

**CORE PAPER****PGDM3CP01: Business Analytics**

Subject Credits: 4

Hours per week: 4

Total Hours Required: 50 Hrs.

<b>Module 1: Fundamentals of Analytics - Theory</b>
<b>Basics</b> <ul style="list-style-type: none"> <li>✓ Theory Testing vs. Theory Building</li> <li>✓ Data &amp; Measurement: Behavioural &amp; Absolute &amp; Categorical vs. continuous</li> <li>✓ Confirming Patterns &amp; Knowledge Discovery</li> <li>✓ Types of Learning – Supervised, Unsupervised and reinforcement</li> <li>✓ Types of Analytics</li> </ul>
<b>LAB - Basic Analyses and Data preparation Using R</b>
<b>Introduction to R</b> <ul style="list-style-type: none"> <li>✓ Data types, Structures and rules of R syntax</li> <li>✓ Recode, Rename, subset, Keep, Drop, Merge, Aggregate</li> <li>✓ Random generation, apply commands</li> <li>✓ Functions, Control flow, arithmetic functions</li> </ul>
<b>Module 2: Data visualization using ggplot2 / Tableau/Excel</b>
<b>Data visualization : Patterns and insights</b> <ul style="list-style-type: none"> <li>✓ Types of measures and types of Graphs and charts</li> </ul>
✓ one variable, two variable and multiple variables using ggplot
<b>LAB - Introduction to Tableau</b>
<ul style="list-style-type: none"> <li>✓ Charts and Graphs</li> <li>✓ Pie, Bar, Box plot whisker , Heat maps, geo maps</li> <li>✓ Introduction to Dashboard and Story board using Tableau</li> </ul>
✓ Simple dashboard and score board using MS-Excel
<b>Module 3: LAB - Testing of Hypothesis using R</b>
<b>Intro to Testing of Hypothesis</b> <ul style="list-style-type: none"> <li>✓ Probability and distribution</li> <li>✓ When to use what type of statistical techniques</li> <li>✓ Chi square, Z proportion test, T test</li> <li>✓ One way ANOVA, Post hoc test</li> <li>✓ Correlation Using Apply command</li> </ul>
<b>Module 4: Introduction to Supervised learning using R and Python</b>
<b>Supervised Learning</b> <ul style="list-style-type: none"> <li>✓ Multiple linear regression: simple, multiple, lasso and ridge</li> <li>✓ Classification Techniques - BLR &amp; MNLR</li> </ul>
<b>Case let: Attrition, Prediction of Salary, Estimating of market of share of Brand, Modelling volatility</b>
<b>LAB - Introduction to Supervised learning technique</b>
<ul style="list-style-type: none"> <li>✓ Regression Analysis : testing and predicting model</li> <li>✓ Binary Logistic Regression: Base model, confusion matrix, model performance and ROC</li> <li>✓ MNLR: Predicting the market share of brand Introduction to Time Series using stock market examples <ul style="list-style-type: none"> <li>✓ Computation of returns – simple and log</li> </ul> </li> </ul>

<ul style="list-style-type: none"> <li>✓ Unit root test – ADF</li> <li>✓ Time series graphs</li> <li>✓ ARIMA Model</li> <li>✓ Cointegration model</li> </ul>
<b>LAB: Time series analysis</b>
<ul style="list-style-type: none"> <li>✓ Unit root test – ADF, PP and KPSS</li> <li>✓ Cointegration</li> <li>✓ AR, MA, ARIMA</li> <li>✓ GARCH</li> <li>✓ Time series Graphs</li> </ul>
<b>Module 5: Unsupervised Learning and Textual Analytics</b>
<b>Unsupervised Learning</b>
<ul style="list-style-type: none"> <li>✓ Exploratory Factor Analysis / PCA</li> <li>✓ Cluster Analysis</li> </ul>
<b>LAB - PCA and Cluster Analysis – K means</b>
<ul style="list-style-type: none"> <li>✓ PCA Vs. ML, Eigen value, KMO, Communalities, Loadings &amp; Score</li> <li>✓ Cluster Analysis – Hierarchal and K Means cluster</li> <li>Introduction to Textual analytics on unstructured data <ul style="list-style-type: none"> <li>✓ Word cloud</li> <li>✓ Sentimental analysis</li> </ul> </li> <li>✓ Clustering</li> </ul>

### PGDM3CP02: Artificial Intelligence and Machine Learning

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs.

<b>Module 1: Python Programming &amp; Basic Statistics</b>
<ul style="list-style-type: none"> <li>• Introduction to Artificial Intelligence &amp; Machine Learning <ul style="list-style-type: none"> <li>o Introduction to Machine Learning</li> <li>o Machine Learning tools and Techniques</li> </ul> </li> <li>• Introduction to Statics <ul style="list-style-type: none"> <li>o Data Distributions</li> <li>o Mean</li> <li>o Variance</li> <li>o Standard deviation</li> <li>o Probability</li> </ul> </li> <li>• Data Visualization &amp; Graphs <ul style="list-style-type: none"> <li>o Types of Charts</li> <li>o Factors Deciding the uses of Charts</li> <li>o Scatter Plot</li> <li>o Mekko</li> <li>o Heat Map</li> <li>o Bubble Chart</li> </ul> </li> <li>• Introduction to Python <ul style="list-style-type: none"> <li>o Software Setup Instructions</li> <li>o Anaconda / Jupyter Notebook</li> <li>o Data Types</li> <li>o Strings in Python</li> <li>o Variables and values</li> <li>o Loops and decision Making</li> </ul> </li> <li>• Sequences and File Operations <ul style="list-style-type: none"> <li>o Python files I/O Functions</li> <li>o Lists and related operations</li> </ul> </li> </ul>

