

Department of Management Studies

Master of Business Administration (MBA)

Curriculum

With effect from July 2018

(for private circulation)



INDIAN INSTITUTE OF TECHNOLOGY MADRAS
CHENNAI 600036

MBA Programme Curriculum
(Revised From July 2013-15 Batch)

CURRICULUM APPLICABLE FOR MBA 2013-15 BATCH ONWARDS						
Pre-term Courses		Non-CGPA Courses : July (3x15hrs= 45 hrs)	L	T	P	C
1	MS 5003	Basics of Probability and Statistics	2	0	0	3
2	MS 5004	Basics of Accounting and Finance	2	0	0	3
3	MS 5005	Spreadsheet Modelling	0	0	3	3
		Total Credits for Non-CGPA courses	4	0	3	9
	Quarter I	AUGUST-OCTOBER	L	T	P	C
4	MS5110	Microeconomics	4	0	0	6
5	MS5120	Organisation Structure and Design	4	0	0	6
6	MS5030	Data Analysis for Management	4	0	0	6
7	MS5040	Financial Accounting	4	0	0	6
8	MS5050	Marketing Management I	4	0	0	6
9	MS5060	Systems Thinking & Applications	4	0	0	6
		Total	24	0	0	36
	Quarter II	OCTOBER-DECEMBER	L	T	P	C
10	MS 5121	Individual Dynamics in Organizations	4	0	0	6
11	MS5260	Management Information Systems	4	0	0	6
12	MS5130	Operations Research	4	0	0	6
13	MS5140	Cost Accounting	4	0	0	6
14	MS5150	Marketing Tools: Strategies and Innovation (Marketing Management II)	4	0	0	6
15	MS 5269	Information Technology Lab	0	0	3	3
16	MS 5031	Data Analysis Applications	2	0	0	3
		Total	22	0	3	36

	Quarter III	JANUARY-MARCH	L	T	P	C
17	MS5010	Macroeconomics	4	0	0	6
18	MS5221	Group Processes in Organisations	4	0	0	6
19	MS5230	Operations Management	4	0	0	6
20	MS 5241	Financial Management-I	4	0	0	6
21	MS 5251	Research for Marketing Decisions	4	0	0	6
22	MS 5171	Managerial Communication	0	0	3	3
23	MS 5242	Financial Analysis Applications	2	0	0	3
24	MS 5729	Social Media Computing	4	0	0	6
25	MS 5754	Nurturing the Inner You	4	0	0	6
		Total	22	0	3	36
	Quarter IV	MARCH-MAY	L	T	P	C
23	MS 5561	Information Systems Analysis	4	0	3	6
24	MS6010	Strategic Management	4	0	0	6
25	MS 5341	Financial Management-II	4	0	0	6
26	MS5330	Supply Chain Management	4	0	0	6
27	MS5320	Human Resources Management	4	0	0	6
28	MS5350	Business Research Methodology	4	0	0	6
		Total	24	0	3	36
29	MS6000	SUMMER PROJECT (non-GPA)				1
	Quarter V	JULY-OCTOBER	L	T	P	C
30	MS6210	Business Models	4	0	0	6
31	MS 5529	Behavioural lab	0	0	3	3
32	DPE01	Elective 1	4	0	0	6
33	DPE02	Elective 2	4	0	0	6
34	DPE03	Elective 3	4	0	0	6
35	DPE04	Elective 4 (or 2 one credit electives)	4	0	0	6
		Total	20	0	3	33

	Quarter VI	OCTOBER-DECEMBER	L	T	P	C
36	MS5210	Legal Aspects of Business	4	0	0	6
	MS5754	Nurturing the Inner You: Developing Positive				
37	MS6280	Industry and Business Domain Analysis	2	0	0	3
38	MS6600	Global Corporate Governance	4	0	0	6
	MS7070	Academic Writing and Presentation	4	0	0	6
	MS7730	Negotiation Support System	2	0	0	2
38	DPE05	Elective 5	4	0	0	6
39	DPE06	Elective 6	4	0	0	6
40	DPE07	Elective 7	4	0	0	6
41	DPE08	Elective 8 (or two one credit electives)	4	0	0	6
		Total	22	0	0	33
	Quarter VII	JANUARY-MARCH	L	T	P	C
42	MS6310	Contemporary Issues in Management	4	0	0	6
43	MS6370	Strategic Networking	2	0	0	3
44	DPE09	Elective 9	4	0	0	6
45	DPE10	Elective 10	4	0	0	6
46	DPE11	Elective 11	4	0	0	6
47	DPE12	Elective 12 (or two one credit electives)	4	0	0	6
		Total	22	0	0	33

- Non-CGPA Pre-term courses = 9, Summer Project – 6 = Total 15 credits.

- Total CGPA= 36 + 36 + 36 + 36 + 33 + 33 + 33 = 243 and
Total overall credits = 258
- Total credits required for award of degree is 243 CGPA credits and
15 on Non-CGPA credits.
- LTPC – H/OC
L = Lecture T = Theory P = Practical C = Credit
H/OC = Hours spent outside class

List of Electives

HUMAN RESOURCES MANAGEMENT ELECTIVES						
Sl. No.	Course No.	Course Title	L	T	P	C
1	MS 5410	Talent acquisition and management	4	0	0	6
2	MS 5420	Training and Development	4	0	0	6
3	MS 5430	Industrial Relations	4	0	0	6
4	MS 5440	Labour Law	4	0	0	6
5	MS 5450	International Human Resource Management	4	0	0	6
6	MS 5460	Compensation Management	4	0	0	6
7	MS 5470	Strategic HRM and General Cultural Issues	4	0	0	6
8	MS 5471	Managing Work Teams	4	0	0	6
9	MS 5472	Leadership Development	4	0	0	6
10	MS 5473	Organization Development	4	0	0	6
11	MS 5474	HR in Mergers and Acquisitions	4	0	0	6
12	MS 5480	Cross-Cultural Management	4	0	0	6
13	MS 5490	Management of Change and Transformation	4	0	0	6
14	MS 5500	Performance Management	4	0	0	6
15	MS7460	Corporate Social Responsibility and Managerial Ethics	4	0	0	6

OPERATIONS MANAGEMENT ELECTIVES						
16	MS 5510	Logistics and Distribution Management	4	0	0	6
17	MS 5520	Simulation Modeling and Analysis	4	0	0	6
18	MS 5540	Manufacturing Systems Management	4	0	0	6
19	MS 5550	Operations Research Applications	4	0	0	6
20	MS 5560	Service Operations Management	4	0	0	6
21	MS 5570	Heuristics for Decision Making	4	0	0	6
22	MS 6230	Strategic Sourcing	4	0	0	6
23	MS 6030	Advanced Data Analytics for Management	4	0	0	6
24	MS 7200	Game Theory - I	4	0	0	6
25	MS 8200	Game Theory - II	4	0	0	6
26	MS8500	Stochastic Modeling and Applications-I	2	0	0	6
27	MS8510	Stochastic Modeling and Applications-II	2	0	0	6
FINANCE ELECTIVES						
28	MS 5610	Security Analysis and Portfolio Management	4	0	0	6
29	MS 5611	Strategic Financial Decision Making	4	0	0	6
30	MS 5612	Real Options Valuation for Strategic Investments and Decisions	4	0	0	6
31	MS 5613	Corporate Hedging Strategies	4	0	0	6
32	MS 5614	Commodity Market	2	0	0	3
33	MS 5615	Treasury Management	4	0	0	6
34	MS 5620	Financial Services	4	0	0	6
35	MS 5630	Investment and Commercial Banking	4	0	0	6
36	MS 5640	Mergers and Acquisitions	4	0	0	6
37	MS 5660	Strategic Cost Management	4	0	0	6
38	MS 5670	Financial Institutions and Markets	4	0	0	6
39	MS 5680	International Finance	4	0	0	6
40	MS 5690	Computational Finance	4	0	0	6

41	MS 5700	Derivatives and Risk Management	4	0	0	6
42	MS 6620	Infrastructure Finance	4	0	0	6
43	MS 6640	Venture Capital and Entrepreneurship Financing	4	0	0	6
44	MS 6670	Advanced Corporate Finance	4	0	0	6
45	MS 6680	Fixed Income Securities: Structure And Trading	4	0	0	6
46	MS 6690	Working Capital Management	4	0	0	6
47	MS 6700	Market Microstructure	4	0	0	6
48	MS 6710	Financial Risk Management	4	0	0	6
MARKETING ELECTIVES						
49	MS 5710	Consumer Behaviour	4	0	0	6
50	MS 5720	Advertising and Publicity	4	0	0	6
51	MS 5729	Social Media Computing	4	0	0	6
52	MS 5730	International Marketing	4	0	0	6
53	MS 5740	Planning and Managing Retail Business	4	0	0	6
54	MS 5750	Brand Management	4	0	0	6
55	MS 5760	Marketing on the Internet	4	0	0	6
56	MS 5770	Strategic Marketing	4	0	0	6
57	MS 5780	e-Business Strategies	4	0	0	6
58	MS 6580	Sales and Distribution Management	4	0	0	6
59	MS 6590	Customer Relationship Marketing	4	0	0	6
60	MS 6720	Industrial and Services Marketing (B2B Marketing)	4	0	0	6
INFORMATION SYSTEM ELECTIVES						
61	MS 5810	Decision Support Systems	4	0	0	6
62	MS 5820	Software Engineering & Project Management	4	0	0	6
63	MS 5830	Business Analysis for IT Solutions	4	0	0	6
64	MS 5840	IT Consulting	4	0	0	6

65	MS 5850	Object-Oriented Analysis and Design	0	0	4	3
66	MS 5860	Introduction to Database Systems	4	0	0	6
67	MS 5880	Introduction to Computer Networking	4	0	0	6
68	MS 5890	IT Systems Management	4	0	0	6
69	MS 6810	Software Development Outsourcing	4	0	0	6
70	MS 6830	Information Systems Auditing and Control	4	0	0	6
71	MS 6840	Data Warehousing and Data Mining	4	0	0	6
72	MS 6850	Software Estimation Methods and Models	4	0	0	6
73	MS 6860	Enterprise Resource Planning	4	0	0	6
74	MS 6870	IT Services and Outsourcing	4	0	0	6
INTEGRATIVE MANAGEMENT ELECTIVES						
75	MS 5370	Total Quality Management	4	0	0	6
76	MS 5870	Introduction to Knowledge Management	4	0	0	6
77	MS 5910	Business Strategy: Analysis and Formulation	4	0	0	6
78	MS 5920	Creativity and Innovation	4	0	0	6
79	MS 5990	Technology Management	4	0	0	6
80	MS 6032	Predictive and Prescriptive Data Analytics	4	0	0	6
81	MS6070	Quality Assurance Management	4	0	0	6
82	MS 6170	Project Management	2	4	0	6
83	MS 6220	Competitive Intelligence and Strategies	4	0	0	6
84	MS6320	Fundamentals of Experimentation for Management	4	0	0	6
85	MS 6470	Six-Sigma and Lean Work	4	0	0	6
86	MS 6910	Global Business Management	4	0	0	6
87	MS 6930	Introduction to Entrepreneurship	4	0	0	6
GENERAL ELECTIVE						
87	MS6990	Management Research Project	0	0	0	6

CORE COURSES

MS 5003 BASICS OF PROBABILITY AND STATISTICS(2-0-0-3)

Objectives:

The objective of this module is to prepare the student for the two core modules in statistical modeling and analysis. This foundation module introduces the student to data, describing data and descriptive and graphical summaries of data. The student is also introduced to probability concepts and basic probability distributions which are vital for statistical analyses.

Contents:

- **Descriptive Statistics:** Different types of data: Data summarization methods; Tables, Graphs, Charts, Histograms, Frequency distributions, relative Frequency distributions, Relative frequency, Quantitative measures of Data: Measures of central tendency and dispersion.
- **Probability concepts:** Fundamental concepts; Conditional probability, Bayes' theorem – revision of probability
- **Probability Distributions:** Notion of random variable and probability distribution; expected value and variance of a random variable.
- **Discrete distributions:** uniform, binomial and Poisson distributions.
- **Continuous distributions:** uniform, normal and exponential distributions; Normal Probability Model

Text Books:

1. Robert E Stine and Dean Foster, ***Statistics for Business: Decision Making and Analysis***,
2. Pearson. ISBN #: 978-81-317-3347-9.

Casebook: Dean Foster, Robert Stine and Richard P. Waterman,

Basic Business Statistics: A Casebook, Springer International Edition. ISBN#: 978-81-8128-028-2.

References:

1. Paul Newbold, William L. Carlson and Betty Thorne, ***Statistics for Business and Economics***, Sixth Edition, Pearson. ISBN #: 978-81-317-1927-5.
2. David R. Anderson, Dennis J. Sweeney and Thomas A. Williams, ***Statistics for Business and Economics***, Ninth Edition, Cengage Learning. ISBN #: 978-81-315-0288-4.
3. Richard Levin and David Rubin, ***Statistics for Management***, Seventh Edition, Pearson. ISBN #: 978-81-7758-584-3.

MS 5004 BASICS OF ACCOUNTING AND FINANCE (2-0-0-3)

Objectives:

To provide students an understanding and knowledge of accounting and finance concepts

Contents:

- Understanding business organization, forms of business organizations and cash flow cycle of business
- Accounting principles, users of accounting information, Accounting process, Overview of Financial, Cost and Management Accounting and Financial Management
- Raising Finance – Sources, Financial instruments characteristics, Overview of financial markets and classification
- Recording business transactions, Assets, Liabilities, Concept of Revenue, Profit, cash flow and balance sheet

References:

1. Narayanaswamy R., 2011, Financial Accounting: A Managerial Perspective, 4th Edition, PHI Learning Private Limited
2. Horngren C.T., Sundem G.L., Elliott J.A., Philbrick D., 2013, Introduction to Financial Accounting, 11th Edition , Prentice Hall
3. www.nseindia.com

MS 5005 SPREADSHEETS FOR BUSINESS DATA ANALYSIS (0-0-3-3)

Objectives:

To impart basic skills in the use of spreadsheets for modeling and analyzing business data.

Contents:

- Fundamental concepts of spreadsheets, common functions in spreadsheets
- Relative and absolute addressing; named cell ranges; referencing by names
- Excel functions: math, statistical, financial, logical, lookup and reference functions
- Pivot tables and pivot charts, one-way and two-way data tables
- Goal seek

- Auditing spreadsheets; error trapping; evaluate-formula feature
- Three-dimensional formulae and the table features

References:

1. Gottlieb, I. (2009) Modeling in next generation Excel: Modeling in Excel for analysts and MBAs, Wiley, ISBN: 978-0-470-82473-3
2. Ragsdale, C. (2010), Spreadsheet modeling and decision analysis, ISBN10: 0538746327, South Western College Pub.

MS 5010 MACROECONOMICS

(4-0-0-6)

Objectives:

To enable the students to understand the macroeconomic environment and anticipate the forthcoming changes in fiscal and monetary policies that affect corporate performance. This course will also help the students understand the implications of government budgets on the economy and the corporate sector.

Contents:

- Introduction, issues, goals and approaches;
- Measurement of macroeconomic variables and their relationship;
- Aggregate demand, income and spending;
- Integrating goods market and money market and money supply;
- Determinants of equilibrium I, aggregate demand and supply;
- Labour market and determinants of aggregate supply;
- Monetary policy and fiscal policy;
- Growth theories;
- Micro foundations of consumption, saving and investment;
- Dynamics of inflation, employment and growth;
- Stabilization policy – debate on government intervention;
- Economics of government budgets;
- Business cycles.

References:

- 1) Dornbusch, Rudiger and Stanley Fisher; Macroeconomics, 7th Edition, McGraw Hill, New York, 1997.
- 2) Rangarajan C and B. H. Dholakia; Principles of Macroeconomics, Tate McGraw Hill, New Delhi, 2002.

MS 5030 DATA ANALYSIS FOR MANAGEMENT (4-0-0-6)

Pre-requisite: MS 5003

Objectives:

Statistical inference is the process of inferring properties of the entire population using a subset of it, known as a sample. We introduce the concept of sample and populations. We use quality control to introduce the concept of sampling distribution and standard error. Estimation of population parameters using samples is followed by introducing the theory of hypothesis testing. The concept of comparing variation is introduced in ANOVA. The objective of this module is to prepare the student to use estimation, hypothesis testing and ANOVA effectively in statistical modeling and analysis of business problems.

