures.
* Liquid assets/total debt ,Liquid assets and other financial assets/total debt,Liquid assets/non-mortgage debt ,Liquid Assets/Net Worth ,Liquid and other financial assets/net worth ,Liquid assets/one year's payment on debt,Liquid and other financial assets/one year's payment on debt,Total debt/net worth,Non-mortgage debt/net worth,Net equity +net tangible assets/net worth,Net equity + net tangible assets min us home/net worth,Net equity + net tangible assets/fixed dollar assets ,Net tangible assets/net worth,Income generating assets/net worth.
* How to build personal financial statements in excel
* Financial Mathematics: Calculate and interpret time value of money.
* Calculation of annuities, Loan repayment schedule, Inflation- adjusted interest rates.
* Economic environment and indicators:

Inflation/ deflation, Interest rates/yield curves,Equity investment and real return,Government monitory and fiscal policy, The impact of business cycles,Key Indicators – lagging, concurrent and leading, Financial institutions.

**Unit 5 5 hours**

**Forms of business ownership**

Forms of business ownership/ entity relationships

* Sole proprietorships, Partnerships, Limited liability companies, Trusts, Foundations/ exempt organizations,Professional associations/ section 25 companies (U/S 8 of new companies act 2013), Cooperative societies, Others.
* Legal aspects of Financial Planning.
* Contracts, Negotiable instruments, Torts, Professional liability, Fiduciary responsibility, Agency law, Consumer protection, Investor protection.

**Case Studies 5 Hours**

**Reference Books:**

1. Madhu Sinha, Financial Planning, 1st Edition, McGraw Hill, 2012.
2. Introduction to Financial Planning – FIIB, 3rd edition, Taxmann Publications, 2011.

# [Harold Evensky](http://www.amazon.com/Harold-Evensky/e/B000APUOT2/ref=sr_ntt_srch_lnk_1?qid=1297851764&sr=8-1). [*Wealth Management: The Financial Advisor's Guide to Investing and Managing Client Assets*](http://www.amazon.com/Wealth-Management-Financial-Advisors-Investing/dp/0786304782/ref=sr_1_1?ie=UTF8&qid=1297851764&sr=8-1)*.* 1st edition, McGraw hill, 1996..

# Eugene F. Brigham and Joel F. Houston. [*Fundamentals of Financial Management*](http://www.amazon.com/gp/product/0324597703?ie=UTF8&tag=maawe-20&linkCode=as2&camp=1789&creative=390957&creativeASIN=0324597703)*.* 12th edition, Cengage Learning, 2009.

1. [S. K. Bagchi](http://shopping.indiatimes.com/ism/faces/tiles/category.jspBooks/search/ctl/20375432). *Wealth Management.* 1st edition, Jaico Publishing House, 2009.
2. Dun, Bradstreet. *Wealth Management.* McGraw Hill, 1st edition, 2009.
3. Madhu Sinha. *Financial Planning* *A Ready to Reckoner* 1st Edition*.* McGraw Hill, 2008.
4. George E. Rejda. *Principles* *of Risk Management and Insurance*. 10th edition, Pearson Education, 2010.

**Specialisation 2.14**

**MMSS405: Training and Development**

Learning hours: 30

Credits: 3

**Objectives:**

To familiarize the students with the requirements for designing appropriate systems for management of organizational career development, roles identity and with the concepts of the Managerial competency approach and its relevance to career management.

**Unit 1 4 hours**

**Overview of Training**

Training process an overview, training, development and education, structure of training origination, role competencies and positions of training professionals, training as a system, training process models, evolution of training role, strategic training and development process, implications of strategies for training - training environment, models of organizing and training departments.

**Unit 2 4 hours**

**Introduction to Learning**

Learning and learning styles - David Kolb’s learning style model, VAK model, principles of learning, Blooms taxonomy, andragogy and pedagogy, synergogy for team learning - learning theories, reinforcement theory, social learning theory, goal theory, need theory, expectancy theory, adult learning theory, information processing theory, learning and knowledge management- Robert Gagne’s The nine events of instruction.

**Unit 3 4 hours**

**Analysis of the Need for Training**

Training needs analysis, organization analysis, person analysis, task analysis. Need assessment techniques, training design and development- Principles, design process, Types of costs in training program, lesion plans- Training implementation, approaches, seating arrangements, selection and training of trainees, training aids, teaching and facilitation skills.