- o Tuples and related operations
- o Functions and OOPs
- Working with Modules and Handling Exceptions
  - o Standard Libraries
  - o Modules Used in Python (OS, Sys, Date and Time etc.)
  - o Errors and Exception Handling

## Module 2: Advance Python Programming, visualization, web scrapping using python

- Introduction to NumPy & Pandas
  - o Create arrays using NumPy
  - o Use NumPy to perform mathematical operations on arrays
  - o Read and write data from text/CSV files into arrays and vice-versa
  - o Understand Pandas and employ it for data manipulation
  - o Understand and use the data structures available in Pandas
- Data Visualisation using Python modules
  - o Matplotlib library
  - o Grids, axes, plots
  - o Markers, colours, fonts and styling
  - o Types of plots - bar graphs, pie charts, histograms
- Web scrapping using Python Libraries
  - o Beautiful Soup Library
  - o Scrapy Library
  - o Hands on performing web scrapping
- Data Handling, Data Validation and Graphs
  - o Important packages used in Machine Learning
  - o Data importing
  - o Working with datasets
  - o Descriptive statistics
  - o Central Tendency
  - o Variance
  - o Percentiles
  - o Outlier detection
  - o Variable distribution charts

## Module 3: Classification using Linear Regression, Logistic Regression and Trees

- Introduction to Machine Learning
  - o Supervised Learning
  - o Un-supervised Learning
  - o Reinforced learning
- Regression Analysis
  - o Correlation
  - o Simple Regression models
  - o R-Square
  - o Multiple regression
  - o Multicollinearity
  - o Individual Variable Impact
  - o Air passenger's data case study
  - o SAT score data case study
- Logistic Regression
  - o Need of logistic Regression
  - o Logistic regression models

<ul style="list-style-type: none"> <li>o Validation of logistic regression models</li> <li>o Multicollinearity in logistic regression</li> <li>o Individual Impact of variables</li> <li>o Confusion Matrix</li> <li>o Service Provider Attrition data case study</li> <li>• Decision Trees <ul style="list-style-type: none"> <li>o Segmentation</li> <li>o Entropy</li> <li>o Information gain</li> <li>o Building Decision Trees o Validation of Trees</li> <li>o Pruning the trees</li> <li>o Fine tuning the trees o Prediction using Trees</li> <li>o Customer retention case study</li> </ul> </li> <li>• Sentiment Analysis <ul style="list-style-type: none"> <li>o Understanding sentiment Analysis</li> </ul> </li> </ul>
o Sentiment analysis Hands on using twitter Data
<b>Module 4: Supervised Learning, Unsupervised Learning and Algorithms</b>
<ul style="list-style-type: none"> <li>• Supervised Learning <ul style="list-style-type: none"> <li>o Understand What is Naïve Bayes Classifier</li> <li>o How Naïve Bayes Classifier works?</li> <li>o Understand Support Vector Machine</li> <li>o Illustrate How Support Vector Machine works?</li> </ul> </li> <li>• Unsupervised Learning &amp; Cluster Analysis <ul style="list-style-type: none"> <li>o Supervised vs unsupervised learning</li> <li>o Need of Cluster Analysis</li> <li>o K- Means clustering algorithm</li> <li>o The theory behind cluster Analysis</li> <li>o Building and interpreting clusters</li> </ul> </li> <li>• Chat Bots <ul style="list-style-type: none"> <li>o Understanding Chatbots</li> </ul> </li> </ul>
o Hands on Chatbot session
<b>Module 5: Model Validation Techniques &amp; Neural Networks with Tensor flow</b>
<ul style="list-style-type: none"> <li>• Model Selection and Cross validation <ul style="list-style-type: none"> <li>o How to validate a model?</li> <li>o What is a best model?</li> <li>o Types of data &amp; Errors</li> <li>o The problem of over fitting</li> <li>o The problem of under fitting</li> <li>o Bias Variance Trade-off</li> <li>o Cross validation techniques</li> </ul> </li> <li>• Neural Networks <ul style="list-style-type: none"> <li>o Neural network Intuition</li> <li>o Neural network and vocabulary</li> <li>o Neural network algorithm</li> <li>o Math behind neural network algorithm</li> <li>o Building the neural networks</li> <li>o Validating the neural network model</li> </ul> </li> <li>• Introduction to Tensor Flow <ul style="list-style-type: none"> <li>o How Deep Learning Works?</li> <li>o What is Tensor Flow?</li> <li>o Tensor Flow code-basics</li> </ul> </li> </ul>

**ELECTIVE: MARKETING MANAGEMENT****PGDM3MM01: Consumer Behaviour and Marketing Research**

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs.