Contents:

- **Sampling** : Sampling theory; simple random sampling; central limit theorem; sampling distributions, Stratified random sampling;
- **Sampling Variation and Quality**: sampling distribution of the mean, Control limits and control charts for variation.
- **Estimation**: Estimation problems, point and interval estimates, confidence intervals: Interpreting confidence intervals and manipulating confidence intervals.
- **Hypothesis testing**: Null and alternate hypothesis; types of errors; level of significance; power of a test, Test concerning mean and proportion, sample size, Tests for difference between means and proportions
- **Analysis of Variance**: Chi-square test; One way and two –way ANOVA, Repeated Measures ANOVA.

Text Book:

Robert E Stine and Dean Foster, ***Statistics for Business: Decision Making and Analysis***, Pearson. ISBN #: 978-81-317-3347-9.

Casebook: Dean Foster, Robert Stine and Richard P. Waterman, ***Basic Business Statistics: A Casebook***, Springer International Edition. ISBN#: 978-81-8128-028-2.

References:

1. Paul Newbold, William L. Carlson and Betty Thorne, ***Statistics for Business and Economics***, Sixth Edition, Pearson. ISBN #: 978–81–317–1927–5.
2. David R. Anderson, Dennis J. Sweeney and Thomas A. Williams, ***Statistics for Business and Economics***, Ninth Edition, Cengage Learning. ISBN #: 978-81-315-0288-4.
3. Richard Levin and David Rubin, ***Statistics for Management***, Seventh Edition, Pearson. ISBN #: 978-81-7758-584-3.

MS 5031 DATA ANALYSIS APPLICATIONS

(2-0-0-3)

Pre-requisite: MS 5030

Objectives:

Regression models are among the most powerful statistical models used in business analysis. In this module, we introduce the student to the concepts of regression by modeling dependent behavior and relationships among variables. We follow it with analysis of covariance. The objective of this module is to help students identify relationships, use predictive models and analyse correlations.

Contents:

- **Simple Regression and Correlation:** Linear relationships, Least square prediction, Regression Model, Inference in regression
- **Multiple Regressions:** Multiple regression model; Partial correlation, Correlation, Modeling interactions, comparing regression models.
- **ANCOVA: Analysis of Covariance:** Combining Regression with ANOVA
- **Time Series Analysis:** Decomposing a Time Series, Regression Models and Checking the Model.

Text Book:

Robert E Stine and Dean Foster, ***Statistics for Business: Decision Making and Analysis***, Pearson. ISBN #: 978-81-317-3347-9.

Casebook:

Dean Foster, Robert Stine and Richard P. Waterman, ***Business Analysis using Regression: A Casebook***, Springer International Edition. ISBN#: 978-81-8128-029-9.

References:

1. Paul Newbold, William L. Carlson and Betty Thorne, ***Statistics for Business and Economics***, Sixth Edition, Pearson. ISBN #: 978-81-317-1927-5.
2. David R. Anderson, Dennis J. Sweeney and Thomas A. Williams, ***Statistics for Business and Economics***, Ninth Edition, Cengage Learning. ISBN #: 978-81-315-0288-4.
3. Richard Levin and David Rubin, ***Statistics for Management***, Seventh Edition, Pearson. ISBN #: 978-81-7758-584-3.

Objectives:

The course essentially aims at building up necessary and sound foundation of Managerial Accounting for two purposes – one, these foundations would be helpful to have a better understanding of other courses; and second, it would help the participants to master ‘the language of business’ and thereby to understand ‘the business better’.

Contents:

- **1. The basic accounting model**
 - Accounting as an information system
 - Recording business transactions
 - Measuring business income
 - Completing the accounting cycle
 - Accounting for merchandising operations
- **2. Accounting for assets, liabilities and shareholders’ equity**
 - Internal control systems, cash and receivables
 - Inventories
 - Fixed assets
 - Liabilities
 - Shareholders’ equity
- **3. Analyzing and interpreting financial statements**
 - Financial statement analysis
 - Statement of cash flows
 - Statement of fund flow
- **4. Disclosure practices**
 - Accounting disclosure practices in India
 - International accounting disclosure practices
 - Accounting standards
- **5. Financial forecasting**

References:

1. Anthony and Reece; *Accounting Principles*, AITBS, Sixth Edition, 1998
2. S.K. Bhattacharyya and John Dearden; *Accounting for Management*, Vikas Publishing House Pvt. Ltd. Third Revised Edition,
3. Charles T Horngren; *Introduction to Financial Accounting*, Prentice Hall Publication.

MS5050 MARKETING MANAGEMENT I (4-0-0-6)

Objectives:

The course aims at developing a clear understanding of fundamental marketing concepts with due emphasis on developing application skills. Specifically the course goals include the following:

1. To provide an in depth understanding and knowledge for analyzing markets and consumers.
2. To encourage a way to think about and analyze competitors and marketing strategy.
3. To make students more conversant with marketing environment through discussion of case studies and real life examples.

Contents:

- Introduction to marketing – market structure and terminologies, marketing and selling – relationship; Evolution of marketing – various concepts and current trends
- Delivering customer value and satisfaction – concept of total cost , total benefit, value delivery process and Michael Porter value chain
- Marketing Environment; Marketing Mix; Strategic market planning – vision, mission and strategies, SWOT analysis; BCG matrix
- Consumer markets and buyer behavior – impact of culture, social class, ethnicity etc on consumer behavior, factors influencing consumer behavior; Business markets and buying behavior
- Market segmentation– levels of segment; criteria for segmentation; Targeting – types of targeting strategies; Positioning – points of parity and points of difference; positioning strategies.
- Overview of 4P's – Product, price, place and promotion

References

1. Kotler, Keller, Koshy and Jha 13/e (2009), "Marketing Management: A South Asian Perspective", Pearson.
2. Kotler, Philip 11/e (2003), "Marketing Management", Prentice Hall of India: New Delhi.

Contents:

- Demand and supply framework, determinants of demand and supply, Nature of demand and supply curves their interaction in the market, Market equilibrium and price elasticity
- Effect of government intervention in the form of taxes/subsidies/ price restriction on the market, and the implications of consumer/producer welfare
- Difference in demand functions for consumer durables vs. non-durables, Intermediate products and services
- Theory of consumer behaviour, Consumer preferences, Indifference curves, Budget constraint, Utility maximization and the derivation of the consumer demand curve, Expected utility maximization under uncertainty
- Theory of Production, Production functions, Cost functions and profit functions. Total, average and marginal product (and cost); Returns to factors and scale; input substitution; and the optimal factor/input combination -Short run versus long run decision making of firms.
- Derivation of the supply curve, Decision under uncertainty
- Market structures, efficiency and regulation, Market forms including perfect competition, Monopoly, monopolistic competition, and oligopoly.
- Pricing strategies of firms, cartels and collusion, Mergers and acquisitions, and government regulation in the form of price directives, taxes / subsidies, Antitrust action and competition policies, Market failures
- Economics of information including asymmetric information, Moral hazard, Adverse selection and implication of information failures, externalities due to spillover effects, and their internalization through corrective taxes / subsidies and enforcement of property rights.
- Public goods and the role of the government.

References:

1. *Principles of Microeconomics*, Stiglitz, J., Norton Publishers
2. *Managerial economics*, Peterson, HC and WC Lewis
3. *Managerial economics*, Paul G. Keat and Phillip K Y Young., Prentice Hall

**MS 5120 ORGANIZATIONAL STRUCTURE (4-0-0-6)
AND DESIGN****Objectives:**

To familiarize students aspiring to be practicing managers with basic concepts and practices of structuring and designing organizations and their relevance in improving organizational effectiveness.

Contents:

- Introduction
- Concept of organizational effectiveness
- Dimensions of organization structure.
- Determinants of organization structure- Strategy, Size, Technology, Environment, Power and control.
- Organizational design-Organizational design options;Choosing the right designs.
- Contemporary issues in organization theory
- Managing the environment;
- Managing organizational conflict and change;
- Organizational culture;
- Organizational evolution.

References:

1. Robbins, Stephen; Organisation Theory: Structure, Design and Applications, 3rd Edition; Prentice-Hall of India, New Delhi, 2000.
2. Jones, Gareth R; Organisational Theory: Text and Cases, 2nd Edition, Indian reprint; Addison Wesley, New Delhi, 2002.
3. Daft, Richard L; Organizational Theory and Design, 7th Edition, Indian reprint; Thomson, New Delhi, 2002.

MS 5121 INDIVIDUAL DYNAMICS IN ORGANIZATIONS (4-0-0-6)**Objectives:**

To provide students an understanding and knowledge of the complex nature of people related issues and problems and to enable them to apply Organizational Behavior concepts and theories in addressing organizational issues and problems.

Contents:

- **Introduction to OB:** Fundamental concepts of OB, Scope, Purpose, Emerging issues, Evolution of OB as discipline, Challenges and Opportunities before OB, Contemporaries issues in OB.
- **Organizational Justice, Ethics, and Corporate Social Responsibility:** Forms of organizational Justice and their effects, Ethical behaviour, Beyond ethics: Corporate Social Responsibility.

- **Individual Differences: Personality, Skills, Abilities and Values:** Meaning, Theories of Personality, Types of Personality, Linking Individual's personality to the workplace (P-O fit, P-J fit), Abilities and Skills (Intelligence, Physical and Social Skills), Importance of Values, Types of Values, Linking personality to values.
- **Attitudes:** Nature and dimensions of attitude, Types of attitudes, Prejudices, Job Satisfaction, Organizational Commitment, Job Engagement, Developing the right attitude.
- **Perception:** Perception and Attribution, Factors influencing perception, Link between perception and individual decision making.
- **Learning, Creativity and Emotions:** Learning through reinforcement, Continuous learning through creativity, Mood and Emotions, Types of emotions, The role of emotions and mood in organizations, Managing emotions, Emotional dissonance, Controlling anger, Emotional Intelligence, Emotional contagion.
- **Managing Stress and Work-Life Balance:** What is stress? Dimensions of work-life balance, Relevance, Potential sources of stress and work-life balance, Individual differences in stress, consequences of stress, managing stress and work-life balance.
- **Motivation:** Definition, Importance, Early and contemporary theories of motivation, Applications of motivation concepts, creating a motivation work setting, Linking employee involvement programs and motivation theories, Using rewards to motivate, How to motivate employees/professionals?

References:

1. Robbins, S., Judge, T.A., and Vohra, N. (2011), "*Organizational Behavior*", Pearson Education, New Delhi.
2. Greenberg, J. (2011), "*Behavior in Organizations*", Prentice Hall India, New Delhi.
3. Nelson, D.L. and Quick, J.C. (2012), "*ORGB 2*", Cengage India, New Delhi.
4. George, J.M. and Jones, G. (2009), "*Understanding & Managing Organizational Behaviour*", Pearson Education, New Delhi.

MS 5130 OPERATIONS RESEARCH

(4-0-0-6)

Objectives:

This course deals with arriving at optimal or near optimal decisions for a given set of managerial objectives under various constraints. The objective of the

course is to acquaint the students with the construction of mathematical models for managerial decision situations. The emphasis is on

- Understanding the concepts and interpretation of the solution rather than on the mathematical details.
- To be able to analyse decision problems in operations, and the relationships of operations decision to other business decisions.
- To develop both an ability to diagnose the causes of operational problems and judgement to deal with them.
- To develop how the resources within the operations can be utilized to meet business objectives relative to product quality, customer service, time, cost and return on investment.

Contents:

- Introduction to modelling
- Linear programming problems : examples and formulation of problems in management
- Solution techniques
- Duality theory and sensitivity analysis
- Transportation and assignment models
- Integer programming problems : formulation and solution techniques
- Use of OR software

References:

1. Hillier, Fredrick S and Gerald J. Lieberman (2008), "Operations Research", Sixth Edition, Tata-McGraw Hill
2. Srinivasan G. (2008), "Operations Research: Principles and Applications", Prentice Hall.

MS 5140 COST ACCOUNTING

(4-0-0-6)

Objectives:

This course is aimed at providing students with insight into using accounting information for decision-making and control.

Contents:

Cost concepts – materials – labour- overheads– job and contract costing – process, joint and by-product costing – profit planning - absorption costing – activity based costing, cost reconciliation and integration - CVP analysis

Cost control – Standard Costing - Variance Analysis – responsibility accounting – budgeting – Computerized Cost Control.

References:

- Colin Drury, *Costing – An Introduction*, Thomson Business Press, London, 1997.9
- BhaveshM.Paul, *Cost Accounting or Management Accounting*, Allied Publishers Ltd., New Delhi, 1997.
- Jain S.P. & Narang K.L., *Cost Accounting*, Kalyani Publishers, Ludhiana, 1997.
- Williamson Duncan, *Cost & Management Accounting*, Wheeler Publishing, New Delhi, 1998.
- M Y Khan & P K Jain, *Management Accounting*, Tata McGraw Hill, New Delhi 1997

**MS 5150 MARKETING TOOLS: STRATEGIES
AND INNOVATION****(4-0-0-6)****Objectives:**

To help students understand the potential of the 4 main tools of Marketing – Product, Price, Place, and Promotion. The idea is to not just acquaint them with the terminologies used but to help them appreciate the strength and power of each of the 4 tools through industry examples, cases and live projects. The course would help prepare students for managerial roles by developing in them the ability to use the marketing tools to improve and impact marketing and business performance.

Contents:

Understanding and identifying core and un-served needs of the target segment.

- **1st Tool – Product:** Product levels, classifications, portfolio – line and width decisions; Product Life Cycle – product, brand and category life cycles; New Product Development; Services Vs. Products. Brand and Product interaction – impact on image. Industry examples and cases to explain strategies and innovation
- **2nd Tool – Price:** Pricing, factors to be considered, Setting the price – alternative methods; Price and Value- customer interpretations, Psychology of pricing; Economics of pricing; Pricing in Marketing – necessity vs. luxury; Price differentiation; initiating and responding to price changes. Brand and Price interaction – impact on image. Industry examples and cases to explain strategies and innovation

- **3rd Tool – Place:** Marketing channels, Creating value networks; Channel roles; Channel development - customer needs, nature of product, control, etc. Hybrid channels, Channel integration – VMS, HMS; Managing channels and channel members. Brand and Place interaction – impact on image. Industry examples and cases to explain strategies and innovation
- **4th Tool – Promotion(communication):** Objective for developing an integrated marketing communication mix, Communication mix elements – advertisement, sales promotion, PR, direct selling, personal selling; Macro and Micro models of communication; steps in developing integrated marketing communication mix, message and media strategies – planning and scheduling; evaluating effectiveness. Brand and communication interaction – impact on image. Industry examples and cases to explain strategies and innovation

Text books:

1. Kotler, Armstrong, Agnihotri and Haque 13/E (2010) “Principles of Marketing: A South Asian Perspective”, Pearson.
2. Kotler, Keller, Koshy and Jha 13/E (2009) “Marketing Management: A South Asian Perspective”, Pearson.

References:

1. Baines, Fill, Page and Sinha (2013) “Marketing – Asian Edition”, Oxford.
2. Lamb, Hair, Sharma and McDaniel (2011) “MKTG: A South Asian Perspective” Cengage.

MS 5171 MANAGERIAL COMMUNICATION (0-0-3-3)

Objectives:

The course would aim at Appreciation of various aspects of effective oral andwritten communication Understandingand application of communication theory to organizational situation, Sharpening of presentation and negotiation skills, Development of professional written business communication competence, Making use of group discussion abilities and making impact in interviews

Contents:

- Semantics of communication
- Principles of communication
 - Model of communication
 - Forms of communication
 - Barriers of communication

- Process of communication
 - Characteristics
 - Listening
 - Feedback positive / negative
- Body language
- Presentation skills
 - Building content; Delivery
 - Platform behaviour and projection
 - Audio visual aids
- Letters / memos / proposals
 - Types
 - Structures
 - Contents
- Cv's/ resumes
- Interviewing skills/group discussions
- Report writing
 - Types of reports
 - Abstracts, Summary
 - Errors of grammar and usage
- Negotiation skills.

References:

1. Arrendondo, Iani; *36 hour course : business presentations*; McGraw Hill
2. Hiltrop, Jean M. and Udall Sheila; *The essence of negotiations*; Prentice Hall
3. KaulAsha; *Business Communication*; prentice hall

MS 5210 LEGAL ASPECTS OF BUSINESS

(4-0-0-6)

Objectives:

The purpose of the course is to create an understanding of the relevant legal environment of business.

Contents:

- Basic principles of the Indian Constitution – fundamental rights and directive principles.

- Contracts Act – basic principles of contract – indemnities and guarantees – agency- quasi contracts – Sale of Goods Act – conditions – warranties.
- Negotiable Instruments Act – negotiable instruments – banker and customer relation – bills of exchange, cheque, and banker's cheque.
- Companies Act – incorporation – types of companies - articles and memorandum of association – prospectus - borrowing powers of the company – powers, duties and liabilities of directors.
- Industrial law – overview of Factories Act, Payment of Wages Act, Payment of Bonus Act, Minimum Wages Act, ESI Act, Workmen's Compensation Act, Industrial Disputes Act, Shops and Establishments Act, Trade Unions Act.
- Sales Tax and central sales tax – Central Excise – Consumer Protection Act – only basic concepts.