**Unit 4 4 hours**

**Technical Training**

Technical training - training for TQM, attitudinal training, training for management of change, training for productivity, training for creativity and problem solving, training for leadership. Training communication, evaluation process .Donald Kirkpatrick’s evaluation model-outcomes used in evaluation training program - Methods of data collection for training evaluation - cost benefit analysis, Future of training and development.

Professional bodies for Management Education and Training - AIMA, NIPM, ISTD, IMS, School of Management Studies, NPC, NITIE and ASCI - Training and TQM and ISO 900 - Training Aids - Types of aids and Audio visual aids - Budget Estimation on Training, Role of Computers in Training - Training needs of 21st century.

**Unit 5 4 hours**

**Management Development and Organisational Development**

Management Development (MD) and Organisational Development (OD), Difference between MD and OD, Aims and objectives of MD and OD, Methods of MD, OD interventions, Succession Planning and Career development. Management development, objectives of MD, Methods of MD, models of management development.

**Reference Books:**

1. A Handbook of Training - Martin Stone
2. Handbook of Training Methodology and - Paul Choudhry
3. Management Organisation Development - French and Bel
4. Bewnet, Roger Improving Training effectiveness, Aldershot, Gower.
5. Buckley R & Caple, Jim, The Theory & Practice of Training, London, Kogan & Page.
6. John Patrick: Training research and practice.
7. Lyntop R. Pareek.U: Training for development.
8. Pepper, Allan D, Managing the Training and Development function, Aldershot, Gower.
9. Rae L How to Measure Training Effectiveness, Aldershot, Gower.
10. Reid M.A. etc. Training interventions, Managing Employee Development, London IPM 1992.
11. Senge Peter M, The Fifth Discipline, The Art and Practice of the learning organization, Doubleday Publications.

**Specialisation 2.15**

**MMSS406: Strategic Leadership and Change Management**

Learning hours: 30

Credits: 3

**Objectives:**

To understand how leadership, strategy, and management are interrelated. To develop individual leadership competencies in the areas of strategic planning, development and execution of plans. To understand the methods and techniques essential for effective strategic leadership and change management.

**Unit 1**  **6 hours**

**Introduction to Strategic Leadership**

Survey of Leadership Theories, Strategy and Strategic Leadership, Leadership qualities and skills**,** Vision, Issues and Problem-solving; Visualization Tools: Systems; Task and Emotional Processes; Transformations of systems and models of growth; Leadership as envisioning transformations and facilitating change processes, Personal Leadership: Fundamental Individual Issues and Frameworks for Personal Growth Selection of Individual Student Projects

**Unit 2**  **6hours**

**Types of Leadership**

Leading a Relationship: Individual Issues and Interpersonal Dynamics; Transactional Analysis, Games, and Authenticity; The Twelve Behavioural Choices as Indicators for Types of Relationship,

Team Leadership I: Interpersonal Underworld (William Schutz) and Group Emotional Processes (Bion),

Team Leadership II: Task Interdependence and Types of Business Processes; Organizational and Technological Imperatives,

Strategic Leadership at Organizational Level I: Understanding Organizations and Business, Frameworks to conceptualize organizational strategies,

Strategic Leadership at Organizational Level II: Framing Issues of Organizational Transformations**,** Political-economic systems, Political Leadership: Local, Regional, State, National; Ideology, Ethnocentricity, Natural Resources and Geo-politics, Political-economy and Redistribution, Domination and Diversity, Religions and Co-existence, Political Systems and Human Rights, Environmental Issues

**Unit 3** **6hours**

**Basics of Change Management**

Meaning, nature and Types of Change, change programmes, change levers, change as growth, change as transformation, change as turnaround, value-based change.

Mapping change: The role of diagramming in system investigation, A review of basic flow diagramming techniques, systems relationships, systems diagramming and mapping, influence charts, multiple cause diagrams- a multidisciplinary approach.

Systems approach to change: Systems autonomy and behaviour, the intervention strategy model, cases in intervention, total project management model (TPMM)

**Unit 4** **6hours**

**Learning Organization**

The relevance of a learning organization, kindling learning processes in organizations, strategies to build a learning organization

Organisation Development (OD): Meaning, Nature and scope of OD, Dynamics of planned change, Person-focussed and role-focussed OD interventions, Planning OD Strategy, OD interventions in Indian Organisations, Challenges to OD practitioners.