<b>Module 1: Consumer Behavior</b>
Introduction, Factors influencing consumer personality, Psychographics, Family, Society, Values of Attitude and Lifestyles, Different models of consumer behaviour – Economic, Learning, Psychoanalytical, Sociological, Howard Shett, Nicosia, Webster and Wind, Engel, Blackwell and Minard models.
<b>Module 2: Buying Decision Making Process</b>
Buying roles, Stages of the decision process- High and low effort decisions, Post purchase decisions, Models of consumer behaviour
<b>Module 3: Marketing Research Designs</b>
Types of research designs, Techniques and tools of data collection-Scales and measurement, Various types of data, Sampling techniques, Sample size determination. Analysis and interpretation of data. Reporting the research findings.
<b>Module 4: Application of Quantitative Tools in Marketing</b>
Decision making using Regression analysis, ANOVA, Discriminant analysis, Factor analysis, Cluster analysis, Multi-dimensional scaling and Conjoint analysis, Use of SPSS for data analysis.
<b>Module 5: Market Research</b>
Marketing and market research, Qualitative research, Market and sales analysis. Motivation research, Communication research, Product, Pricing and Distribution research.
<b><u>Textbooks and References:</u></b>
<ul style="list-style-type: none"> <li>• <i>Marketing Research – R. Nargundkar</i></li> <li>• <i>Consumer Behaviour – Schiffman and Kanuk</i></li> <li>• <i>Marketing Research – Tull, Green and Hawkins</i></li> <li>• <i>Business Research Methods – Zikmund</i></li> <li>• <i>Marketing Research – N. K. Malhotra</i></li> <li>• <i>Marketing Research – Parashuraman, Grewal</i></li> <li>• <i>Consumer Behaviour – Hoyer Mac Innis</i></li> </ul>

**PGDM3MM02: Sales and Logistics Management**

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs.

<b>Module 1: Sales Management</b>
Objectives of sales management, Personal selling process, Developing personal selling strategies. Organizing the sales force-Types of sales organizations-Determining the kind of Sales force and Size of the sales force. Qualities of sales executives.
<b>Module 2: Managing the Sales Force</b>
Effective Recruiting, Selecting and Training the sales force. Time and territory management, Sales territories and Sales Quotas-Compensating sales force, Motivating the sales force-Controlling the sales force-Evaluating the sales force.
<b>Module 3: Retailing and Wholesaling</b>

Non - store retailing, E-tailing, Direct marketing, Telemarketing, Marketing on the net, Emerging trends in retailing & wholesaling.
<b>Module 4: Distribution and Logistics Management</b>
Design of distribution channel, Structure and Channel Management. Components of logistics, inbound and outbound logistics, key logistics activities viz., Customer services – Inventory management Material handling Communication – Order processing, Packaging – Traffic and transportation – Warehousing and storage.
<b>Module 5: Logistics Strategy</b>
Logistics information system, Organizing for effective logistics, Implementing logistics strategy – Computer packages used in logistics. Retailing and wholesaling, sales and logistics for rural markets.
<b><u>Textbooks and References:</u></b>
<ul style="list-style-type: none"> <li>• <i>Sales Management – Decisions , Strategies and Cases – Richard R. Still, Edward W. Cundiff and Norman A . P. Govani</i></li> <li>• <i>Professional Sales Management – R. E. Anderson, Joseph F. Har, Alan J. Bash</i></li> <li>• <i>Marketing Channels – Louis W. Stern, Adel I. ER – Ansary, T. Coughlan</i></li> <li>• <i>Fundamentals of Logistics Management – M. Lambert , James R. Stock, M. Eliram</i></li> <li>• <i>Logistics Management – Donald J.B. and D.J. Closs</i></li> <li>• <i>Logistics and Supply Chain Management – Martin Christopher</i></li> <li>• <i>Sales Management – Analysis and Decisions Making – Thomas N. Ingram</i></li> <li>• <i>Managing Supply Chain – J. L. Gattorn and D. W. Wald is</i></li> </ul>

### PGDM3MM03: Advertising and Promotion Management

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs.

<b>Module 1: Promotion Mix:</b>
Elements of marketing promotion mix, Advertising, Publicity, Personal selling, Public relations and sales promotion, Determinants of promotion mix.
<b>Module 2: Advertising:</b>
Types of advertisement, advertise ability and advertising aids, Advertising planning and decision making.
<b>Module 3: Advertising Campaign Planning:</b>
Setting advertising goals and objectives, The DAGMAR Approach. Message strategies and tactics, Creative approaches, Copy writing and testing, Advertising copy design and communication strategy, Copy – visualization layout, Advertising appeals and themes, Classification of advertisement copies, Essentials of a good copy. Exercises in drafting advertisement copy.
<b>Module 4: Advertising Media:</b>
Types of media, media planning and scheduling, Advertisement budgets, approaches to advertising, budgeting. Measuring advertising effectiveness. Advertising strategies for rural markets.
<b>Module 5: Advertising Agencies:</b>
Profile of major advertising agencies in India And abroad, Rural advertising, social advertising, ethics

in advertising, advertising standards council of India (ASCI).

**Textbooks and References:**

- *Advertisement and Promotion – Belch and Belch*
- *Advertising – Aaker and Bathra*
- *Advertising Management – Chunawalla*
- *Advertising Management – Write and Ziegler*
- *Contemporary Advertising – Williams Arens*
- *Advertising Management – Rajeev Batra , John G. Myer, David Aker*
- *Advertising Planning & Implementation – Sangeeta Sharma & Raghuvir Singh*
- *Advertising Principles and Practice – Wells, Moria ry, Burnett*
- *Advertising Management – Jaishri Jethwanry , Shruthi Jain*
- *Marketing Communication – Dahlen*

**ELECTIVE: HUMAN RESOURCE MANAGEMENT**

**PGDM3HR01: Human Resource Development**

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs.