References:

1. Kapoor, N.D.; *Mercantile Law*, Sultan Chand and Sons, New Delhi, 1992.
2. Madan; *Principles of Law*, Progressive Corporation, New Delhi, 1989.
3. Shukla, M.C.; *Manual of Mercantile Law*, Sultan Chand, New Delhi, 1986.
4. Gulshan, S. S. and G. K. Kapoor; *Business Laws*, New Age International, New Delhi, 1998.

MS 5221 GROUP PROCESSES IN ORGANIZATIONS (4-0-0-6)

Objectives:

To help students develop greater insights into the interpersonal and group/team dynamics and help them develop skills to improve inter – personal and team effectiveness.

Contents:

- **Foundations of Group Behaviour:** Defining and classifying groups, Why do people form groups? Stages of group formation, Structural dynamics of work groups, Individual performance in groups (Social facilitation, social loafing), Group decision making, Types of decisions, Techniques for improving effectiveness of decisions.
- **Understanding Work Teams:** Concept of teams, Relevance, Difference between groups and teams, Types of teams, Potential obstacles to team success, creating effective teams.
- **Interpersonal Communications and Relations:** Communication process, Role of technology, Interpersonal and Organizational

communication, Barriers to effective communication, Persuasive communication.

- **Leadership** :Definition, Importance of leadership, Roles of a leader, Leadership theory paradigms, traits of effective leaders, Leadership behaviour and styles, Leadership and motivation, Contingency leadership theories and models,LMX theory, Charismatic and transformational leadership,Stewardship and servant leadership, Authentic leadership, Strategic leadership, Mentoring.
- **Influencing Others: Power and Politics:** Definitions, Sources of Power, Leadership and power, Power Tactics, Abuse of power (Sexual harassment),Politics: Powers in action, How do people respond to organizational politics, Forms of political behaviour, Impression management, Trust in working relationships, Constructive and destructive workplace deviance (Whistle blowing, Cyberloafing), workplace aggression and violence, workplace bullying.
- **Managing Conflict and Negotiating Effectively:** Definition of conflict, The conflict process, Types of Conflict, Conflict Management, Cooperation between individuals, Managing conflict through negotiation, The negotiation process, Bargaining strategies, Cultural differences conflict handling and in Negotiations.
- **Organization Culture and Diversity:** Definition How is an organization's culture transmitted to its members? Factors shaping organizational culture, Hofstede'smodel of national culture, Competing values framework, Creating an ethical culture, The learning organization, Cultural diversity, Diversity and Generational differences, Effectively managing a diverse workforce.

References:

1. Robbins, S., Judge, T.A., and Vohra, N. (2011), "*Organizational Behavior*", Pearson Education, New Delhi.
2. Greenberg, J. (2010), "*Behavior in Organizations*", Prentice Hall India, New Delhi.
3. Nelson, D.L. and Quick, J.C. (2012), "*ORGB 2*",Cengage India, New Delhi.
4. George, J.M. and Jones, G. (2009), "*Understanding & Managing Organizational Behavior*", Pearson Education, New Delhi.

MS 5230 OPERATIONS MANAGEMENT

(4-0-0-6)

Objectives:

This course provides the students with an understanding of Operations Management as a functional area and its relevance in the management of a firm. Important topics such as forecasting, planning, scheduling and materials management are covered in the context of manufacturing and service operations. The course will have teaching sessions, tutorials, case discussions and computer-based games.

Contents:

- Introduction: Process selection; facilities, location and layout.
- Forecasting: Qualitative, time-series and causal models; monitoring forecasts and selection of forecasting model.
- Inventory Management: Deterministic and probabilistic lot-size models; selective inventory control.
- Materials Requirement Planning (MRP)
- Production Planning and Control: Aggregate planning and scheduling; Capacity Requirement Planning (CRP); Manufacturing Resource Planning (MRP-II);
- Just-in-Time manufacturing (JIT)
- Quality Management and Control: 7 Tools; sampling.
- Services Operations Management – A perspective.

References:

1. Krajewski, Lee J., and Larry P. Ritzman; *Operations Management – Strategy and Analysis*, Addison Wesley, New Delhi, 1999.
2. Chase, Richard B., Nicholas J. Aquilano and Robert F. Jacobs; *Production and Operations Management – Manufacturing and Services*, Tata McGraw-Hill, New Delhi, 1999.

MS 5241 FINANCIAL MANAGEMENT I (4-0-0-6)

Pre-requisite: MS 5040: Financial Accounting; MS 5140: Cost Accounting;

Objectives:

The aim of this course is to provide a broad framework of corporate finance. It is designed to cover the concepts and applications pertaining to financing decisions of an organization, designing capital structure and measuring financial risk.

Contents:

Financial value

- Financial objectives of the firm – income – profit - value
- Time value of money – present value – future value
- Financial instruments – Debt – equity - derivatives
- Valuation of debt instruments – debt cash flows – bond yield
- Valuation of equity instruments – Dividend discount models – Relative valuation – efficient market hypothesis
- Cost of capital –opportunity cost of capital – marginal cost of capital – weighted average cost of capital
- Valuing a business-discounted cash flow method, comparable trades method, venture capital method
- Valuing options and hedging - basics

Financial Structure

- Corporate source of finance – long term – public issue – venture capital
- Capital structure theory - net income approach – net operating income approach – traditional approach - Modigliani and Miller approach.
- Leverage and financial decisions – trade-off theory – pecking order theory – financial leverage
- Designing capital structure – EBIT – EPS analysis – ROI – ROE analysis

Financial Risk

- Financial risk and return
- Measuring expected return – CAPM - beta
- Debt instruments credit risk
- Equity instruments and value at risk
- Efficient Market- implications of efficiency;

Text Book:

Ross Stephan A., R.Westerfield and D.J. Bradford, Fundamentals of Corporate Finance, Tata Mc-Graw Hill, 2008.

References:

1. Brealey R.A. Principles of Corporate Finance, Tata McGraw Hill, New Delhi, 2007.
2. Van Horne James C. and J.M.Wachowicz, Fundamentals of Financial Management, Prentice Hall, 2005.
3. Pandey, I.M. Financial management, Vikas publishing, 2013, Tenth edition.

MS 5242 FINANCIAL ANALYSIS APPLICATIONS (2-0-0-3)

Pre-requisite: MS 5040: Financial Accounting; MS 5140: Cost Accounting

Objectives:

The purpose of this course is to provide exposure on financial analysis applications using case studies.

Contents:

Case studies in

- Financial Forecasting and valuation – asset based and discounted cash flow methods, Forecasting models, analyst forecasts
- Financial Statement analysis – Industry and company analysis
- Consolidated financial statement analysis and Analysis of inter-corporate investments
- Financial analysis of multinational corporations
- Cost control and pricing

Text Books:

- Gerald I. White, A.C. Sondhi and D.Fried, The Analysis and Use of Financial statements, Wiley India, 2007.
- Case studies

References:

1. Higgins, Robert C. Analysis for Financial management, McGrawHill Irwin, 2009.
2. Charles T. Horngren, G.S.Sundem, W..Stratton,D. Burgstahler, J.Schatzberg, Introduction to management accounting, Pearson education,

MS5251 RESEARCH FOR MARKETING DECISIONS (4-0-0-6)

Objectives:

The identification of market opportunities and analyzing the structure of markets under dynamic conditions are among the most important and exciting aspects of marketing management. Marketing Research is the body of knowledge consisting of a variety of concepts and tools that are used for this purpose. This course is aimed at developing the students' awareness and understanding of Marketing Research through examples of applications in different industrial and business contexts.

Contents:

- Marketing Research - A Conceptual framework
- Case Discussion - (Relevance of Marketing Research)
- Research Planning, Design, and Data Sources.
- Qualitative Research.
- Exploratory Research.
- Causal Research.
- Measurement and Scaling.
- Questionnaire Design.
- Sampling Methods and Data Collection.
- Field Investigation – Planning, Implementation, and Issues.
- Data Analysis Technique - Univariate, Bivariate, Tabulation and Analysis.
- Multivariate Data Analysis and applications - Multiple Regression Analysis, Factor Analysis,
- Discriminant Analysis, Cluster Analysis, Conjoint Analysis.
- Organizational, Technological and Ethical Issues.
- Project Report Preparation and Presentation.

References:

- 1) Malhotra, Naresh K., "Marketing Research – An applied orientation", Third Edition, Addison Wesley Longman, New Delhi, 1999.
- 2) Beri, G. C., "Marketing Research", Third Edition, Tata McGraw-Hill, New Delhi, 2001.
- 3) Hair, Joseph, Robert Bush, and David Ortinau, "Marketing Research: Within a Changing Information Environment", Second Edition, McGraw-Hill, New York, 2002.
- 4) Aaker, David A., V. Kumar, George S. Day, and George Day, "Marketing Research", Seventh Edition, John Wiley, New York, 2000.
- 5) McQuarrie, Edward F., "The Market Research Toolbox: A concise guide for beginners", Sage, New York, 1996.
- 6) Proctor, Tony, "Essentials of Marketing Research", Second Edition, Pitman, London, 2000.

- 7) Luck, David J., and Ronald S. Rubin, "Marketing Research", Seventh Edition, Prentice-Hall of India, New Delhi, 2000.
- 8) Tull, Donald S., and Del I. Hawkins, "Marketing Research: Measurement and Method", Sixth Edition, Prentice-Hall of India, New Delhi 1999.
- 9) Churchill, Gilbert A., and Dawn Iacobucci, "Marketing Research: Methodological Foundations", Eighth Edition, South-Western College Publishing, 2001.
- 10) Green, Paul E., Donald S. Tull, and Gerald Albaum, "Research for Marketing Decisions", Fifth Edition, Prentice-Hall of India, New Delhi, 1999.
- 11) Brown, F. E., "Marketing Research – A structure for decision making", Addison-Wesley, Reading, Massachusetts, 1980.
- 12) Boyd Jr., Harper W., and Ralph L. Westfall, and Stanley F. Stasch, "Marketing Research – Text and Cases", McGraw-Hill, New York, 1985.

MS 5260 MANAGEMENT INFORMATION SYSTEM (4-0-0-6)

Objectives:

The objectives of the course are

- To prepare the students to manage information systems used in their areas of responsibility and to cope with continual technology driven change
- To enable the students to identify ways to use IT in their areas of responsibility
- To enable the students to guide the development or acquisition of an IT application that is effective, flexible, and consistent with business directions
- To enable the students to have a vision of the future impact of IT on managers, organizations, the economy, and society.

Contents:

- Introduction to Information Systems
- Managerial Overview of IT
 - Computer hardware
 - Computer software
 - Computer networks
 - Data base management
- Internet and electronic commerce
 - Internet
 - Electronic commerce
- Intranets, Extranets, and Enterprise Collaboration

- Intranets and extranets
- Enterprise collaboration
- Developing information systems
- Information systems in functional areas
- Information systems for transaction processing
- Information systems for decision support
- Information systems for strategic advantage
- Managing information technology

References:

1. O'Brien, James A. (1999) *Management Information Systems: Managing information technology in the internet worked enterprise*; Irwin McGraw Hill
2. Rudman, Jack, *Management Information System*, National Learning Corporation, New York

MS 5269 INFORMATION TECHNOLOGY LAB (0-0-3-3)

Objectives:

To introduce databases and analytical tools used in business management to MBA students

Contents:

- Relational databases, development in MS Access, Table structure, relationships, implementation
- SQL queries, Query implementation in MS Access
- Excel macros and their implementation
- Online Analytical Processing using SQL Server 2010
- Getting started with software packages for computing: SPSS, and R (open source), basic commands and instruction set, connecting data sources to the packages

References:

1. MSDN, "Get to know Access, <http://office.microsoft.com/en-us/training/get-to-know-access-RZ006118141.aspx>", accessed June 20, 2013
2. MSDN, SQL Server 2012 , "Tutorials for SQL Server 2012", <http://msdn.microsoft.com/en-us/library/hh231699.aspx>, accessed June 20, 2013
3. SQL, "SQL Tutorials", W3 School, <http://www.w3schools.com/sql/> accessed on June 21, 2013

4. Harvard-MIT, "Guide to SPSS", Harvard-MIT Data Centre, http://www.hmdc.harvard.edu/projects/SPSS_Tutorial/spsstut.shtml, accessed June 21, 2013
 5. Venables, W. N and Smith D. M. (2012), An introduction to R, *R Development Core Team*, <http://cran.r-project.org/doc/manuals/R-intro.pdf>
- MS5320 HUMAN RESOURCES MANAGEMENT (4-0-0-6)**

Objectives:

The course aims at introducing the students to various aspects of human resources management. The important functions of a human resources manager such as recruitment and selection processes interview methods, Performance appraisal, Training and development, disciplinary procedures, collective bargaining and employee welfare. The students will be exposed to the recent methods and trends in HRM with a few case studies in the context of globalization.

Contents:

- Strategic role of human resource management
- Job analysis
- Personnel planning and recruiting
- Employee testing and selection
- Interviewing candidates
- Appraising performance
- Managing careers
- Compensation
- Benefits and services
- Labour relations and collective bargaining
- Employee safety and health

References:

1. Gary Dessler., *Human Resource Management*, Prentice Hall, New Jersey, 7th International Edition, 1997.
2. Fisher, Schoenfeldt and Shaw., *Human Resource Management*, Houghton Mifflin Company, Boston, New York, 4th Edition 1999.
3. Asfahl, C.Ray., *Industrial Safety and Health Management*, Prentice Hall, New Jersey, 3rd Edition, 1995.
4. Terry L. Leap, Micheal D. Crino., *Personnel/ Human Resource Management*, MacMillan, New York, 1990.
5. Dale, S. Beach., *Personnel – The Management Of People at Work*, MacMillan, New York, 1985.
6. Duane, P. Schultz, Sydney Ellen Schultz., *Psychology and Work Today*, Prentice Hall, New Jersey, 1994.

MS 5330 SUPPLY CHAIN MANAGEMENT**(4-0-0-6)****Objectives:**

This course seeks to discuss key concepts and issues in the design, operation and management of supply chains. The course will have lecture sessions, tutorials and cases in Supply chain management related issues.

Contents:

- Introduction to supply chain management
- Sourcing strategy and vendor development
- Supply chain design issues
- Inventory management in supply chains
- Distribution and logistics management
- Global supply chain management
- Role of IT in supply chain management
- Performance evaluation

References:

1. Raghuram G and N. Rangaraj, *Logistics and Supply chain Management*. Macmillan, New Delhi, 2000.
2. Krajewski, Lee J., and Larry P. Ritzman, *Operations Management – Strategy and Analysis*. Addison Wesley, New Delhi, 1999.
3. Chase, Richard B., Nicholas J. Aquilano and Robert F. Jacobs., *Production and Operations Management – Manufacturing and Services*. Tata McGraw-Hill, New Delhi, 1999.

MS 5341 FINANCIAL MANAGEMENT II**4-0-0-6)**

Pre-requisite: MS 5040: Financial Accounting; MS 5140: Cost Accounting;

Objectives:

The course aims to provide an understanding of investment decisions and working capital management. The process and issues involved in capital budgeting decisions, dividend policy decisions and working capital decisions are introduced to the students.

Contents:**Capital budgeting decisions**

- Corporate project types – unequal lifetime – replacements
- Projected cash flows – free cash flows
- Techniques of evaluation – accounting rate of return – payoff period - net present value – internal rate of return
- Conflict in evaluation – NPV vs. IRR – modified IRR
- Capital rationing
- Sensitivity analysis

Dividend decisions

- Factors influencing dividend payment of a firm
- Dividend models – Walter – Gordon – Modigliani and Miller
- Dividend policy of a firm
- Alternate forms of dividend – bonus shares – stock splits - stock options – stock repurchase

Working capital management decisions

- Working capital cycle
- Inventory management
- Receivables management
- Cash management
- Financing Working Capital

Text Book:

Ross Stephan A., R.Westerfield, and D.J. Bradford , Fundamentals of Corporate Finance, Tata Mc-Graw Hill, 2008.

References:

1. Brealey R.A. Principles of Corporate Finance, Tata Mc-Graw Hill, New Delhi, 2007.
2. Van Horne James C. and J.M.Wachowicz, Fundamentals of Financial Management, Prentice Hall, 2005.
3. Pandey, I.M. Financial management, VikasPublishing, 2013, Tenth edition.