Negotiated change: Change in the labour-management relations in the post-liberalised India, A review of the response of collective bargaining strategy to the challenges of Globalisation and the restructuring of enterprises in India, Changes in the legal frame work of collective bargaining, negotiated flexibility, productivity bargaining, improved work relations, public sector bargaining and social security

**Unit 5** **6hours**

**Team Building**

Nature and Importance of Teams, Team vs Groups, Types of teams, Characterstics of Virtual teams, Team building life cycle, role of managers as linking pins, team building skills, Perspectives on effectiveness of Team working.

Virtual teams: High performance teams, self managing teams, Building team relationships, empowered teams, leadership on teams, Managing cross -cultural diversity in teams, Group think as a decision making process, effective decision making techniques for teams and groups, role of change consultant-- contemporary issues in managing teams

**Reference Books:**

1. Adrian Thomhil, Phil Levis, Mike Millmore, and Mark saunders, "A HR Strategy Approach- managing Change", Addision Wesley Longman (Singapore), Indian Branch, 2000
2. Camal C.A., "Managing Change in Organisations", London Prentice Hall, 1995.
3. Times, B, "Managing Change: A strategic Approach to Organisational Dynamics", London, Pitman, 1996.
4. Art Horn: Gifts of Leadership: Team Building through Focus and Empathy, Macmillan India, 1998.
5. C.S.Venkataratnam: Negotiated Change -Collective Bargaining, Liberalisation and Restructuring in India, Response Books, New Delhi, 2003.
6. Joseph W. Weiss: Organisational Behaviour and Change-- Managing Diversity, cross cultural dynamics and Ethics. Thomson Learning 2/e, New Delhi, 2001.
7. Mirza S.Saiyadan, Organisational Behaviour,TMH, 2003, New Delhi.
8. R.S.Dwivedi: Human Relations and Organisational Behaviour: A Global Perspective 5/e, Macmillan, New Delhi, 2001.
9. Robert A Paton and James McCalman, Change Management: A Guide to Effective Implementation 2/e.Response Books, New Delhi, 2000.
10. S.Ramnarayan, TV Rao and Kuldeep Singh(Ed.): Organization Development, Response Books, New Delhi 2003.
11. Sethi: Orgnisational Transformation Through Business Process Reengineering Pearson Education.
12. V.Nilakant and S.Ramnarayan: Managing Organisational Change, Response Books, New Delhi, 2003

**Specialisation 2.16**

**MMSS407: Project and Program Management**

Learning hours: 50

Credits: 3

**Objectives: Business Law**

To plan, co-ordinate and control the complex and diverse activities of projects in organizations. To deliver project objectives within time, resource and budget allocations. To align project execution with the strategy, mission, and ethics of the organization.

**Module 1 10 hours**

**Introduction to Project**

Definition of a Project, Sequence of Activities, Unique activities, Complex Activities, Connected Activities, One Goal, Specified Time, Within Budget, According to Specification. Defining a Program, Project parameters: Scope, Quality, Cost, Time, Resources, The scope triangle, Time, Cost, and Resource Availability, Project Classification.

Project Management: Principles of Project Management: Defining, Planning, Executing, Controlling, Closing; Project Management Life Cycle: Phases of Project Management, Levels of Project Management; Quality Management: Continuous Quality Management Model, Process Quality Management Model; Risk Management, Risk Analysis; Relationship between Project Management and other Methodologies

## Module 2 10 hours

**Project Activities, Resource Requirements and Costs**

Work Breakdown Structure, Uses of WBS, Generating the WBS: Top-Down/Bottom-Up Approach, WBS for Small Projects, Intermediate WBS for large projects; Criteria to Test for Completeness in the WBS: Measurable Status, Bounded, Deliverable, Cost/Time Estimate, Acceptable Duration Limits, Activity Independence; Approaches to Building the WBS: various approaches, Representing WBS.

Activity Duration, Resource Requirements, & Cost: Duration: Resource Loading versus Activity Duration, Variation in Activity Duration, Methods for Estimating Activity Duration, Estimation Precision; Resources; Estimating Cost, JPP Session to Estimate Activity Duration & Resource Requirements, Determining Resource Requirements

## Module 3 10 hours

**Fundamentals of Project Network Diagram**

Project Network Diagram, Benefits to Network- Based Scheduling, Building the Network Diagram Using the PDM, Analyzing the Initial Project Network Diagram.