**Module 1: Human Resource Development**

Sub systems of HRD & OD, HRM and HRD, Emerging trends in HRD, HRD in IT industry, public sector, government organizations, and NGOs.

**Module 2: Performance Management**

Traditional and modern techniques, Open Appraisal – Identification of Key Performance Areas and Key Result Areas – Managerial appraisal – Ethical issues in performance appraisal. Potential appraisal, Feedback mechanisms, Performance management and career development. Bi – directional performance management.

**Module 3: Mentoring, Coaching & Employee Counselling Services**

Nature mentoring and coaching, Coaching to improve poor performance, Effectiveness of coaching, Need for employee counselling programs, Components & Characteristics, Issues in employee counselling.

**Module 4: Career Planning and Development**

Meaning and process – Career path, Career width and Length – Succession planning – Career Development.

**Module 5: Learning and development in knowledge setting**

Knowledge environment, creating a holistic developmental approach, developing social capital, developing knowledge leadership capabilities, project – based learning, working with technology, building a comprehensive knowledge development strategy, planning for individual development.

**Textbooks and References:**

- *Human Resource Development – Randy L. Desimone, Jon M. Werner & David M. Harris.*
- *Designing and Managing Human Resource Systems – Pareek, Udai and Rao T. V.*
- *Recent Experience in Human Resource Development – Rao T. V. and Pereira, D.H.*

- *Performance Appraisal – Theory and Practice – Rao T. V.*
- *Effective Human Resource Development – Neal E. Chalofsky, Carlene Reinhart.*
- *Human Resource Management – Satyadian S. Mirza*
- *Knowledge Management – Shelda Debowski – John Wiley , India*

### PGDM3HR02: Organizational Change and Development

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs.

<b>Module 1: Organizational Change</b>
Planned organizational change, Change agents, Dynamics of resistance to change, Planned change. Quality work life.
<b>Module 2: Organization Development</b>
History of Organization, Development – Values – Assumptions – Beliefs in organization development.
<b>Module 3: Theory and Management of Organization Development</b>
Foundations of organization development – Managing the organization development process – Action research and organization development.
<b>Module 4: Organization Development Intervention</b>
Team intervention - Intergroup and third party peacemaking intervention –Comprehensive intervention – Structural interventions – Training experiences.
<b>Module 5: Key Considerations and Issues</b>
Issues In consultant – Client Relationships – System ramifications - Power, politics and organization development – Research in organization development
<b><u>Textbooks and References:</u></b>
<ul style="list-style-type: none"> <li>• <i>Organization Development – Franch and Bell;</i></li> <li>• <i>Organization Behaviour – Fred Luthans</i></li> <li>• <i>Human Behaviour at Work – Keith Davis; Organizational Design for Excellence – Khanda walla</i></li> <li>• <i>Organizational intelligence – Silber Kearny</i></li> <li>• <i>The dance of change – Peter Senge and others</i></li> <li>• <i>The fifth discipline – Peter Senge</i></li> </ul>

### PGDM3HR03: Training and Development

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs.

<b>Module 1: Training</b>
Introduction, Importance of training, Advantages of training, Training challenges, Changing workplace and workforce, Training as a subsystem of HRD, Learning environment, Instructional design, Learning outcomes, Feedback, Conditions of transfer, Converting training objectives to training plan.
<b>Module 2: Training Needs Assessment (TNA)</b>



Methods of TNA, Organizational support for TNA, Organizational analysis – Specifying goals, Identifying constraints, Resource analysis, Learning principles, Training enhancement, Trainee characteristics.
<b>Module 3: Training Delivery</b>
Traditional Vs Modern methods, SDLP, Simulated Work settings, DLP, CDROM, Interactive Multimedia, Web – based instructions, Intelligent Training System (ITS), Virtual Reality Training (VRT).
<b>Module 4: Training Evaluation</b>
criteria, Evaluation of criteria, Dimensions of criteria, Use of experimental designs, Quasi experimental designs, Utility conservations, Individual difference models, Content validity model, Statistical method
<b>Module 5: Training Interventions</b>
Learning Experience and Building Organization Capability, Employee capability, Apprenticeship, Vestibule, Embedded training, Teambuilding, cross and Inter – positional training, Leadership training.
<b><u>Textbooks and References:</u></b>
<ul style="list-style-type: none"> <li>• <i>Training in Organization – Irwin L. Goldstein, J. Kevin Ford.</i></li> <li>• <i>Effective Training: System Strategies &amp; Practices – P Nick Blanchard James W Thacker.</i></li> <li>• <i>Training For Organizational Transformation – Rolf P Lynton Udai Pareek</i></li> <li>• <i>The Trainers portable mentor – Gargulo &amp; Others</i></li> </ul>

### **ELECTIVE: SUPPLYCHAIN MANAGEMENT**

#### **PGDM3SC01: Supply Chain Management**

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs.