MS 5350 BUSINESS RESEARCH METHODOLOGY (4-0-0-6)

Pre-Requisite: Data Analysis for Management

Objectives:

The objective of the course is to cover all aspects relevant to designing appropriate frameworks, selecting tools and techniques related to business research and also exploring avenues for conducting field research in the business world. The students would be exposed to different facets of business

research needs and equipped with adequate knowledge to formulate and execute business research plans.

Contents:

- **Introduction to Business Research:** Scope of Business Research - Managerial Value of Business Research - Major Topics for Research in Business – Design of Inquiring Systems (based on the works of Leibnitz, Locke, Kant, Hegel, Singer) – Theory, Concepts, Propositions and Scientific Method.
- **Business Research Tools:** Types of Business Research - Stages in the Research Process - Problem discovery and definition - Planning the research design - Evaluating research designs - Ethical Issues in Business Research – Problem Definition –Exploratory Research – Sources of Secondary Data – Survey Research Methods – Observation methods - Questionnaire Design.
- **Measurement and Scaling Concepts:** Types Of Scales (Nominal, Ordinal, Interval, Ratio scales) - Mathematical and statistical analysis of scales - Three Criteria For Good Measurement (Reliability, Validity, Sensitivity) - Attitude Measurement.
- **Experimental Research:** Issues In Experimental Design - Internal Validity - External validity - Classification of Experimental Designs - Quasi-experimental Design - Pretest-Posttest Control Group Design - Posttest Only Control Group Design - Solomon Four-Group Design - Compromise Experimental Designs - Time Series Experimental Designs - Complex Experimental Designs (Completely Randomized Design, Randomized Block Design, Factorial Design, Latin Square Design).
- **Sample Designs and Sampling Procedures:** Sample Frames - Random Sampling and Non-sampling Errors - Probability Vs. Non-probability Sampling - Appropriate Sample Design – Sample Size Determination.
- **Field Work and Communicating Research Results:** Nature of Field Work - Principles of Good Interviewing – Field Work Management - Communications Model Insights - Report Format - Graphic Aids - Oral Presentation.

Text book:

Zikmund, William G., *Business Research Methods*, Thomson Asia, Singapore, 2003.

References:

1. Cooper, Donald R. and Pamela S. Schindler, *Business Research Methods*, Tata McGraw-Hill, New Delhi, 2003.
2. Kothari, C.R., *Research Methodology: Methods and Techniques*, New Age International, New Delhi, 2004.

MS 5561 INFORMATION SYSTEMS ANALYSIS (2-0-3-6)

Objectives:

This course deals with the body of knowledge that pertains to the process of identifying management information needs and then analyzing the corresponding organizational systems of data flow for the explicit purpose of designing appropriate MIS.

Contents:

- Systems analysis and design – an introduction
- The systems development life cycle
- Problem recognition and definition
- MIS project initiation
- Feasibility analysis
- Determination of system requirements
- Data and information system modeling
- Logical and physical system design
- Software quality and reliability
- System analysis and design documentation

References:

1. Hawryszkiewicz, I.T.; *Introduction to Systems Analysis and Design*, Third Edition; Prentice-Hall of India; New Delhi. 1997.
2. Garg, Vinod Kumar and S Srinivasan; *Workbook on Systems Analysis & Design*; Prentice-Hall of India; New Delhi 2000.
3. Senn, James A; *Analysis and Design of Information Systems*; McGraw-Hill; New York. 1986.
4. Fitzgerald, Jerry and Ardra F Fitzgerald; *Fundamentals of Systems Analysis*, Third Edition; John Wiley; New York. 1987.
5. Whitten, Jeffrey L., Lonnie D Bentley, and Victor M Barlow; *Systems Analysis and Design Methods*, Second Edition; Galgotia; New Delhi. 1991
6. Davis, William S.; *Systems Analysis and Design*; Benjamin/Cummings; Redwood City. 1987.

MS 6010 STRATEGIC MANAGEMENT

(4-0-0-6)

Objectives:

The purpose of this course is to provide an understanding of how strategic decisions are to be taken and implemented in the changing environment scenario.

Contents:

- Strategic management – concept of strategy – strategic management process.
- Strategy formulation – mission, business definition, objectives – environmental appraisal – organization appraisal – porter's model – SWOT.
- Strategic alternatives – growth, diversification, merger, disinvestment strategies – strategic choice – BCG analysis, competitor analysis.
- Strategy implementation – activating strategies, organization structure, functional plans and policies, corporate culture.
- Strategy evaluation – technique of strategic evaluation and control.

References:

1. Kazmi, Azhar; *Business Policy*, Tata McGraw Hill Publishing Co., New Delhi, 1992.
2. Johnson, Gary and Scholes, Kelvan; *Exploring Corporate Strategy*, Prentice Hall of India, New Delhi, 1994.
3. Ramaswamy V.S. and S. Namakumari; *Strategic Planning: Formulation of Corporate Strategy*, Macmillan, New Delhi, 1999.
4. Banerjee, Bani P.; *Corporate Strategies*, Oxford University Press, New Delhi, 1999.
5. Certo, Samuel C and Paul J. Peter; *Strategic Management: A focus on process*, McGraw Hill, New York, 1990.

MS 5729 – SOCIAL MEDIA COMPUTING

Motivations and Course Overview:

In the last decade, new digital technology has reshaped the business practices. Technology, in particular social media, has rejuvenated the communication arena through which business firms reach and engage the customers. This global emergence of social networking has enabled network-based analytical

modeling and new forms of targeting and referral strategies based on the preferences of consumers' peers. By understanding what the customers think about an organization, products and services, firm can then act quickly and remain competitive. Several studies in recent times have shown that social media activities, e.g., liking, sharing, commenting on Facebook, Twitter, YouTube, Foursquare etc. have been proven to be very effective if monitored regularly by the business firms using Social Media Computing tools and techniques.

Using the combination of case studies, the best practice examples, and hands-on demonstrations, this course will signify the prospects to leverage the power of social media in real-world business scenarios.

The course is divided into six main modules. Each module will contain case studies and/or hands-on demonstrations with popular social media computing tools, such as R, Gephi, NodeXL, etc.

1. Introduction and Overview: Statistics, trends and research on social media computing. Data crawling from social media platforms with hands-on demonstrations.

2. Graph Theory and Social Networks: Introduction to basic graph-theoretic concepts. Node- and network-level properties, strong and weak ties, small world, structural balance theory, affiliation.

3. Network Dynamics: Information cascade, retweet network, importance and influence measures, homophily, PageRank, branding and community in networks, social tagging and folksonomies.

4. Text Analysis: Types of social media text, text analysis process and algorithms, application of text-analysis (e.g., sentiment analysis, topic modeling) algorithms on social media data, trend Analysis.

5. Social Media Mobile Computing: Applications of mobile technologies and geospatial tagging in marketing, social advertising techniques and viral marketing through mobile social media, privacy in networked world.

6. Advanced Social Media Computing: Underpinning techniques and tactics in real-world problems such as building predictive models for forecasting demand/ revenue of a product, recommendations based on user's interest matrix, personality insights (IBM Watson Personality Insights using Social Media), and crowdsourcing with Mechanical Turk.

Learning Outcome

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

- use different tools for collecting, analyzing, and exploring social media data
 - apply social media related practical and analytical skills required in modern digital enterprises to derive insights for business decisions using social media
3. Pedagogy

Text Book:

- Networks, Crowds, and Markets: Reasoning About a Highly Connected World by David Easley and Jon Kleinberg, Cambridge University Press, 2010.
- Analyzing Social Media Networks with NodeXL: Insights from a Connected World by Hansen, D., Shneiderman, B., & Smith, M. A. (2010)

Reference Books:

The following books can be used as references.

- Social Media ROI: Managing and Measuring Social Media Efforts in Your Organization by Olivier Blanchard, ISBN-13: 978-0789747419.
- Social Media Metrics: How to Measure and Optimize Your Marketing Investment by Jim Sterne, David Meerman Scott, ISBN: 978-0-470-58378-4
- Seven Layers of Social Media Analytics: Mining Business Insights from Social Media Text, Actions, Networks, Hyperlinks, Apps, Search Engine, and Location Data by Gohar F. Khan, 2015, ISBN: 1507823207.

MS 6210 BUSINESS MODELS

(4-0-0-6)

Objectives:

The objective of the course is to provide insights into business excellence frameworks, designing business models and the dynamics of business innovation. This course outlines holistic management of both established and new firms through the integration of strategic perspectives related to marketing, financial, organizational and operational aspects. The students will be exposed to emerging theories in this arena to enable them gain a deep understanding of business models and their dynamic roles in the sustainability of business success with the aid of global case studies.

Contents:

- **Corporate Lifecycles:** Growing Vs. Ageing Companies – Corporate Lifecycle Stages (Infancy – Go-Go – Adolescence – Prime – Stable – Aristocracy – Recrimination – Bureaucracy – Death) – Tools for organizational analysis.
- **Business Excellence Models:** Core values and concepts – Business Excellence frameworks of USA (MBNQA), Europe (EFQM) and India (CII-EXIM) – Cross-comparison of national frameworks.

- **Components of a Business Model:** Relationship between strategy and structure – Product vs. Service Businesses – Firm boundaries – Architectural components of business models – Evaluation of business models – Case examples.
- **Planning and Execution of Business Models:** Profit Models – VRISA analysis – Sources of competitive advantage – Critical success factors for planning and executing business models – Global case studies
- **Business Innovation:** Industrial perspectives on growth and innovation – Types of innovations – Managing product and process innovations – Managing disruptive innovations – Principles of value based management.

Text books:

1. Afuah, Allan; *Business Models: A Strategic Management Approach*, McGraw-Hill, New York, 2004.
2. Vedpuriswar, A.V.; *Business Innovation Lessons from Great Companies*, Vision Books, New Delhi, 2005.

References:

1. Roberts, John; *theModern Firm*, Oxford University Press, New York, 2004.
2. Christensen, Clayton, Scott Anthony and Eric Roth; *seeingwhat's Next*, Harvard Business School Press, Boston, 2004.
3. Adizes, Ichak; *Managing Corporate Lifecycles*, Prentice Hall, New Jersey, 1999.
4. Heather, Ken; *theEconomics of Industries and Firms*, Pearson, London, 2002.
5. Govindarajan, Vijay and Chris Trimble; "Building breakthrough businesses within established organizations", *Harvard Business Review*, pp.58-68, May 2005.
6. Markides, Constantinos and Constantinos D. Charitou; "Competing with dual business models: A contingency approach", *Academy of Management Executive*, Vol. 18, No. 3, pp.22-36, 2004.
7. Magretta, Joan; "Why business models matter", *Harvard Business Review*, pp.87-92, May 2002.
8. Nambisan, Satish; "Why service businesses are not product businesses", pp.72-80, *MIT Sloan Management Review*, summer 2001.
9. Kim, W. Chan, and Rene Mauborgne; "Knowing a winning business idea - When you see one", *Harvard Business Review*, pp.129-138, Sep-Oct 2000.
10. Miller, Danny; "Icarus Paradox: How exceptional companies bring about their own downfall." *Business Horizons*, Jan-Feb 1992.

Objectives:

Course intends to help students develop critical thinking skills—particularly skills relevant for effective behavioural analyses models, designs, interpretation and insights.

Contents:

- Behaviourism: Philosophy, Methodology, theory
- Social - Experiences and behaviours of the individual in the social world of relationships, media influences, group pressures and prejudices, and cultural and gender stereotypes.
- Organizational: Leadership, Performance management, Work and wellbeing; Employee relations, Selection and assessments, Gestalt, Group decision making; Organization Design, Culture, Power, Politics, Diversity
- The Biological Basis of Human Behaviour – Non-invasive Biometrics and Bio feedback systems. Assess critically the extent to which biological explanations can be used to understand or explain human behaviour and vice versa.
- Cognition–Perception, Information Processing, Cognitive styles, Social cognition, cognitive dissonance etc.
- Ethical Issues - Examine the use of human participants in the behavioural lab investigations, where the emphasis will be on the importance of following ethical guidelines, such as those provided by the APA.
- Students will be presented with models and empirical studies for critical evaluation in the above mentioned areas.
- Research methods - Nature of psychological and behavioural enquiry and the advantages and disadvantages of different research methods. Test battery, assessments, Unobtrusive behavioural observation, field studies, the design and implementation of experimental and non-experimental investigations, quasi experimental designs, times series designs, factorial design, single subject research design etc will be investigated, by thinking about the selection, formulation and implementation of appropriate investigation designs

References:

1. American Psychological Association. (2010). Publication manual of the American Psychological Association. (6th ed.). Washington, D. C.: American Psychological Association.
2. McBride, D. M. (2010). The Process of Research in Psychology. Los Angeles, CA: Sage.
3. Mazur, J. (2007) Learning and Behaviour (7th Ed) Pearson Higher Ed USA.

MS 6280 INDUSTRIAL AND BUSINESS DOMAINS (2-0-0-3)

Objectives:

The knowledge of different industrial and business domains is essential to broaden the students' professional perspectives. They develop a comprehensive and comparative understanding of the important issues facing managers in those domains. It enables them to appreciate the scope for and limitations of applying different concepts and techniques in various management functions across different domains. It also enhances their familiarity of managerial practices in those domains.

Contents:

Descriptions of various industrial and business domains, in India, in terms of:

- Output products/services;
- Market segments and sizes;
- Market potential;
- General uncertainties and major problems;
- Prevailing technologies;
- Major suppliers/sourcing agents;
- Leading firms, their strategies and performance characteristics in terms of finance, marketing, productivity, and quality, and other key organizational features;
- Future outlook.
- The various industrial and business domains that will be described in this course will include:
 - Core sectors - steel, oil, power/energy, construction, etc.
 - Manufacturing - capital goods (non-electrical and electrical machinery and transportation equipment).

References:

Leading business periodicals, magazines, newspapers, and business websites

MS 6310 CONTEMPORARY ISSUES IN MANAGEMENT (4-0-0-6)

Objectives:

The objective of the course is to expose students to major interdisciplinary topics and emerging trends in the field of management theory and practice. It aims to familiarize them with new concepts and state-of-the-art methodologies concerning management philosophy and managerial decision-making. The course explores the issues and challenges pertaining to recent developments as depicted in research studies on business environments, models, entrepreneurship and competitive positioning of firms.

Contents:

- Philosophy of Management and Capitalist Philosophers.
- Globalization, International Trade and WTO: Issues and Challenges.
- Emerging Trends in Functional Domains
- Managerial Decision Making: Anatomy of sensible, sustainable Decisions.
- Art of Negotiation: Approaches, Tools and Techniques.
- Corporate Performance Management: Emerging Models.
- Business Ideas: Evolution and Execution.
- Technology as a Competitive Weapon.
- Corporate Social Responsibility and Business Ethics.
- Management and Spirituality.

References:

1. `Murray, Peter, David Poole, and Grant Jones (2005) *Contemporary Issues in Management and Organisational Behaviour*, Thomson, Sydney.
2. Gabor, Andrea (2000) *The Capitalist Philosophers: The Geniuses of Modern Business*, Three Rivers, New York.
3. Bhagwati, Jagdish (2005) *In Defense of Globalization*, Oxford University, London.
4. Beinhocker, Eric D (2006) *The Origin of Wealth: Evolution, Complexity, and the Radical Remaking of Economics*, Harvard Business School, and Boston.
5. Clarke, Thomas and Stewart Clegg (1998) *Changing Paradigms: The Transformation of Management Knowledge for the 21st Century*, Profile, London.
6. Russo, Edward and Paul Schoemaker (2002) *Winning Decisions: Getting It Right the First Time*, Judy Piatkus, New York.

7. Nalebuff, Barry and Ian Ayres (2005) *WhyNot?: How to Use Everyday Ingenuity to Solve Problems Big And Small*, Harvard Business School, Boston.
8. Bragg, Andrew and Mary Bragg (2005) *Developing New Business Ideas: A step-by-step guide to creating new business ideas worth backing*, Pearson, Harlow.
9. Mullin, John (2003) *The New Business Road Test: What Entrepreneurs and Executives Should Do Before Writing a Business Plan*, FT Prentice Hall, London.
10. Shell, Richard (1999) *Bargaining for Advantage: Negotiation Strategies for Reasonable People*, Penguin, New York.
11. Rochlin, Dave (2006) *Hunter or Hunted: Technology, Innovation and Competitive Strategy*, Thomson, New Delhi.
12. Zohar, Danah and Ian Marshall (2004) *Spiritual Capital: Wealth We Can Live By*, Berrett-Koehler, New York.