Network Analysis – PERT: Introduction to Project Evaluation and Review Technique, Event, Activity, Dummy, Network rules, Graphical guidelines for network, Common partial situations in network, numbering the events, Cycles; Developing the Network, Planning for network construction, modes of network construction, steps in developing network, hierarchies; Time Estimates in PERT, Uncertainties and use of PERT, Time estimates, Frequency distribution, Mean, Variance & standard deviation, Probability distribution, Beta distribution, Expected time; Time Computations in PERT, Earliest expected time, Formulation for TE, Latest allowable occurrence time, Formulation for TL, Combined tabular computations for TE, TL; Slack, Critical Path, Probability of meeting schedule date

**Module 4                                                                                                               10 hours**

**Network Analysis- CPM**

Introduction to Critical Path Method, Procedure, Networks, Activity time estimate, Earliest event time, Latest allowable occurrence time, Combined tabular computations for TE and TL, Start & Finish times of activity, Float, Critical activities & Critical path. Crashing of project network, Resource levelling and Resource allocation.

**Module 5                                                                                                               10 hours**

**Schedules Based on Resource Availability**

Resources, Levelling Resources, Acceptability Levelled Schedule, Resource Levelling Strategies, Work Packages: Purpose of a Work Package, Format of a Work Package.

Joint Project Planning Session: Planning the Sessions, Attendees, Facilities, Equipments, Complete Planning Agenda, Deliverables, Project Proposal.

**Reference Books:**

1. A management guide to PERT/CPM by Jerome D Weist and Sertinand K Levy, Prentice Hall India
2. Appraisal &Control of Project costs by Roy.Pilchar, McGraw Hill,Latest Edition.
3. Effective Project Management by Clements and Gido, Thomson India Edition, 2007.
4. Project Management – a systems approach and planning, scheduling and controlling by Harold Kerzner, CBS Publishers
5. Project Management : The Managerial Process by Gray and Larson, MGH, Special Indian Edition, 3rd Edition
6. Project Management by Dennis Lock, Coles Publishing Co., Ltd.
7. Project Management by Gary R Heerkens & Roger A Formisano, McGraw Hill.
8. Project Management by Mantel, Meredith, Shafer, Sutton and Gopalan, 1st Indian Edition
9. Project Management for 21st Century by Bennet P Lientz and Cathryn P Rea, Academic Press, Latest Edition
10. Project Management for Business and Technology: Principles and Practice by John Nicholas, PHI – Eastern Economy Edition, 2nd Edition
11. Chitale: Project Viability in Inflationary Condition.
12. Little and Mirrless : Guidelines for Project Evaluation.
13. P.K. Matto : Project Formulation in Developing Countries.
14. Prasanna Chandra: Project: Preparation, Appraisal, Budgeting and Implementation.

**Specialisation 2.17**

**MMSS408: Performance Management and Competency Mapping**

Learning hours: 50

Credits: 3

**Objectives:**

To understand how to set useful performance objectives and standards to plan effective performance management. To define the role of employees, supervisors, and managers in performance management. To highlight the key steps of effective performance management process.

**Unit 1 10 hours**

**Introduction to Performance Management**

Concept, Principles and Contribution of Performance Management, Dangers of poorly implemented performance management system, Contributions of Performance Management, Background to Performance Management-Performance Management and Performance Appraisal, Strategic issues in moving from Performance Appraisal to Performance Management, Concerns of Performance Management, Ethical considerations, Legal Issues in Performance Management.

**Unit 2 10 hours** **Performance Management Process**

Model and Process of Performance Management, Performance Management Cycle, Role Definition, Personal Development Plan, Performance Agreement, performance Review, Balance Scorecard approach to PMS, Benchmarking process, industry best practice.