<b>Module 1: Introduction to Supply Chain Management:</b>
Concept, Objectives and function of SCM, conceptual framework of SCM, supply chain strategy, operating model for supply chain Managing the External and internal supply chain.
<b>Module 2: Global Supply Chain Management:</b>
EDI, Problems of complexity confronting supply chain Management, Reverse Supply Chain. Value chain and value delivery systems for SCM. Organization Design and Management of supply chain.
<b>Module 3: Sourcing:</b>
Sourcing of material, Global sourcing - issues, Problems. Group Purchasing, Inventory Management in Supply chain: Role and importance of inventory in SC, Inventory policies, JIT, VMI. Role of Stores management in SC, inventory as an element of customer service.
<b>Module 4: Strategic Issues in Supply Chains:</b>
Lean Manufacturing, Strategic Partnerships, Alliances, and Collaborative advantage. Strategic relationship sin - logistics, Handling systems and equipment, Stores management. Best practice and Benchmarking, Re – engineering of supply chain.
<b>Module 5: Retailing and supply chain Interface:</b>
Retail supply chain management, Transportation and inventory in retail SC, Channel design and management, Role of Packaging and Repackaging in Retail business, Customer led business, Customer focus in Supply Chain, Complaint Handling, developing customer service strategy, RFID and Bar coding.
<b><u>Textbooks and References:</u></b>
<ul style="list-style-type: none"> <li>• <i>Mohanty, R. P and Deshmukh, S . G , 2005,. Supply Chain Management</i></li> </ul>

*Theory and practices, Biztantra .*

- *Sunil Chopra & Meindl Peter, 2003 , Supply Chain Management strategy, planning and operation, 3rd Edition, Pearson Education / PHI.*
- *Altekar , V. Rahul , 2005 , Supply Chain Management , PHI .*
- *Pierre David, 2003 , International Logistics, Biztantra .*
- *Joel D. Wisner, G. Keong Leong and Keah - Choon Tan, 2005 , Principles of Supply Chain Management A balanced Approach, Thomson.*
- *Ronaqld H. Ballou , 2004 , Business Logistics /Supply Chain Management, Pearson education, 5th Edition.*
- *Coyle, J . J . , Bardi E. J . & John Langley . C , 2006 , The Management o f Business Logistics - A supply Chain Perspective Thomson, 7th Edition.*
- *B. S . Sahay, 2004 , Supply Chain Management for Global Competitiveness, Macmillan India Ltd, 2nd Edition.*
- *Metze r, 2005 , “ Supply Chain Management ”, Response.*

**PGDM3SC02: Operations Strategy**

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs.

<b>Module 1: Introduction to Operations Management:</b>
Role of Operations Management In total management System – Inter face between the operation systems and systems of other functional areas. Production Planning and Control: Basic functions of Production Planning and Control, Production Cycle – characteristics of process technologies.
<b>Module 2: Control of production operations:</b>
Plant Capacity and Line Balancing. Plant layout – different types of layouts. Location and the factors influencing location. Maintenance Management: Objectives – Failure Concept, Reliability, Preventive and Breakdown maintenance, Replacement policies.
<b>Module 3: Strategy &amp; Operations:</b>
Frame work for operations strategy. Tradeoffs, Productivity & competition. Processing Network Strategies – Capacity and real asset investment, Capacity Timing and Flexibility Risk Management and Operational Hedging.
<b>Module 4: Supplier &amp; Customer Strategies:</b>
Outsourcing vs. Integration, Purchasing Supply Management, Designing contracts & pricing; Mass customized service, Timely service & Incentive mgt, Revenue management
<b>Module 5: Learning &amp; Growth Strategies:</b>
Global standardization automation, Employee competencies & culture, Learning & process improvement, competing through learning and innovations.
<ul style="list-style-type: none"> <li>• <i>Operations Management, Stevenson J. William , 2007, 9th Edition, TMH.</i></li> <li>• <i>Operations Management strategy and analysis, Lee J. krajewski and Larry P. Ritzman, 2007, 9th Edition, Pearson</i></li> <li>• <i>Operations Strategy by Slack and Lewis. Prentice Hall, 2003.</i></li> <li>• <i>Manufacturing Strategy by Hill. Irwin McGraw-Hill, 2000.</i></li> <li>• <i>Manufacturing Strategy: How to formulate and implement a winning plan by Miltenburg. Productivity Press, 1995.</i></li> </ul>

- *Restoring our competitive edge: competing through manufacturing by Hayes and Wheelwright. John Wiley & Sons, 1984.*
- *Operations Strategy by David Garvin. Prentice Hall, 1992*
- *Balanced Sourcing by Laseter. Jossey-Bass Publishers, 1998.*

### PGDM3SC03: Services & Retail Marketing

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs.

#### Module 1: Service:

Concepts, Scope of Services. Goods – Services continuum. 4Is of Services Goods and Services Categorization. Industrial Services. Segmentation target Marketing and positioning, Customer expectations and perceptions of services.

#### Module 2: Service marketing Mix:

Product, Pricing, Place, Promotion, People, Physical evidence and process. Dimensions of Service Quality, Measuring service Quality.

#### Module 3: Strategies for Marketing:

Over view, strategies for dealing with intangibility, inventory, inconsistency and inseparability. Building customer Relationship through Segmentation and retention strategies. Service Marketing Triangle – External Marketing, Internal Marketing, Relationship Marketing and Interactive Marketing.

#### Module 4: Introduction to Retailing:

Types, Franchising in retail, Technology in retail, Factors affecting retail, Retailing process. Retailing in India and emerging trends and Policy imperatives.