MS6370 STRATEGIC NETWORKING

(2-0-0-3)

Objectives:

This Course will address various conceptual dimensions of corporate level networking and its applications to gain strategic advantage – in terms of an ability to identify and exploit opportunities and overcome threats in achieving corporate objectives.

Contents:

- Concept of networking.
- Different perspectives on networking – sociological, organizational theories, Development Administration, etc.
- Networking as a tool for corporate survival and growth.
- Experiences of different Indian Organizations.
- Political networks and lessons for the Corporate world.
- Product lifecycles and networking.
- Emerging Paradigms and Issues.

References:

- 1) Dixit, M R and Ramachandran, K (1989), *Corporate Networking for Strategic Advantage*, Working Paper 803, IIM Ahmedabad.
- 2) Wiewel, W. Hunter, A (1985), *The Interorganizational Network as a resource: a Comparative case study on organizational genesis*, Administrative Science Quarterly, Vol. 30, pp.482-496.
- 3) Jarrillo, J C (1988), *Strategic Networks*, Strategic Management Journal, Vol. 9, pp 31-41.

- 4) Rob Cross and Andrew Parker (2004), *The Hidden Power of Social Networks – Understanding how work really gets done in organizations*, Harvard Business School Press.
- 5) Yannis M. Ioannides and Adriann R Sveterent, (October 2005), *Social Networking and Individual Outcomes: Individual Decisions and Market context. The Networks Electronic Commerce and Telecommunications (“NET”)*, Institute working paper 05-16.

ELECTIVE COURSES

HUMAN RESOURCE MANAGEMENT ELECTIVES

MS5410 TALENT ACQUISITION AND MANAGEMENT (4-0-0-6)

Objectives:

In a time of increasing global competition every organization is concerned about the level of work performance of its employees. Since performance of employees is a major determinant of how successful an organization is in

reaching its strategic goals and developing a competitive advantage. This course will deal with various tools and techniques used in the selection process for acquiring the right talent for the organizations and how to manage these human resources.

Contents:

1: Overview and Models

- Staffing-nature, Definition, implications, importance
- Staffing models
- Recruitment with a global perspective
- Ethical Issues in Recruitment

2: Environmental Conditions

- Economic conditions – changes and its impacts
- Labour markets - Demand and Supply

3: Legal Aspects of staffing

- Fair employment laws – EEO best practices
- Labour unions – Contracts and their impacts
- Recruiting from a diverse workforce

4: Strategy and Planning

- Human Resource planning
- Forecasting HR requirements and availabilities
- Preparing Action Plans
- External and internal environmental scanning

5: Job Analysis

- Job analysis –Job descriptions, job specifications
- Job analysis techniques
- Competency based job analysis
- Job rewards and job analysis-job reward matrix

6: Measurement

- Importance and use of measures-Scores
- Reliability and validity of measures
- Specific use of measures in staffing

7: External Recruitment

- Common Practices- Traditional and Technology enhanced methods
- Campus Recruitments, job fairs, employee referrals
- Role of media in recruitment

8: Internal recruitment

- Organizational and administrative issues in internal recruitment
- Mobility paths , Succession Planning
- Communicating internal recruitment
- Glass ceilings
- Comparative analysis –internal Vs. Internal recruitment

9: Selection Tests

- Test Of ability and knowledge- Intelligent test, job Knowledge test, Performance Tests and work samples
- Assessment centers
- Medical examinations, Drug testing
- Tests of personality and character, Integrity tests

10: Interviews

- Nature and Purpose
- Types Of Interviews- Structured Vs. Unstructured, Panel interviews, Virtual interviews
- Interview content- nature Of Questions
- Interviewer attributes and behaviour

11: Employee Contracts

- Employee Contracts
- Job Offers – formulation, Presentation
- Preparing for induction
- Legal issues of job contracts

12: Evaluating Success of Selection

- Predictors and criteria
- Performance appraisal methods – Checklists, employee comparisons and graphic rating scales

References:

1. Staffing Organization : Heneman, Judge, Heneman- McGraw- Hill – Third Edition
2. Employee Selection : Lilly M Berry – Thomas Wadsworth, 2004
3. Recruiting, interviewing, Selecting & Orienting new employees : Diane Arthur – Prentice – Hall of India , 2006
4. Human Resource Selection: Gatewood, Hubert Frild and Murray BarrickSouth Western Cengage Publications, 2009

MS 5420 TRAINING AND DEVELOPMENT

(4-0-0-6)

Objectives:

This course analyses and discusses various training and development methods in organisation. It examines the training processes, which begins with the diagnosis of training needs and establishment of pure objectives pertaining to programmes. This module will discuss various issues on the design and the delivering of training programmes that use appropriate methods and procedures to maximise the leaning and subsequent job performance of trainees. It will also discuss on various training programmes, which are evaluated to see whether they meet the objectives and are cost effective.

Contents:

1. Scope and cost of human resource development - a systems model to training, strategy and HRD, building employee commitment; orientation and socialization.
2. Need assessment - purpose and methods of need assessment, three levels of need assessment, identifying training objectives.
3. Training phase - learning principles, training methods, management development programmes - new employee orientation.
4. Evaluation phase - evaluation levels and purposes, evaluation designs, using evaluation to improve training, utility of training programmes, benchmarking HRD.
5. Human resources development in the future - small business applications; training, training for special purposes, global HRM training, information technology and HR training.

References:

1. Gary Dessler, *Human Resource Management*, 7th edition, Prentice Hall, New Jersey, 1977.
2. Fisher, Schoenfeldt and Shaw, *Human Resource Management*, 4th edition, Houghton Mifflin Co., New York, 1999.
3. Milkovich, G.T., and F.W. Bourdreau, *Human Resource Management*, 8th edition, Irwin, 1997.
4. Mondy, Wayne R. and Robert M. Noe, *Human Resource Management*, 6th edition, Prentice Hall, New Jersey, 1996.

MS 5430 INDUSTRIAL RELATIONS**(4-0-0-6)****Objectives:**

Industrial relations play a crucial role in establishing and maintaining industrial democracy. In India it has passed through several stages. A number of factors, viz., and social, economic and political have influenced industrial relations.

Contents:

Industrial unrest leads to loss of man, days and productivity of organisations. The government had played a dual role – one as the initiator of policy and the other as an employer or owner by setting up large public sector organisations.

Industrial relations provide the basics of industrial democracy, dispute settlements and collective bargaining in organisations.

- Indian industrial relations – an overview
- Indian industrial worker

- Trade unionism
- Origin and structure of trade union
- Trade Union Act
- Evolution of industrial relations
- Industrial Disputes Act 1947
- Industrial Employment (Standing Orders) Act 1946
- Payment of Bonus Act 1965

References:

1. Mammoria, C.B., *Dynamics of Industrial Relations in India*, Himalayan Publishing House, Bombay, 1996.
2. Mammoria, C.B., *Personnel Management*, Himalayan Publishing House, Bombay, 1996.
3. Kapoor, N.D., *Hand Book of Industrial Law*, Sultan Chand & Sons, New Delhi, 1998.
4. Monappa, Arun, *Industrial Relations*, TATA McGraw Hill Publishing Co., New Delhi.
5. Anantharaman, V., *Malaysian Industrial Relations: Law and Practice*, 2nd Edition, UPM Press, Kaula Lumpur, 1999.

MS5440 LABOUR LAW

(4-0-0-6)

Objectives:

Fundamental rights and directive principles of state policy incorporated in our constitution strive to attain socialistic equalitarian society, free from socio-economic oppression and exploitation. The various legislative measures taken by the government towards the healthy industrial jurisprudence with the growth of industrialization, especially during and after the first world war, the conditions changed. First India emerged as one of the eight industrial powers of the world and there was steady increase in the ranks of industrial employees. The course will provide the inputs to various industrial laws viz. Standards and norms and welfare and amenities legislations.

Contents:

- Industrial legislation
- Growth of industrial labour force, characteristics of industrial labour
- Factories Act, Mines Act, Plantation Labour Act, Minimum Wages Act, Maternity Act, Employees State Insurance Act, Workmen's Compensation Act, Employees Provident Fund Act, Gratuity Act.

References:

1. Monappa, Arun, *Industrial Relations*, TATA McGraw Hill Publishing Co., New Delhi.
2. Mammoria, C.B., *Dynamics of Industrial Relations in India*, Himalayan Publishing House, Bombay, 1997.
3. .Kapoor, N.D, *Hand Book of Industrial Law*, Sultan Chand & Sons, New Delhi, 1998.
4. Gulshan, S.S., and G.K. Kapoor., *Business-Age*, International Publishers, New Delhi, 1998.
5. Anantharaman, V., *Malaysian Industrial Relations: Law and Practice*, 2nd Edition, UPM Press, Kuala Lumpur, 1999.

**MS5450 INTERNATIONAL HUMAN RESOURCE
MANAGEMENT**

(4-0-0-6)

Objectives:

With globalization on the rise, organizations are facing increasing challenges in terms of effectively managing their human resource on an international scale. This course would therefore attempt to familiarize students with these challenges facing multinational and transnational corporations today in operating on a global sale, the human resource policy choices that confront multinational enterprises, and factors to be considered in making those choices. This course would benefit students wishing to specialize in Human Resource Management and Organizational Behavior. The pedagogy would comprise of a mix of interactive classroom lecture sessions, case discussions and presentations.

Contents:

- Introduction to International Human Resource Management: approaches to IHRM, variables moderating differences between domestic and international HRM, organizational context, cultural profiles and challenges, HR and expansion strategies.
- Strategic human Resource management in a global context
- International recruitment and selection
- Performance management of expatriates and foreign subsidiaries
- Training and development
- Compensation modules
- Repatriation
- labor and employee relations
- Issues, challenges and developments in IHRM, global and cultural diversity

References:

1. International Human Resource management (2001): Peter j Dowling, Dencie E Welch & Randall S Schuler – South – Western Thomson Learning
2. International HRM (2001): Maryann H Albrecht (edited) – Blackwell Publishers, UK
3. International Human Resource Management (2003): Anne –WilHarzing& J V Ruysseveldt (edited): Sage Publications, UK

MS 5460 COMPENSATION MANAGEMENT (4-0-0-6)

Objectives:

The objective of this course to equip students with an understanding of compensation management approaches including systematic Performance Management (PM). This subject covers the main elements of compensation management and its relationship with the strategic role of human resource management. Performance management and its relation to employee and its organization performance will also be discussed.

Contents:

- Overview of compensation - strategic role of compensation in human resource system, the importance of compensation, factors influencing effective compensation.
- Compensation process - employee satisfaction and motivation issues in compensation, developing salary structure, elements of compensation, executive compensation
- Performance management framework - definition and coverage, reason for undertaking PM, PM process, linking pay to performance
- Planning of performance management - establishing individual/team objectives, job analysis and its process, establishing internal equity; job evaluation methods, setting performance standards
- Managing performance management - coaching and counseling, feedback and day-to-day planning of meetings, motivation, self-monitoring, monitoring training and development activities
- Reviewing of performance management - formal review of performance, performance measurement
- Rewarding performance - financial rewards, non-financial rewards, administering compensation systems

References:

1. Richard I.Henderson, *Compensation Management in a Knowledge-Based World*, 7th edition, Prentice Hall, 1997
2. Joseph J.Mantocchio, *Strategic Compensation: A human resource Management Approach*, 1st edition, Prentice Hall, 1998

3. Dick Grote, *The complete guide to performance appraisal*, Amacom, USA, 1996
4. Douglas G.Shawet.al.,*The performance Measurement, Management and Appraisal Sourcebook*, Human resource development Press Amherst, Massachussets. 1995
5. Milkovich, G.T, and F.W.Boudreau, *Human Resource Management*, 8th edition, Irwin, 1997.

MS 5470 STRATEGIC HRM AND GENERAL CULTURAL ISSUES

(4-0-0-6)

Objectives:

In their continuous quest for sustainable competitive advantage, the central question facing most organizations today is how to reduce, if not eliminate, the lag between the emergence of new strategies and structures and their appropriate human resource management systems. The expectation therefore is that HR executives take on more of leadership roles than before, in driving the strategies of their organizations, rather than restricting their roles to being merely followers. Strategic Human Resource Management (SHRM) offers a look at the critical role of how managing human resources is a value - adding proposition in the achievement of organizational goals and objectives. Each human resource function must be aligned with the organization's strategies. This course is designed to offer tools that lift thinking to a higher level culminating in processes that lead to an integrated approach between human resources and the organization.

Contents:

- Introduction: Strategic Partnership Model; strategic value of human assets
- Investment perspectives of HR and the human resource environment; strategy implementation
- Rewards and development systems; performance evaluation and HR impacts
- Strategic uses of change management
- Strategic renewal : downsizing / mergers and acquisitions / restructuring
- Internal and external fit in SHRM systems
- Crafting strategic HR systems: SHRM measurement
- Multinational SHRM
- Role of formal HRM under SHRM

References:

1. Mello, Jeffrey A. (2005). *Strategic Human Resource Management* (2nd Ed.). South-Western; Cincinnati

2. Greer, Charles, R (2001). *Strategic Human Resource Management*. (2nd edition). Pearson Education, New Delhi
3. Ivancevich, John M (2004). *Human Resource Management*. 9th edition. Tata McGraw-Hill, New Delhi

MS 5471 MANAGING WORK TEAMS

(4-0-0-6)

Objectives:

Work teams have become an integral part of organizations today. In this context this course will sensitize students on the dynamics of work teams. The key objective of the course is to help the students understand factors which affect work team performance and thus manage them effectively.

Contents:

- **Introduction to work teams:** Definition of work teams – How work teams are different from other teams - Different types of work teams – Theories on work teams.
- **Factors affecting team performance:** Interpersonal factors – Task related factors – Technological factors – Temporal factors
- **Team Dynamics:** Conflict in teams – Group think – in-group Vs out-group behaviours.
- **Managing a team:** being a team member – being a team leader – HR issues in managing a team.

Text books:

1. Hackman J. R (1990), *Groups That Work (and Those That Don't): Creating Conditions for Effective Teamwork* (Jossey Bass Business and Management Series), Jossey-Bass Inc. Publishers, San Francisco, California.
2. Stewart G.L., Sims H. P., Manz C. C., (1999). *Team-Work and Group Dynamics*. J. Wiley, New York.

References:

1. M. P. Ganesh and Meenakshi Gupta (2008). Nurturing Team Performance by Managing Virtualness, *Journal of Psychosocial Research*. Vol. 3 No. p. 251-264
2. Yeatts, D.E., and Hyten, C., (1997). *High-performing self-managed work teams: A*
3. *Comparison of theory to practice*. Sage Publications.

4. Maruping, L. M., and Agarwal, R. (2004). Managing team interpersonal processes
5. Through technology: A task–technology fit perspective. *Journal of Applied Psychology*, 89(6), 975-990.

MS 5472 LEADERSHIP DEVELOPMENT

(4-0-0-6)

Objectives:

Leadership is one of the most salient aspects of the organizational context. It is a complex process by which the leader influences others to perform and achieve. The leadership attributes – belief, values, ethics, character, knowledge, and skills – are all traits which can be learned. The course is designed to discuss several important aspects of leadership in a comprehensive manner. Course will also expose students to some of the central ideas and frameworks in leadership and helps them to understand how to apply these ideas and frameworks to analyze managerial and organizational situations.

Contents:

- **Nature & Importance of Leadership:** Definition and the Leadership Grid; Leadership theories, styles and Behavior; Leadership and Major motivational theories
- **The Leader:** Character and integrity; Ethics and Values; Building excellence; Emotional intelligence; Leadership traits; Influencing team/organizational culture
- **Developing Team Work: Team building process; Team leadership; Facilitation; Mediation; Negotiation; The Team Leader as a facilitator, mediator & negotiator**
- **Communication, Conflict and Coaching:** Communication skills and styles; Conducting effective meetings; Managing Conflict; Coaching & mentoring; Coaching for performance; Skills Audit; Giving feedback;
- **Power, Politics and Leadership:** Working with politics and power; Influence and Persuasion; Factors that contribute to political behavior; Exercising control over dysfunctional politics.
- **Strategic Leadership:** The nature of strategic leadership; International and culturally diverse aspects of leadership: Leadership and diversity; Leadership and change; Creating High performance culture; Leadership and the organization

References:

1. Robert. N.Lussier& Christopher. F. Achua. Effective Leadership. 3rd Edition. Ceneage Learning India Pvt. Ltd (2007)
2. Watson M Craig.Dynamics of leadership.Jaico Publishing House. 2001.
3. Daniel Goleman. "Leadership that Gets Results." Harvard Business Review OnPoint Enhanced Edition. Boston: Harvard Business School Publishing, 2000.
4. Selected papers from refereed journals.