**Unit 3 10 hours**

**Performance Appraisal**

Performance Appraisal System – Meaning, Features and Objectives of Performance Appraisal, Factors affecting Performance Appraisal, Benefits of Performance Appraisal, Problems with Performance Appraisal, Essentials of a Good Appraisal System, Evaluation of a Performance Appraisal System

**Unit 4 10 hours**

**Methods of Appraisal**

Appraisal Methods on the basis of approaches – Ranking–Forced Distribution, Paired Comparison, Check List, Critical Incident, Graphic Rating Scale, BARS–MBO–Human Resource Accounting, 360 degree Feedback, Definition & Uses of 360 degree feedback, Rationale for 360 degree feedback, Scope of application in various industries, Advantage and disadvantage of 360 degree feedback, Concept of Potential Appraisal, Requirements for an Effective Potential Appraisal system, Performance Appraisal and Potential Appraisal

**Unit 5 10 hours**

**Competency Mapping**

Competency Mapping: Concept of Competency and Competence- Constituents of competence-Types of Competencies-Competency Management-Significance of competency-based performance management-Competency based performance management strategy-intervention and drivers.

**Reference Books:**

1. A. S. Kohli and Tapomoy Deb, Performance Management, Oxford University Press
2. Chadha: Performance management, Excel Books
3. Hartle: Transforming Performance Management Process, Kogan page.
4. Herman Aguinis: Performance Management, Pearson Education
5. Michael Armstrong: Performance Management- Key Strategies and Practical Guide, Kogan Page.
6. Murphy and Cleaveland: Performance Appraisal, Sage Publication
7. Srinivas R. Khandula: Performance Management: Strategies, Interventions and Drivers, Prentice Hall of India.

**Specialisation 2.18**

**MMSS409: Organizational Change and Development**

Learning hours: 30

Credits: 3

**Objectives:**

The purpose of this course is to learn to plan and implement change at the individual, group and organizational level. The course is designed to help to develop the students as potential change agents and OD professionals. It develops insight in diagnostic and intervention processes and skills for initiating and facilitating change in organizations.

**Unit 1 10 hours**

**Organisational Change**

Concept, forces and types of organizational change ‐  External and Internal, Recognizing the need for change, problem diagnosis, The Six‐Box organizational Model, The 7‐S  framework, Identifying alternate change techniques, Resistance to change, Managing resistance to change, The process of organizational change. Incremental Change vs Disruptive Change.

**Unit 2 10 hours**

**Managing Change**

Managing Change: Planning, Creating the support system, Internal Resource Persons (IRP) and External agent, managing the transition, organization restructuring, reorganizing work activities, strategies, process oriented strategies, competitor and customer oriented strategiesng.

**Unit 3 10 hours**

**Organisational Development**

Organisational change and process Consultation, Organisation Development, OD process, OD Interventions, Action Research orientation, Evaluating OD Effectiveness.   Managers as change agents, Internal and external change agents, Organizational change and its management in manufacturing and service sectors‐ Power sector reforms in Orissa.

**Unit 4 10 hours**

**OD Interventions**

Concept, Types of Interventions, Person Focused Interventions, Role Focused Interventions, Sensitivity Training, Team – Building, Survey Feed Back, Process Consultation, Grid – OD, System 4 Management, Action Research, Intervention Design – Designing New Need Based Interventions for OD.

**Unit 5 10 hours**

**Organizational Effectiveness**

Concept, Factors, Organizational Effectiveness Approaches, Maximization versus Optimization of Effectiveness, Integration of Individual & Organizational Goals, Effectiveness through Adaptive Coping Cycle Organizational Climate: Concept, Factors Affecting Organizational Climate, Measurement of Organizational Climate-Measuring tools -Questionnaires, Interviews etc.

**Reference Books:**

1. Bennis,Warren G.,1966,Changing Organizations , McGraw Hill .
2. Chakraborty,Managing Organizational Change , Prentice Hall Inc.New Delhi.
3. Davis, Keith, 1989,Human Behaviour at Work , McGraw hill inc.
4. French & Bell ,Organisational Development, Prentice Hall Inc.
5. French & Kast ,1985,Understanding Human Behaviour,Harper & Row Publishers.
6. Mehta, Praticipation & OD , Tata McGraw Hill.
7. Cummings and Worley, Organizational Development and Change.
8. Management of Organization Changes, K. Harigopal, Response Book
9. Managing Organizational Change, Palmer Dunford Avin ‐ TMH
10. Organisational structure change and management, Bhattacharya, HPH
11. Organization Change & Development, Kavita Singh, Excel
12. Ramnarayan, S. Rao, T. V., Organizational Development.
13. Training in Organizations, Goldstein, Ford ‐ Cengage.