#### Module 5: Merchandise Management:

Sources of merchandise, Logistic Management, Category Management, Store Layout, Design and Visual Merchandising, Retailing Strategy and Customer Service.

#### Textbooks and References:

- Hoffman, 2007 , “ *Services Marketing* ”, Thomson .
- Lovelock, Chat t e r j e e , 2006 , *Services Marketing People , Technology Strategy, 5 th edition, Pearson Education.*
- David Gilbert, 2003 , *Retail Marketing Management, 2nd edition, Pear son Education.*
- Zeithaml Valorie A . and Bitner Mary, 2000, *Services Marketing TMH.*
- Rampal M. K. and Gupta S. L, 2000, *Service Marketing, Concepts, application and cases,*
- Galgotia Publishing Company, New Delhi.
- Levy & Weitz, 2005 , *Retailing, TMH*
- A J Lamba, 2006 , *The Art of Retailing, TMH*
- Patrick M. Dunne and Robert F. Lusch , 2005 , *Retailing, Thomson Learning*
- Fernie & Sparks, 2005, *Logistics & Retail Management, Viva Books*
- Gilmore, 2005, *Services marketing and Management, Response Books*
- Gronroos, 2005, *Services Management & Marketing, John Wiley*
- Cullen & Newman, 2007, “ *Retailing, environment and operations* ”, Thomson.

### ELECTIVE: INTERNATIONAL BUSINESS

**PGDM3IB01: International Economics**

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs

<b>Module 1: Theories of International Trade:</b>
The law of comparative advantage, the standard theory of international trade, factor endowment and the Hecksher - Ohlin theory.
<b>Module 2: Demand &amp; Supply Analysis:</b>
Introduction, the equilibrium relative commodity price with trade – partial and general equilibrium analysis, relationship between general and partial equilibrium analyses, offer curves, the terms of trade and gains.
<b>Module 3: Economies of Scale:</b>
Introduction, imperfection petition and international trade, trade based on dynamic technological differences, cause of transportation, industry location, environmental standards and international trade.
<b>Module 4: Economic Growth and International Trade:</b>
Growth factors of production, technical progress, growth and trade in small country and large country perspective, effect and evaluation, trade changes.
<b>Module 5: Trade Modes:</b>
Modes, determinants, foreign investments – FDI, FPI, FDI on national treatment factor. Heterogeneity in international trade, India in the global setting and globalization of Indian business.
<b><u>Textbooks and References:</u></b>
<ul style="list-style-type: none"> <li>• <i>Domenic Salvator – International Economics</i></li> <li>• <i>Paul R. Krugman and Obstfeld. M – International Economics, 3<sup>rd</sup> Edition, Harper Collins Pub., 1994</i></li> <li>• <i>Buckley, Adrian – Multinational Finance, New York, Prentice Hall Inc. m 1996.</i></li> <li>• <i>International Economics – Robert J. Carbaugh 2008.</i></li> <li>• <i>International Economics – Theo. S. Eicher, John H. Mutti and Michel le H. Tumovsky – 2009</i></li> <li>• <i>International Economics – Global Markets and competition – Henry Thompson, 2006</i></li> </ul>

**PGDM3IB02: International Trade Policy**

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs

<b>Module 1: Over view of International Trade</b>
Introduction, development, operating factors, factors leading to growth in international trade and evaluation.
<b>Module 2: Trade Restrictions</b>
Partial equilibrium analysis and effects of tariffs, theory of tariff structure – the rate of effective protection, generalization and evaluation theory of effective protection, general equilibrium analysis of tariff in small and large country perspective, optimum tariff.
<b>Module 3: Non-trade Barriers and Protectionism:</b>

Introduction – import quotas – other non – tariff barriers and new protectionism – the political economy of protectionism – strategic trade and industrial policies, the Uruguay round and outstanding trade problems.
<b>Module 4: Economic Integration – Custom unions and free trade areas:</b>
Trade creating custom unions, trade diversions, theory of second best and other static welfare effects of custom unions – dynamic effects from custom union, analysis of economic integration - EUFTA, NAFTA, attempts at economic integration among developing countries, transition economies and emerging economies.
<b>Module 5: International Trade &amp; Economic Development:</b>
Regulations, free trade, protection, determinants, FDI regulations, currency convertibility regulations, regulations of foreign trade and implementation in India, importance and terms of trade to development, export in stability, import substitution / export orientation, current problems facing developing countries.
<b><u>Textbooks and References:</u></b>
<ul style="list-style-type: none"> <li>• <i>International Trade Policy – A contemporary analysis – Nigel Golm wade</i></li> <li>• <i>International Trade and Trade Policy – Ethan Helpman</i></li> <li>• <i>International Trade Policy – A developing country perspective author: Dilip K. Das</i></li> <li>• <i>International Trade Policy for Technology Transfer – Yi Shin Tang, 2009</i></li> <li>• <i>International Trade Policy – Fredrick Victor Meyer – 1978</i></li> </ul>