MS 5473 ORGANIZATION DEVELOPMENT

(4-0-0-6)

Objectives:

This course treats the contemporary theory and practice of organization development while also focusing on the role of organization development in anticipating and effecting change in organizations. The course examines the organization diagnostic & development process, intervention strategies, and the role of organization development in creating the changes that improve individuals, teams, and organizations, roles & styles of OD practitioners

Contents:

- **Overview of Organizations and Systems:** Understanding organizations; diversity of organizations; organizations as open systems; Overview of the field of organization development;
- **Collaborative Consulting:** Collaborative and OD consulting; Maintaining Professionalism; Yourself as an instrument of Change; Trust, commitment and collaboration with Clients; Administrative skills; staying grounded and centered
- **Values, Assumptions and Beliefs in OD:** OD components;Chronology of events in Management and organization thought; early statements of OD values and assumptions; Implications of OD values and assumptions.
- **Theory and Management of OD:** Action research and Organization Development; Action Research Diagnostic Phases; Action Research Implementation Phases; Managing the OD process;
- **OD Interventions:** OD interventions-An Overview; Team Interventions; Intergroup and Third party Peacemaking interventions; Comprehensive interventions; Structural interventions; Training Experiences
- **Performance, Change and Learning:** Performance management; Organizational Change and capacity building; evaluation of performance and change; cultivating and guiding learning

- **Collaborative Consulting Cycle:** Clients start up; Engagement and Agreement; Discovery and feedback; Action Planning, Alignment and Integration; Implementation and Change Management; Adoption and evaluation; Project termination
- **Key Considerations and Issues:** Issues in Consultant – client Relationships; System Ramifications; Power, Politics and Organization Development. Research on Organization Development; Future and OD

References:

1. Brown, D. R., (2010). *An experiential approach to organization development*. 8th Ed Pearson/Prentice-Hall: Upper Saddle River, NJ.
2. Joan V Gallos (2006) *Organization Development.A Jossey Bass Reader.Jossey-Bass Ed 1.*
3. Cummings, T.G. & Worley, C.G. (2008). *Organization Development and Change (9thEd.)*. Cincinnati, OH: South-Western College Publishing.
4. Donald L. Anderson (2009)*Organization Development: The Process of Leading Organizational Change*. Sage Publications, Inc.
5. French & Bell (1998) *Organizational Development: Behavioral Science Interventions for Organization Improvement*, 6th Edition.

MS 5474 HR IN MERGERS AND ACQUISITIONS (4-0-0-6)

Objectives:

Mergers and acquisitions (M&A) are increasingly being used by firms to strengthen and maintain their position in the marketplace. While most M&A research focused on the financial and strategic issues, more recent literature is focusing on the human resources (HR) aspect of M&A.

Today, it is widely accepted that the way HR issues are handled is critical to the success of any M&A and management of the human side of change is the real key to maximizing the value of a deal. Most M&A failures can be traced to poor support of HR-related issues and activities, human resources issues being neglected or HR not playing a critical role in the process. As the Indian industry opens up to the global competition, we are witnessing a spate of such mergers, acquisitions, and strategic alliances for corporate restructuring and renewal. It is in this context that this course is being offered. Though M&A's is highly multi-dimensional, course highlights the human aspects and people side of mergers and acquisitions.

Contents:

- Introduction: A Brief History of Mergers and Acquisitions, Why Companies Merge and Acquire, Merger and Acquisition Lifecycle. Why Mergers fail

- HR function and role change: M&As as change makers Factors influencing the role of the HR function: The Outer context, The Inner context: Organization factors, Individual factors, Merger specific influencing factors
- Frameworks for HRM: Tysons and Fells Building Industry, Storeys Personnel Practitioners, Monks Personnel Management, Ulrichs multiple role model etc.
- Strategic fit between M&As and HRM: HR Leadership, HR Due Diligence, Organization structure, integration planning, Over capacity M&As and Downsizing, Staffing and Selection, Retention, Communication, Transition Teams, Cultural clashes and the acculturation process, Change management, HRM processes, Resources, Values.
- Critical HR issues: pre-combination, integration, and post-integration.: Pre-Combination: HR Issues, HR Implications and Actions; Combination - Integrating the Companies; HR Implications and Actions; Solidification and Assessment of the New Entity: HR Issues and HR Implications and Actions
- Integration levers and components

References:

1. The Human Side of Mergers and Acquisitions. Buono, A.F. and Bowditch, J.L. (1989) San Francisco, CA: Jossey-Bass.
2. Mergers and Acquisitions: Managing Culture and Human Resources- Günter K. Stahl, Mark E. Mendenhall- Stanford University Press, 2005
3. The Human Side of Mergers and Acquisitions: Managing Collisions Between People, Cultures, and Organizations-Anthony F. Buono, James L. Bowditch-Beard Books, 2003
4. Birkinshaw, J. and Bresman, H. (2000) 'Managing the Post-Acquisition Integration Process: How the Human Integration and Task Integration Processes Interact to Foster Value Creation', Journal of Management Studies, 37: 395–425.

MS 5480 CROSS-CULTURAL MANAGEMENT (4-0-0-6)

In present-day India, with its increasing focus on globalization, business success requires intercultural awareness and effective cross cultural communication skills. In addition to the normal pressures of people-management, managers are now required to deal with challenges, friction and misunderstandings emanating from cross cultural differences. Understanding and appreciating intercultural differences ultimately promotes clearer communication, breaks down barriers, and strengthens relationships and yields tangible results in terms of business success. This

course aims to provide an overview and practical skills in the cross-cultural management and cross-cultural business communication, through an understanding of how culture affects workplace dynamics.

Contents:

- Introduction: International management and culture. Culture and the workplace.
- Cultural orientation. G. Hofstede, Trompenaars, Globe cultural dimensions. Implications for the manager.
 - Stereotyping in cross-cultural management.
 - National culture and organizational culture.
 - Leadership in cross-cultural management.
 - Culture and organizational structure.
 - Motivating across cultures.
 - Culture and conflict. Conflict management.
- Negotiations. Appropriate communication across cultures. Verbal and non-verbal business communication.
- Culture and planning.
- International staffing policy. Intercultural team-work.
- Expatriates culture shock and methods of cultural adjustment.
- Multicultural business- Regional specific.

References:

1. The Blackwell handbook of cross-cultural management. (2002) Gannon, M. & Newman, K. L. (eds.) Oxford, UK: Blackwell.
2. Earley, P. C. & Gibson, C. B. (2002). Multinational work teams: A new perspective. Mahwah, NJ: Lawrence Erlbaum.
3. Hall, E. T. Beyond culture. Garden City: Anchor Press. Doubleday. 1981.
4. Hofstede, G. (2003) Cultures and organizations: Intercultural cooperation and its importance for survival. London. Profile books.
5. Manab Thakur, Gene E Burton, B N Srivastava. (2001) International management. Concepts and cases. New Dehli: Tata McGraw-Hill Publishing Company.
6. Marx, E. (1999) Breaking through culture shock: what you need to succeed in international business. Cambridge university press.
7. Mead, R. (2001) International management. Cross-cultural dimensions. (2nd ed.) Oxford: Blackwell.

MS5490 MANAGEMENT OF CHANGE AND TRANSFORMATION

(4-0-0-6)

Objectives:

To enable the participants

- Understand the forces of change in organizations
- The need for effective management of change process
- Develop knowledge and skills to design and implement change processes in organizations

Contents:

- **Unit 1:**
Environmental context of organizations
Forces of change
- **Unit 2:**
Need for effective management of change
Process steps in the management of change
- **Unit 3:**
Frameworks for organizational analysis
Organizational growth stages
- **Unit 4:**
Appreciative inquiry in facilitating change
Designing and implementing change
- **Unit 5:**
Behavioural dimensions of change process
Understanding and managing resistance to change
- **Unit 5:**
Role, types and competencies of facilitators of change
Seminal works of change management – Participants will take up an assignment on a seminal book/concept relating to management of change

MS 5500 PERFORMANCE MANAGEMENT (4-0-0-6)

Objectives:

- Develop skills for managing performance of employees i.e. appraising, Compensating & developing employees
- Appreciate Reward & Performance management in the context of the organizational Objectives

At the end of this course, the students should have a greater understanding of basics of RPM and its applications at the work site

Contents:

- **Performance Management –Definition, concerns. Scope and its linkage with other HRM Systems**

- **Elements of Performance Management**
Defining Performance, Facilitating Performance and Encouraging Performance
 - Setting Goals & Targets
 - Responsibilities before, during, after Performance & Development Planning

Individual, team and organizational performance linkages

- **Designing PMS- {MBO, BSC. Policy Deployment}**
- **Monitoring and Appraising Performance (Performance Appraisal)**
 - What is Performance Appraisal
 - The Performance Appraisal system
 - Performance Appraisal Methods
 - Errors and Biases in Performance Appraisal
 - Reducing biases / errors
 - Features of an effective system
 - Performance Counselling

(What is it, What to do, what not to do)

- **Compensating Performance – Reward Management**
 - Performance management and compensation strategies
 - What is compensation
 - Designing compensation systems
 - Compensation and dimensions
 - Legislation and compensation
 - Job analysis, Job description, Job evaluation techniques
 - Compensation surveys, Compensation policies
 - Designing pay structures
 - (Pay policy line, Pay grades, broad banding)
 - Pay for performance / Pay for knowledge Seniority / Merit
 - Incentives and benefits.

Text books:

1. Performance Management, Herman Aguinis, Pearson Education, 2007.
2. The Talent Management Hand Book, Lance A. Berger & Dorothy R. Berger, Tata Mc-Graw Hill.

References:

1. Appraising & Developing Managerial Performance-.T. V. Rao, Excel Books
2. 360 degree feedback & assessment & development Centres, Volume I, II and III, TV Rao,et al., Excel Books
3. Performance Management, Dixit Varsha, 1st edition, VrindaPublications Ltd.
4. Performance Management, Michael Armstrong and Angela Baran, Jaico Publication
5. A handbook of Remuneration Strategy and practices - Michael Armstrong, HallenMuntis,Kogan Page .

**MS 7460 CORPORATE SOCIAL RESPONSIBILITY (4-0-0-6)
AND MANAGERIAL ETHICS****Objectives:**

- To help students understand the impact of business on society, politics and ecological environment.
- To sensitize students on the importance of socially responsible business practices for sustained business performance.
- To help students understand the basic concepts in business ethics and thus recognize the ethical implications of their business decision in future.
- Help students aware of ethical dilemmas they might encounter in their future career and to understand the role of their personal values in resolving those dilemmas.

Contents:

- The social context of business
- Corporations and their impact on the social, political, ecological environment
- Corporate Social Responsibility and Organizational Performance
- Theoretical approaches to Corporate Social Responsibility
- The stake holders approach to business
- Business ethics and Management
- Personal and organizational ethics
- Morality, personal values in the work place
- Factors affecting ethical decision making
- Understanding and resolving ethical dilemmas
- Mechanisms to improve business ethics in organizations

References:

1. Archie B. C and Buchholtz A. K., (2009). Business and Society – Ethics and Stakeholder Management 7th edition, South Western- Cengage Learning.
2. Fisher C. and Lovell A., (2006). Business Ethics and Values - Individual, Corporate and International Perspectives 2nd edition. Prentice Hall
3. Pies I, and Koslowski P., (2011). Corporate Citizenship and New Governance - The Political Role of Corporations. Springer
4. Duska. R.,(2007). Contemporary Reflections on Business Ethics. Springer

OPERATIONS MANAGEMENT ELECTIVES

**MS 5510 LOGISTICS AND DISTRIBUTION
MANAGEMENT**

(4-0-0-6)

Objectives:

The purpose of this course is to provide an understanding of the issues in modeling logistics and distribution in industry.

Contents:

- The factors governing the location of Distribution Centers: Qualitative and quantitative factors in the context of strategic, tactical and operational issues.
- Modelling of Distribution Centre (DC) Location: Optimization of DC locations using mixed integer programming; heuristic methods.
- Vehicle Routing, Minimum Spanning and Travelling salesman problems: Optimization algorithms and heuristic methods.
- Strategic, Tactical and Operational Analysis of Distribution Networks in Supply Chains: Framework, optimization and heuristic approaches.
- Analysis of Logistics Management: Qualitative factors in logistics management by road, sea and air in the national and international arena.

References:

1. Heragu, Sundaresh, Facilities Design, 1997, PWS Publishing Company, Boston.
2. Shapiro, Jeramy. Modeling the Supply Chain, 2001, Duxbury Thomson Learning, Pacific Grove, California, USA.

MS 5520 SIMULATION MODELING AND ANALYSIS (4-0-0-6)**Objectives:**

By the end of the course, students will be able to: Define and describe simulation systems; Interpret and infer from simulation systems; Build simulations models for optimization.

Contents:

- Systems and Modelling: Systems, sub-systems, parameters, variables, measures of performance, and types of models.

- Introduction to simulation: Qualitative and quantitative simulation
- Introduction to sampling: Sampling from historical data, empirical distributions and statistical distributions
- Applications of simulation: Study of inventory system, project network, replacement model, production and operations scheduling, supply chain, and queuing system; development of business games.
- Design of simulation experiments: Analysis of transient and steady states, and run length; variance reduction techniques; use of statistical tests for output data analysis.
- Use of simulation software.

References:

1. Ross Sheldon (2005), "Simulation", Third Edition, Elsevier Publications India Pvt Ltd
2. Law Averill and Kelton David W (1991), "Simulation Modeling and Analysis", Second Edition, McGraw Hill Inc, New York, USA
3. GosawiAbhiji, (2010), "Simulation-based Optimization," Kluwer Academic Publishers, Norwell, Massachusetts, USA

MS 5540 MANUFACTURING SYSTEMS MANAGEMENT(4-0-0-6)

Objectives:

This course aims at introducing concepts in Manufacturing Systems Management through examples, problems and case studies. The emphasis is more on recent trends and thinking in the design and operations of manufacturing systems such as Cellular Manufacturing, Flexible Manufacturing and Synchronous Manufacturing. The emphasis will be more on applying the concepts rather on the theory behind these concepts. The topics to be covered are:

Contents:

- Types of Manufacturing Systems
- Cellular Manufacturing Systems – Issues in Design
- Production Flow Analysis
- Quantitative Algorithms for cellular manufacturing systems
- Operator Allocation and planning issues
- Product Ownership based design
- Flexible Manufacturing systems – Design issues and algorithms
- Synchronous Manufacturing – Concepts
- Synchronous Manufacturing – Applications and extensions

- Agile Manufacturing

References:

1. Burbidge J.L.(1971) Production Flow Analysis, *Production Engineer*, Vol. 50, 139-152.
2. Mahadevan B, the New Manufacturing Architecture, Tata McGraw Hill Publishing Company, New Delhi, 1999.
3. SA Irani (Editor), Handbook of Cellular Manufacturing, Wiley International, 1998.
4. Black J T (1991), "The Design of the Factory with a Future," McGraw-Hill Series in Industrial Engineering and Management Science, McGraw-Hill Companies, USA .
5. Goldratt, E and Cox Jeff (1992), "The Goal: A Process of On-going Improvement," second revised edition, North River Press, USA.
6. Rouf A. and Ahmed S.I. (Editors) (1985), "Flexible Manufacturing Systems: Recent Developments in FMS, Robotics, CAD/CAM, CIM," Elsevier Science Publisher, B.V. Amsterdam.
7. Goldmann, S.L., Nagel, R.N., and Priess, J., Agile Competitors and Virtual Organizations, Van Nostrand Reinhold, New York, 1995.
8. Goldratt, E. and Cox, J., The Goal: A Process of Ongoing improvement, Revised Edition, North River Press, New York, 1987.
9. Wemerlov, U. and Hyer, N.L., Cellular Manufacturing in the U.S. Industry: A Survey of users, International Journal of Production Research, Vol. 27, 1511-1530, 1989.
10. Wemmerlov, U. and Johnson, D. J., Cellular manufacturing at 46 User Plants: Implementation Experiences and Performance Improvements, International Journal of Production Research, Vol.35, 29-50, 1997.

MS5550 OPERATIONS RESEARCH APPLICATIONS (4-0-0-6)

Objectives:

This course introduces the students to selected applications and recent tools of Operations Research. The applications of Operations Research are varied, ranging from Manufacturing to Services and the Social Sciences. Important applications chosen from various functional areas are discussed. For each application, the various tools and techniques used, the relevant literature, the different variants of the problem are discussed. The stress will be on the adaptation of the tools and techniques of Operations Research for the application, more than understanding the functional area. Where relevant, cases and computer solutions will be discussed pertaining to the application.

Contents:

A suggested set of applications is given below. The applications can change based on recent developments from time to time.