### PGDM3IB03: Export – Import Procedures

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs

<b>Module 1: International Trade Policy Frame work:</b>
Regulations for International trade, legal aspects of exports – imports contract, EXIM policy of India.
<b>Module 2: Export Trade Procedures &amp; Documentation:</b>
Export procedures, pre shipment inspection procedure, export documentation, ECGC relevance's, incentives, eligibility criteria, performance evaluation, self – certification procedures, concessions and promotional advantages.
<b>Module 3: Export Promotion Measures in India:</b>
Export promotion organizations, role of government agencies, STC, MNC / TNC's in promoting exports and evaluation of its impact on BOP.
<b>Module 4: Import Trade Procedures &amp; Documentation:</b>
Restrictions, role and relevance of government interventions, measurement of import parity on GDP.
<b>Module 5: Role of International Trading Centre in E - commerce:</b>
Computational analysis of India's export import logistics and simplification of procedural formalities and requirements.
<b><u>Textbooks and References:</u></b>
<ul style="list-style-type: none"> <li>• <i>Desai. H . B – Indian Shipping Perspectives, Delhi , Anupam Publications, 1988</i></li> </ul>

- *Government of India handbook of Import – Export Procedures*
- *Paras Ram – Export: What, Where and How, Delhi, Anupam Pub., 1995.*
- *Export Management – Balagopal*
- *Export Import Procedures – Thomas E. Johnson*
- *New Import Export Policy & Handbook of Procedures- Nabhi*
- *International Trade & Export Management – Francis Cherunilam*

### **ELECTIVE: INFORMATION SYSTEMS**

#### **PGDM3IS01: System Analysis and Design**

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs

#### **Module 1: System Analysis Fundamentals and the Modern Systems Analyst:**

Introduction to systems analysis and design, information system components, types of business information systems, organizational structure. Systems development techniques and tools, the SDLC, the systems analyst position.

#### **Module 2: Information Requirements Analysis:**

Systems planning, preliminary investigation, the importance of strategic planning, a frame work for systems development, information system projects, evaluation of systems requests, steps in preliminary investigation.

#### **Module 3: Systems Analysis Process:**

Requirements modelling, system development methods, modelling tools and techniques, systems requirement checklist, fact – finding, interviews, other fact – finding techniques, documentation. Data and process modelling - DFDs, data dictionary, process description tools, logical vs. physical models. Object modelling – object – oriented terms and concepts, objects and classes.

#### **Module 4: The Design Process and its Essentials:**

Evaluating software alternatives, steps in evaluating and purchasing software packages, transition to systems design, proto typing. User interface, input and output design, user interface design. Systems implementation – application development, structured application development, object-oriented application development, testing the application, documentation, management approval, installation and evaluation, training, data conversion, systems support – user support activities, maintenance activities, systems obsolescence.

#### **Module 5: Cross Life Cycle Activities and Skills:**

Project and process management techniques, fact finding and information gathering, feasibility and cost – benefit analysis, joint application development, inter personal skills and communications.

#### **Textbooks and References:**

- *Jeffrey L. Whitten and Lonnie D. Bentley – Systems Analysis and Design, Tata Mc Graw Hill*
- *Shelly, Gary b., Cashman, Thomas J and Rosenblatt, Harry J: Systems, Analysis and Design, Thomson*
- *Kendall and Kendall, Systems Analysis and Design, PHI*
- *Len Fertuck – Systems Analysis and Design with Modern Methods – B*

*&E Tech*

- *Satzinger, John W. Jackson, Robert B. Burd, Stephen D, Systems Analysis and Design in A changing world, Thomson*

### PGDM3IS02: Software Engineering Management

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs

#### Module 1: The Product and the Process:

An over view of system engineering, analysis concepts and principles, analysis modeling, design concepts and principles, design methods, design for real time systems.

#### Module 2: Software Life Cycle Models:

Software requirement, software design, configuration management.

#### Module 3: Software Metrics:

Software process and project metrics, technical metrics for software. Project planning and management: Project management concepts, project scheduling and tracking, software project planning.

#### Module 4: Risk Management, Quality Assurance:

Quality verification and valuation, testing.

#### Module 5: Object Oriented Concepts:

Formal Methods, Software re-engineering and software tools.

#### Textbooks and References:

- *Roger S. Pressman: Software Engineering – A Practitioner’s Approach – Tata Mc Graw Hill – I V edition.*
- *Kieron Conway, Software Project Management: From concept to deployment, Wiley Dreamtech Press*
- *Sommerville, Ian: Software Engineering, Addison Wesley*
- *S.A. Kelkar, Software Project Management, PHI*
- *Carlo Ghezzi, Mehdi Jazayeri, Dino Mandrioli – Fundamentals of Software Engineering – PH I*

### PGDM3IS03: Data Management Techniques

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs

#### Module 1

Database Concepts, Schemas, Models, Architectures, Products, Features, OOAD, OOPS, OLAP, OLTP.

#### Module 2

Extraction, Transformation and Loading (ETL), ETL Concepts and Tools in market, Data ware housing, Data Mining, Data Mart, Data Storage Methods.

#### Module 3

Business Intelligence, Tools and Methods.