- Job Shop Scheduling - O.R. models in scheduling - Dispatching rules for various situations - Application of Shifting Bottleneck Heuristic - Case study on application of genetic Algorithms and dispatching Rules.
- Vehicle routing problem - Applications in Distribution and Logistics - Types of VRP - Exact Solutions using TSP and heuristics using savings method - Case Study and Application.
- Bin packing problem - 1d, 2d and 3d problems, Algorithms and applications, Applications.
- Resource Constrained Project Scheduling - Formulations and heuristics, Applications
- Portfolio Optimization - Quadratic Programming - Lagrangean Multipliers.
- Conjoint Analysis - Applications in Marketing - Linear Programming models for preference estimation.
- Data Envelopment Analysis - Linear Programming models - Applications in Health care industry
- Crew Scheduling and Rostering - Linear and Integer Programming - Applications in Airline Industry - Case study and Real-life application.

References:

1. Wayne Winston. Operations Research: Volume 2 *Introduction to Probability Models*. Thomson Books, 2004.
2. MichealPinedo, Scheduling -Theory, *Algorithms and Systems*, Prentice Hall Inc, 1995.
3. Adams J, Balas E and Zawack , (1988) *The Shifting Bottleneck Procedure for Job shop , Scheduling, Management Science*, Vol 34, No.3 391-401.
4. Bodin LC (1990) Twenty years of Routing and Scheduling, *Operations Research*, Vol38,No.4, 571-579.
5. Andrea Lodi, Silvano Martello, Michele Monaci,(2002) Two dimensional Parking Problems: A survey, *European Journal of Operational Research*, Vol 141, NO. 2, 241- 252.
6. Brucker P, Drexl A, Mohring R, Neumann K, Pesch E (1999), Resource-Constrained Project Scheduling: *Notation, Classification, Models and Methods*, *European Journal of Operational Research*, 1999, Volume 112, 3-41.
7. Amenc N and Le Sourd V. *Portfolio Theory and Performance Analysis*, Wiley NJ, 2003.
8. Srinivasan V and Shoker AD (1973) *Linear Programming Techniques for Multidimensional Analysis of Preferences*, *Psychometrica*, Vol 38, No. 3, 337-369.
9. Charnes, A; Cooper, W. W.; Rhodes, E (1981) Evaluating program and managerial efficiency: an application of data

- envelopment analysis to program follow through. Management Science, Vol. 27 No. 6, 668-697,
10. BalajiGopalakrishnan, Ellis. L. Johnson (2005) *Airline Crew Scheduling: tate-of-the-Art. Annals of Operations Research*. Vol. 140, No. 1; p. 305.

MS 5560 SERVICE OPERATIONS MANAGEMENT (4-0-0-6)

Objectives:

This course discusses the various issues in the strategic, tactical and operational aspects of Service Management. Of late, with distribution and logistics gaining importance and third party service providers being available for all activities, service operations management is gaining importance in the overall success of any business.

Contents:

- Nature of services
- Focus of Service Management
- Globalization of services
- Service strategy
- Technology and Impact on services
- Locating facilities
- Managing demand and supply in services
- Service Quality
- Service Productivity
- Tools for service management

The course will involve case discussions, assignments, internet exercises and student presentations.

Reference:

Haksever C, Render B, Russell RA and Murdick RG (2000) *Service Management and Operations*, Prentice Hall International, USA.

MS 5570 HEURISTICS FOR DECISIONMAKING (4-0-0-6)

Objectives:

This course provides insights on various heuristics and its applications in different functional areas of management.

Contents:

Introduction to conventional search techniques: Random search, simple dimensional search, steepest ascent/descent search, and greedy search.

Introduction to meta heuristics: Simulated annealing, tabu search, genetic algorithm, artificial neural network and ant-colony algorithm.

Applications of heuristics to –

- Production Management: plant location and layout, demand forecasting, aggregate production planning, and production scheduling.
- Operations Management: study of issues in supply chains, involving location and capacity determination of suppliers, manufacturing plant, distribution centers and retail points.
- Financial Management: capital budgeting, forecasting share prices and valuation of securities.
- Manpower Planning.

References:

1. Tversky, Amos; Kahneman, Daniel (1982), "Judgment under uncertainty: heuristics and biases", in Kahneman, Daniel; Slovic, Paul; Tversky, Amos, Judgment under uncertainty: heuristics and biases, Cambridge University Press, pp. 3–20, ISBN 9780521284141
2. Baron, Jonathan (2000), Thinking and deciding (3rd ed.), New York: Cambridge University Press, ISBN 0521650305, OCLC 316403966

MS 6230 STRATEGIC SOURCING (4-0-0-6)

Objectives:

This course describes and offers insights on the transformation from functional sourcing or purchasing to strategic sourcing. It will be useful for students to understand:

- Dramatic change of purchasing into world class supply management
- Various strategic decisions for outsourcing, supplier selection, evaluation and development.
- The role of communications, electronic exchanges, global markets and Internet in sourcing process design

Contents:

- **World class supply management** - Imperatives, evolution of strategic sourcing; Supply chains and networks; Supply management's role in business and its impact on bottom line; Strategic supply management alliances.
- **Total Cost of Ownership (TCO) and strategic cost management** - Components of TCO; Price and cost analysis; Discounts and contract compensation arrangements.
- **e-Commerce: negotiation and bidding** - e-Commerce as an enabler: EDI and ERP; B2B exchanges; Online negotiations and reverse auctions.
- **Outsourcing and managing suppliers** - Make or buy decisions; Strategic issues in outsourcing; Supplier selection (bidding and negotiation); Supplier evaluation and development; Single sourcing versus multiple sourcing; Supply base reduction.
- **Supplier relationship management and Global supply management** - Supplier relationship and contract management, incentives, innovation and supply risks; Supply channels and global trade Intermediaries; Currency and payment issues.
- **Analytical models** - Supplier selection; Supplier evaluation; Supply base optimization; Supplier performance index; Supply contracts.

Text books:

1. Burt, D. N., Dobler, D. W. and Starling, S. L. (2008), "World Class Supply Management: The key to Supply Chain Management", 7th Edition, Tata McGraw Hill, New Delhi.
2. Monczka R., Trent, R. and Handfield, R. (2008), "Purchasing and Supply Chain Management", 3rd Edition, Thomson South Western, New Delhi.
3. Seshadri, S. (2005), "Sourcing Strategy: Principles, Policy and Designs", 1st Edition, Springer, New York.

MS 5754 NURTURING THE INNER YOU

(4-0-0-6)

Objectives

Work is one of the central points in our existence. There is a need at the individual and collective level to make this as fulfilling and meaningful as possible. As management graduates, working on oneself and ensuring inner to outer transformation is an emergent need of the hour. This introspective course is intended to unravel and develop capacities, nurture deep relationships, create opportunities for fulfilling work, and inspire the same in others.

- Deepening one's self-knowledge that can manifest in flow, joy, and excellence at Work.
- Discovering one's Calling by identifying work that brings fulfillment

- Developing insights into what drives us to work intrinsically and find overall meaning and purpose
- Building the Case for Positivity: Understanding the impact of positive emotions on work-related outcomes such as creativity, well-being and performance
- Equipping oneself with capacities such as optimism and resilience
- Inspiring change in others through a strength-based approach to leading
- Building meaningful and value-driven organizational culture

Contents

- Starting off: The Why of Positivity, The Journey of Self-Actualization and Self-Realization
- Me: Human Flourishing and Fulfilment
- Core Beliefs about Self: Self-Efficacy, Self-Transcendence
 - Virtues and Character Strengths: Being Authentic, Principle-Centered living, Pressing the pause-button: building muscle memory for ethicality
 - Positive Emotions: Use of positivity to enlarge, develop oneself and others, and experience its impact on work outcomes, The Energy Contagion and Fun at Work
 - Learned Optimism: Courage, Grit and Resilience; Creativity and the Flowexperience; Mindfulness: Focus and Being in the Present, Practicing
 - NonJudgmentality, Enhancing the Intuitive Power of decision-makingMe and Work: Oneness with Work
 - Discovering Calling: Identifying Inner Strengths, Passion
 - Finding Meaning and Purpose: Intrinsic Motivation and the Case for Job Crafting
 - Transformative Learning: Being Curious, Unlearning, Mental Models
 - The Collective-Organization: Mentoring and Inspiring Others for Sustained Transformation
 - High Quality Connections: Developing positive relationships, working in harmony with trust and respect, Unconditional positive regard
 - Lens of Leadership from a Doing to a Being Model: Strength-Based Approach towards Coaching and Mentoring
 - Creating Meaningful Organizations: Appreciative Inquiry, Value-Driven
- Culture and Leadership
 - The Collective-Community: Truth, Goodness, BeautyPro-Social Being, Love, Compassion, Gratitude: The final pieces

BOOKS, REFERENCES, READING MATERIALS

- Ben-Shahar, T. (2012). Choose the life you want: The mindful way to Happiness, The Experiment, LLC, New York.
- Cooperrider.D. and Whitney, D.K. (2005). Appreciative Inquiry: A Positive Revolution in Change, Berrett-Koehler Publishers. Inc. California.
- Csikszentmihalyi, M. (1996). Creativity, Harper Collins, USA.
- Das.G. (2009). The Difficulty of Being Good, penguin group, New Delhi.
- Dutton.J. and Spreitzer. M. (2014). How to be a Positive Leader: Insights from the Leading Thinkers on Positive Organization, Berrett-Koehler Publishers. Inc. US.
- Easwaran.E. (2009). Your Life Is Your Message: Finding Harmony with Yourself, Others and the Earth. Jaico Publishing House, New Delhi.
- Frankl. V.E. (2004). Man's Search for Meaning, Rider, UK.
- Fredrickson, B. (2009). Positivity. Crown Publications, New York.
- Hermann, H. (2008). Siddhartha. Penguin Books, England.
- Kalam A.P.J. (2013). My Journey: Transforming dreams into Actions, Rupa Publications India Pvt. Ltd. New Delhi.
- Maslow, A.H. (1993) The Farther Reaches of Human Nature, Penguin Books, England.
- Seligman M. E.P (2006). Learned Optimism: How to change your mind and your life, Vintage books, New York.
- Shonar. (2014)Of Past Dawns Future Noons: Towards a Resurgent India, Sri Aurobindo Society. Puducherry.
- Additional readings will be distributed in the class.

MS6030 ADVANCED DATA ANALYTICS FOR MANAGEMENT

(4-0-0-6)

Objectives:

To develop strong data analytic skills using a case based approach to apply data mining and advanced statistical techniques to business problems. Examples from finance, marketing, operations management and HR will be discussed.

Prerequisites: First course in Basic Statistics.

Pedagogy: A mixture of analysis based on cases and examples.

Contents:

- *Data Visualization*– Understanding business scenarios by analyzing patterns in data. Would cover linear patterns, curved patterns, Normal models, linear models and nonlinear models. Visualizing higher dimensional data.
- *Decision Trees and Value of information:* Review concepts from probability and discuss construction of decision trees. Applications include use of decision trees to evaluate options,
- *Classification:* General approach to solve a classification problem. Evaluating performance of a classifier. Rule based classification, nearest-neighbor classifiers and Bayes classifiers. Applications include Anomaly detection, fraud detection in credit card etc.
- *Maximum Likelihood estimation and application to management.*
- *Dimensionality Reduction:* Principal component analysis, Singular Value Decomposition, Factor Analysis, Multidimensional scaling and cluster analysis
- *Multiple Regressions:* Multivariate Linear Regression and Statistical Inference in multiple regressions.

References:

1. Pang-Ning Tan, Michael Steinbach and Vipin Kumar (2009), "Introduction to Data Mining", Pearson Education Inc.
2. Dean Foster, Robert Stine and Richard Waterman (1998), "Business Analysis using Regression", Springer Verlag.
3. Dimitris Bertsimas and Robert M. Freund (2004), "Data, Models and Decisions: The Fundamentals of Management Science", Dynamic Ideas LLC.

MS 7200 GAME THEORY – I

(4-0-0-6)

Objectives:

Introduction to formal treatment of games. This should help us appreciate the importance of information in decision-making, Emphasis of applications of game theoretic principles to model various problems.

Prerequisites: No formal prerequisites required. Aptitude for logic would be very helpful.

Contents:

- *Introduction* – what is a "game"? different forms of games, history

- *Terms and definitions* – extensive and normal form of games, strategies (pure and mixed), dominance, rationalizability, Nash equilibrium
- *Static games with perfect information* – Cournot competition, Bertrand duopoly model, Pareto optimality, Proof of existence of Nash equilibrium
- *Dynamic games with perfect information* – multi-stage games, sub-game perfection, backward induction principle and its applications (advertising and competition), Chain-store paradox, repeated games (reputation games), Folk theorem
- *Static games with incomplete information* – Bayesian games, perfect Bayesian equilibrium, Contracting risk and incentives, Job market signaling and schools

Text Book:

Drew Fudenberg and Jean Tirole (2005), “Game Theory”, First Indian Reprint, Ane Books, New Delhi.

References:

1. Joel Watson (2004), “Strategy – Introduction to Game Theory”, South Asian Edition, W.W. Norton and Company
2. Hal Varian (1992), “Microeconomic Analysis”, 3rd Edition, W.W. Norton and Company.

MS 8200 GAME THEORY – II

(4-0-0-6)

Objectives:

Emphasis would be on the theoretical basis for game theory. Also, advanced topics and applications of game theoretic principles shall be discussed.

At the end of the course, the student is expected to know important theoretical results in the area and also will be able to apply the theorems in practical applications.

Contents:

- *Static games with incomplete information* -- mechanism design, auctions, efficiency theorems
- *Dynamic games with incomplete information* – game trees, sequential equilibrium, perfect Bayesian equilibrium for repeated games
- Sequential bargaining under incomplete information – price discrimination, price offers from informed player
- *Games of asymmetric information* – moral hazard, optimal contracts, efficiency wages, adverse selection

- *Signaling games*

Text book:

Drew Fudenberg and Jean Tirole (2005), "Game Theory", First Indian Reprint, Ane Books New Delhi.

References:

1. Joel Watson (2004), "Strategy – Introduction to Game Theory", South Asian Edition, W.W. Norton and Company
2. Hal Varian (1992), "Microeconomic Analysis", 3rd Edition, W.W. Norton and Company.

MS 8500 STOCHASTIC MODELING AND APPLICATIONS – I

(4-0-0-6)

Objectives:

This is a first course in stochastic processes and their applications. Through this course, we hope to explore: Building blocks of stochastic processes; Modeling problems from various areas (specifically operations and finance) using stochastic processes.

Contents:

- Random variables, Conditional probability and Conditional expectation
Review of probability basics; Baye's theorem; Computing probabilities and expectations by conditioning; Applications and examples
- Markov chains
State definition, transition probabilities; Chapman-Kolmogorov equation; Steady state probabilities, Applications and examples
- Continuous time Markov chains
Birth-death processes; Limiting probabilities; Applications and examples
- Renewal reward theory
Renewal reward processes; Insurance ruin problem; other applications and examples
Brownian motion process and financial option pricing
- Hitting times; Gambler's ruin problem; Geometric Brownian motion process; Pricing stock options

Text Book

S.M Ross (2006), "Introduction to Probability Models," 9th Edition, Academic Press, ISBN # 978-0125980623.

References:

1. Karlin, S. and H. M Taylor (1975), "A First course in Stochastic Processes," Second Edition, Academic Press, ISBN # 978-0123985521.
2. Luenberger, D.G (1997), "Investment Science," Oxford University Press, USA, ISBN # 978-0195108095.

MS 8510 STOCHASTIC MODELING AND APPLICATIONS – II

(4-0-0-6)

Objectives:

By the end of this course, students will be able to: Define building blocks of a financial model using theory of stochastic processes; Evaluate a given financial model using stochastic calculus; Design and develop stochastic models

Contents:

- Queuing models
- Exponential models; Queuing networks; Priority queues; Multi-server queues; Applications and examples
- Stochastic processes in finance
- Arbitrage pricing; Capital asset pricing
- Martingales
- Definition, Sub- Super- Martingales, Optional Sampling Theorem, Applications to finance
- Stochastic Dynamic Programming
- Review of deterministic DP, Value iteration, Policy iteration, Applications in operations management

Text book:

Karlin, S. and H. M Taylor (1975), "A First Course in Stochastic Processes," Second Edition, Academic Press, ISBN # 978-0123985521.