<b>Module 4</b>
Structure, Design, Development and Managing Corporate Information Systems (CIS).
<b>Module 5</b>
Data Security Management and Control.
<b><u>Textbooks and References:</u></b>
<ul style="list-style-type: none"> <li>• <i>The Data Warehouse ETL Toolkit : Practical Techniques for Extracting, Cleaning</i> by Ralph Kimball and Joe Caserta</li> <li>• <i>ETL Strategy for the Enterprises.</i> by Sandesh Gawande</li> <li>• <i>Business Intelligence: A Capability Maturity Model</i> By Dorothy Miller</li> <li>• <i>Introduction to Business Intelligence</i> By Jorg Hartenauer</li> <li>• <i>Database Management: An Organizational Perspective</i> by Richard T . Watson</li> <li>• <i>Database Systems Design, Implementation, and Management</i> by Peter Rob and Carlos Coronel</li> <li>• <i>Modern Database Management ( 5th Edition)</i> by Fred R . Mc Fadden, Jeffrey A. Hoffer and Mary B. Prescott</li> <li>• <i>Developing Quality Complex Database Systems: Practices, Techniques and Technologies</i> by Shirley A . Becker</li> <li>• <i>Strategic security management: a risk assessment guide for decision makers</i> By Karim H . Vellani</li> <li>• <i>The best damn IT security management book period</i> By Susan Snedaker</li> <li>• <i>Information Security Management with IT IL , Volume 3</i> By Jacques A. Cazemier, Paul Overbeek, Louk Peters</li> <li>• <i>IT governance: a manager' s guide to data security and BS 7799 / ISO 17799</i> By Alan Calder, Steve Watkins</li> </ul>

### **ELECTIVE: FINANCE MANAGEMENT**

#### **PGDM3FM01: Corporate Taxation**

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs

<b>Module 1</b>
Outline of Income Tax Act 1961 Basic Definitions and Concepts, Residential Status, Incidence of Tax, Heads of Income (Income from Salary, Income from House Property, Capital Gains, Income from Other Sources). Exemptions and Deductions relevant to Assessment Year 2019-20 (Simple Problems Only)
<b>Module 2</b>
Computation of Business Income, definitions, Scope, Computation of Profits and Gains from Business or Profession, Assessment of Companies, Deductions, Minimum Alternate Tax u/s 115JB, Dividend Distribution Tax u/s 115-OCalculation of Tax Liability. Problems using Depreciation,(Normal, Additional, Unabsorbed) Setoff and Carry Forward of Losses Advance Payment of Tax, Tax Deducted at Source
<b>Module 3</b>
Tax Planning and Management, Tax Avoidance, Tax Evasions, Comparison of Tax Benefits of Firm, LLP and Company, Make or Buy Decisions, Own or Lease of an Asset.(Simple Problems to be Solved)



<b>Module 4</b>
Customs Duty, meaning and Definition, Import Procedures, Applicability, Chargeability of Customs, Taxable Event, Valuation of Imported Goods, Computation of Customs Duty Payable. Simple Problems
<b>Module 5</b>
Introduction to Goods and Service Tax (GST), IGST,CGST, SGST, Procedure and Levy of Tax under GST, Assessment and Returns, Tax Liability, (Input Tax and Output Tax)( Simple Problems to be solved)

### PGDM3FM02: Financial Strategies

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs

<b>Module 1</b>
Mergers and Acquisitions, Basic forms of acquisitions, Tax forms of Acquisition, Accounting Synergy from an Acquisition, Calculating Value of Firm after Acquisition, NPV of Merger. Simple Problems on Acquisitions
<b>Module 2</b>
Financial Distress and Restructuring: Introduction, Causes and effects of Financial Distress, Financial Restructuring Liquidation and Reorganization
<b>Module 3</b>
Merchant Banking and Credit Rating, Introduction to Merchant Banking, Merchant Bankers, registration, Obligation and responsibilities, underwriters,, Issue Management activities, Credit rating SEBI guidelines, Credit rating Agencies.
<b>Module 4</b>
Capital, Debt and Stock Markets, Fund raising, Equity, Debt and Money Market Instruments, Book building, Shares Buy Back, Green Shoe Option, Mutual Funds, international Equity Markets, FDI, FII
<b>Module 5</b>
Private Equity and Venture Capital, meaning of PE, Limitations of PE, Venture Capital, meaning, stages in Venture Capital Financing, Types of VC advantages , VC players in India,

### PGDM3FM03: Portfolio Management

Subject Credits: 4

Hours per week: 4

Total Hours Required: 40 Hrs

<b>Module 1</b>
Portfolio meaning, definition, Construction, Fundamental principles of PM, Purchasing Power Parity, combination of Debt and Equity Efficient Market Hypothesis,, Capital allocation between the Risky Asset and the Risk Free Asset, Markowitz Model,, Equilibrium in Capital Markets, CAPM, Index models and Arbitrage Theory and Multifactor models of Risk and Return.
<b>Module 2</b>
Portfolio Evaluation, Introduction, Performance, Sharpe's Performance Index, Treynor's Performance Index, Jensen's Performance index,
<b>Module 3</b>
Fixed Income Securities, Bond Prices, and yield, Bond Characteristics and Types, Risk and Return, Exposure and Risk, Types of Risk and Characteristics of Risk, Risk Avoidance, Measurement of

Returns, Forwards ,Futures and Options, Black Scholes Option Pricing Model, CAPM theory, SML
<b>Module 4</b>
Technical Analysis, Market Indicators, Forecasting Individual Stock performance, techniques, Types of Charts, Dow Theory, Elliot Wave Theory, Relative Strength, Contrary Opinion Moving Average,
<b>Module 5</b>
Fundamental Analysis, Introduction, Economic Analysis, Industry Analysis, Company Analysis, Financial Health,, Factors affecting Industrial Performance. (Simple Problems to be solved where ever applicable in Modules)