References:

1. Buzacott J.A. and J. George Shanthikumar (1993), "Stochastic Models for Manufacturing Systems," Prentice Hall Englewood Cliff, NJ ISBN # 978 0138 475673

2. Bertsekas D.P. (2005), "Dynamic Programming and Optimal Control: Volume 1," Athena Scientific, ISBN # 978 1886 529 267

FINANCE ELECTIVES

MS5610 SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

(4-0-0-6)

Objectives:

The course introduces security research technique as well as security valuation methods. The lectures, projects and cases require use of computer based technical tools.

Contents:

- Money market securities – CDs – CPs – Eurodollars – REPO – bankers acceptances – government bills.
- Corporate bonds – types – characteristics – determinants of discount rates.
- Shares – types – characteristics – determination of issue price.
- Security market indexes.
- Risk and factors influencing security risk – short positions – hedging – arbitrage.
- Bond portfolio management – bond values – durations – yield spreads – bond portfolio immunization.
- Portfolio management – share valuation – earnings approach – value vs price – technical analysis – fundamental analysis – portfolio return – efficient frontiers – optimum portfolio.
- Portfolio performance evaluation – mutual funds – Sharpe's performance measure – Treynor's performance measure – Jensen's performance measure – comparison of performance measures.

References:

1. Fisher, Donald, and Ronald Jordon, *Security analysis and Portfolio Management*, John Wiley, New York, 1990.
2. Francis, J.C., and W.Taylor, *Theory and Problems of Investments*, McGraw Hill, New York, 1992.
3. Jones, Charles P., *Investments: Analysis and Management*, John Wiley, New York, 1990.
4. Francis, J.C., and Stephen H.Archer, *Portfolio Analysis*, Prentice Hall, New Jersey, 1990.
5. Reilly, Frank., and Keith C. Brown, *Investment Analysis and Portfolio Management*, Harcourt College Publishers, 1999.

6. Cottle, Sidney, et.al, *Security Analysis*, McGraw Hill, New York, 1988.

MS 5611 STRATEGIC FINANCIAL DECISION MAKING (4-0-0-6)

Objectives:

The objective of this course is to help the student understand the interrelationships between different financial decisions and the impact that such decisions have on firm value. The course would help the student to gain insights into the interrelationships among financing, capital budgeting, liquidity management, accounting, capital restructuring, and actual production and capacity decisions. This course would also internalize the learning from the fundamental finance and other courses taught during the 1st year of the MBA program by moving away from a problem solving approach to real world decision making situations.

Contents:

The course would use a multiple period decision making simulation setting in which students would make a variety of financial decisions. The key aspects of decision making would be:

- Establishing a management plan
- Developing Pro Forma financial statements
- Cash and liquidity management
- Capital budgeting analysis
- Capital structure decisions
- Dividend policy
- Discount on receivables
- Pricing strategy
- Production and advertising decisions
- Integrating the set of decisions

Text Books:

1. Brooks, L. D. (2008). *FinGame Online*, McGraw Hill.
2. Ross, S. A., Westerfield, R. W., and Jaffe, J. (2005). *Corporate Finance*, McGraw Hill.

References:

1. Mian, S. I. and C. Smith, 1994. Extending trade credit and financing receivables, *Journal of Applied Corporate Finance*, Spring Issue.
2. Myers, S. C. , 1984, The capital structure puzzle, *Journal of Finance*, July issue.

3. Miller, M. and Modigliani, F., 1961. Dividend policy, growth, and the valuation of shares. Journal of Business, October issue.

MS 5612 REALOPTIONS VALUATION FOR STRATEGIC (4-0-0-6)

INVESTMENTS AND DECISIONS

Objectives:

The objective of this course is to expose the students to the use of techniques that are used in options valuation in real world business decisions. This course would provide the students exposure to analytical skills that help in analyzing capital investment decisions using an options framework. In addition, the course would also introduce the students to look at stocks and bonds as options, and use options techniques in valuation of corporate financing instruments such as warrants, convertible debt, etc.

Contents:

- **Introduction to real options analysis:** Traditional options analysis, drawbacks in using traditional valuation methodologies, the basics and fundamental essence of real options, the importance of real options, and comparing traditional approaches with real options
- **Application of financial options concepts:** Essential option concepts, applying financial option concepts to real options, Black-Scholes and binomial valuation models
- **Different real options models:** Option to abandon, option to expand, option to contract, option to switch, option to activate, option to choose, simultaneous compound options, and sequential compound option, use of case studies and situations to illustrate the various option models
- **Valuation process:** Monte Carlo simulation, binomial lattice, volatility estimates, optimization techniques, introduction to software tools for real options
- **Use of options to value financial instruments and structures:** Firm expressed as put and call options, warrants and convertible instruments, Pricing and valuation of convertible bonds

Text books:

1. Mun, J.(2006). Real options analysis – Tools and techniques for valuing strategic investments and decisions, John Wiley and Sons, New Jersey.

2. Howell, S., Stark, A., Newton, D., Paxson, D., Cavus, M., Pereira, J., and Patel, K. (2001). Real options – Evaluating corporate investment opportunities in a dynamic world, Prentice Hall, London

References:

1. Copeland, T. and Tufano, P. (2004). A real world way to manage real options. Harvard Business Review, March issue, pp. 90 – 99
2. Hevert, K. T. (2001). Real options primer: a practical synthesis of concepts and valuation approaches, Journal of Applied Corporate Finance, 14(2), pp. 25–40
3. McDonald, R. L. (2006). The Role of Real Options in Capital Budgeting: Theory and Practice, Journal of Applied Corporate Finance, 18(2), pp. 28–39

MS 5613 CORPORATE HEDGING STRATEGIES (4-0-0-6)

Objectives:

This course intends to introduce students to identify and measure business risk. The focus is on the methods used by firms to hedge risk and strategies for transfer and control of business risk. The students will be prepared to select appropriate risk management tools, issues involved in implementation of the selected strategies and monitor the hedge outcome to ensure value creation in business.

Contents:

- Corporate risk – operating risk – financial risk – systems risk – event risk – market risk; hedging business risk – benefits of hedging – cost of hedging; hedging tools – strategic plan – market instruments, active hedging – passive hedging – Value creation for corporate.
- Security hedge – business portfolio hedge –Tailing the hedge - Measuring performance of hedged portfolio - Risk mitigation.
- Hedging in commodity markets –risk reducing strategies using commodity futures – spread positions – cross hedging – option strategies - commodity swaps – energy swap contracts – trading strategies in carbon credits.
- Measuring interest rate risk exposure - Hedging interest rate risk – Synthetic agreements - Hedging transaction exposure – Hedging

translation exposure - Trading strategies using interest rate forwards, futures, options and swaps – Trading in exotic currency options.

- Quantification and evaluation of VaR - Delta hedging, Gamma hedging, Vega hedging, Theta hedging, Rho hedging and hedging a combination of risks - Hedge accounting – Implication of tax on hedge.

Text Books:

Koziol Joseph D., 1990, hedging: principles, practices and strategies for financial markets, John Wiley & Sons, New York.

References:

1. Beaver W., and G.Parker (eds.), 1995, Risk management: Problems and Solutions, McGraw-Hill, New York.
2. Brown G.W. and D.H. Chew, 1999, Corporate risk, Risk Books, London.
3. Energy Security Analysis Inc., 1998, Crude oil hedging, Risk Books, London.
4. Hull John, 2011, Options, futures and other derivatives, Prentice Hall, New Jersey.
5. Kasper Walet and Cyriel de Jong, 2004, A guide to emissions trading, Risk Books, London.
6. Leautier Thomas Olivier, 2007, Corporate Risk Management and Value Creation, Risk Books, London.
7. Smith C.W. Jr., and C.W. Smithson (eds.) 1990, The handbook of financial engineering, Harper Business Books, New York.

MS 5614 COMMODITY MARKET

(2-0-0-3)

Objectives:

The purpose of this course is to provide an understanding of the characteristics of commodity market, trading in commodity exchanges and pricing and valuation of commodity futures, and overview of various commodity derivatives market

Contents:

- **Commodity Market Characteristics**
Indian Commodity Market and Global Commodity Market-Indian and Global Commodity Exchanges - Regulation of Commodity Spot Market-Regulation of Commodity Futures Market- Indian and Global View-- Role

of Government, subsidies, Minimum Support Price, betting, Government Inventory and International Effect- Commodity Index.

- **Trading in commodity Spot and Futures Market**
Participants-Spot Trading Platform- Design of Commodity Spot Contracts-Types of Commodities traded in Indian and Global Commodity Exchanges-Instruments available for Trading-- Basics of Trading-Clearing, Settlement and Risk Management- Pricing and Valuation.
- **Commodity Derivatives Market**
Commodity derivatives- crude oil derivatives, agricultural, forest and livestock derivatives, metal derivatives – Power derivatives, Weather derivatives, Carbon derivatives, Derivatives on freight, water, Property and payroll - Commodity Spread, Options, SWAPs and Futures- ETFs.

References:

1. Neil C Schofield, 2013. “Commodity Derivatives: Markets and Applications”, Wiley Finance, New Delhi.
2. PrabinaRajib, 2014. “Commodity Derivatives and Risk Management”, PHI Learning Pvt. Ltd, New Delhi.
3. HelyetteGeman, 2009. “Commodities and Commodity Derivatives, Modeling and Pricing for Agriculturals, Metals and Energy”, John Wiley and Sons, New Delhi.
4. Indian Institute of Banking and Finance 2009. “Commodity Derivatives”, Macmillan Publishers, New Delhi.
5. Scott Paul Frush, 2008. “Commodity Demystified”, Tata McGraw Hill Publication, New Delhi.
6. Tom Taulli, 2011. “All about Commodities”,Tata McGraw Hill Publication, New Delhi.

MS 5615 TREASURY MANAGEMENT

(4-0-0-6)

Objectives:

The aim of this course is to introduce the basics of treasury management in corporate and banking sector. The scope includes managing cash, how to use treasury instruments for mitigating financial risk, banking regulations and payments processes in treasury operations.

Contents:

Module A: Basics of Treasury management function

- **Role of Financial Markets and Financial Regulatory Environment**
- **Treasury /market risk fundamentals** :Treasury risk-market risk-credit risk –Liquidity risk

- **Scope and functions of treasury management** : Treasury and its relationship to the organizational finance function- Positioning treasury in the organizational structure - Treasury controls & centralization - Treasury outsourcing

Module B: Cash management: Forecasting Cash and liquidity management

- **Cash Transfer methods:** Check payments - Automated clearing house (ACH) payments - Cash payments - Cash transfer: Types, controls & procedures.
- **Cash Forecasting:** Models, sources & accuracy of cash forecasting – automation of cash forecasting – Cash forecasting controls, Policies & Procedures –Cash budgeting- Zero based budgeting.
- **Liquidity Management** : Rationalities for holding liquidity-Accounting ratios in liquidity management -Focal areas of banks in liquidity management – Dimensions of liquidity risk –Dynamics vs. static liquidity management
- **Asset liability management: ALM** system defined –functions of ALCO –structural liquidity –time bucketing –dynamic short term liquidity statement.

Module C: Financial risk management: Using treasury instruments beyond the ambit of Proprietary Positions

- **Financial risk:** Techniques to measure it – Hedging – speculation – arbitrage -Roles of the treasury department in managing financial risk.
- **Derivative Instruments:** Forward- futures- options – swaps
- **Foreign Exchange Risk Management in Treasury:** Foreign Exchange (FX) rates- Foreign Exchange (FX) exposure –commercial banks and currency risk dimension -Currency derivatives.
- **Interest Rate Exposure and Risk Management:** Fixed rates & Floating rates –Net interest income (NII) – Net interest margin (NIM) - Earnings at risk (EAR)-Interest rateforward-Interest rate futures –Interest rate options-interest swaps.
- **Equity price risk –commodity price risk:**Forms of equity risk - focus areas of equity risk - RBI guidelines -commodity from risk angle defined

Module D: Payment systems practice & issues:

- **Types of payment systems:** Cash Payments Systems-Paper Systems – Electronic systems
- **Processes in Payment process:** Payment Clearing Process - The Settlement Process – SWIFT –Electronic payment security- cross currency payments
- **Payment system risk:** Global Banking Systems and Practices - Identification of Bank accounts – Anti-Money Laundering and its Impact on Payments - Continuous Linked Settlement (CLS) - Straight-Through-Processing (STP) - ISO 20022 Global Standards

Module E: Regulations, Supervision and Compliance of Treasury Operations

- Internal audit system for treasury/market risk management: Internal audit – objective –scope- outsourcing internal audit – Internal audit Vs Internal check
- Capital adequacy Requirements: Capital fund – Tier 1 & Tier 2 capital – Risk weight – control mechanism
- Operational risk: Operational risk events-Ten Principles –Operational risk policy.
- Regulatory capital charge for market risk exposure : Regulatory guidelines on capital charge –framework for measurement of capital charges for interest rate risk related instruments in trade book ,interest rate derivatives ,equities in trade book ,foreign exchange and gold positions

Readings:

1. Basics of Basel accord in risk management
2. Master Circular on 'Prudential Norms on Capital Adequacy'
3. FEDAI guidelines.

Text Books:

1. Steven M. Bragg, 2010. "Treasury Management: The Practitioner's Guide", Wiley publications.
2. S.K.Bagchi, 2008. "Treasury risk management", Jaico books. New Delhi

References:

1. Indian Institute of Banking and Finance, Treasury Management (CAIIB 2010) –Macmillan publications.
2. Essentials for Treasury Management, 4th Edition – material prepared by Certified Treasury Professional (CTP)

MS5620 FINANCIAL SERVICES

(4-0-0-6)

Objectives:

This course provides an understanding of the various financial services that are available, the regulatory framework governing them, the procedures involved and the current and future scenario in the Indian environment.

Contents:

- Financial services – fund based – fee based services – regulatory framework – RBI guidelines – SEBI guidelines.
- Merchant banking services – capital issue management – pricing of issue –marketing of issues.

- Non-banking financial companies – functions
- Lease financing, hire purchase finance, consumer credit.
- Factoring and forfeiting, bills discounting, debt securitisation.
- Housing finance, insurance services, venture capital financing.
- Mutual funds, types, fund management.
- Stock broking, credit rating.

References:

1. Machiraju, H.R., *Merchant Banking*, Wheeler Publishing, 1995.
2. Verma J.C., *Guide to Mutual Fund – Portfolio – Law, Practice and Procedures*, Bharat Law House, 1992.
3. Kothari V., *Lease Financing, Hire Purchase including Consumer Credit*, Wadhwa and Co., 1991.
4. Khan M.Y., *Financial Services*, Tata McGraw Hill, New Delhi, 1997.
5. Verma J.C., *Venture Capital financing in India.*, Sage, New Delhi, 1997.
6. Sadhale H., *Mutual Funds in India*, Sage, New Delhi, 1997.

MS 5630 INVESTMENT AND COMMERCIAL BANKING(4-0-0-6)

Objectives:

The course intends to introduce the students to the recent developments in the banking sector and equip them to perform the key managerial functions effectively.

Contents:

- Liberalization in Banking Sector – Banking Services – Risk Management – Bank Norms
- Investment banking – activities – potential for investment banking in India - Stock broking.
- Development banking – financial appraisal – technical, economic appraisal – Social cost-benefit analysis – guidelines for financing – supervision system.
- Commercial banking – characteristics – functions - credit creation – capital adequacy norms – credit appraisal – deposits – assets – investments – NPAs and profitability – cash management – Asset Liability Management - Debt recovery Tribunal and civil suits – alternate dispute resolution methods.
- Electronic banking – ATM – Online banking – Work Technology

- Bank Marketing – Positioning – Competition.
- Bank Supervisions and bank audit – Accounting Standards.Banks foray into insurance – agency contracts

References:

1. William, J. Peter, *the Investment Banking Handbook*, John Wiley, 1988.
2. Marshall, J. F., M. E. Ellis, *Investment Banking and Brokerage: The new rules of the game*, Probus Pub., 1993.
3. Joshi, Vasant C. and Vinay V. Joshi, *Managing Indian Banks: The Challenges Ahead*, Response books, 1998.
4. Nanda, K.C., *Credit and Banking*, Response books, 1999.
5. Sundaram and Varshney, *Commercial Banking*, Sultan Chand & Sons, New Delhi, 1990.

MS5640 MERGERS AND ACQUISITIONS (4-0-0-6)

Objectives:

Mergers and Acquisitions is a powerful tool to build new generation companies to compete successfully on a global basis. This course describes how Mergers and Acquisitions and other forms of corporate restructuring are used in the business world.

Contents:

- Mergers and Acquisitions – Divestitures – reorganization, joint ventures – leveraged buyouts – corporate restructuring.
- Economic, legal and corporate finance considerations of Mergers and Acquisitions.
- Financial valuations of public and private companies for Mergers and Acquisitions – Guidelines – Impact of valuation on capital structure.
- Strategic factors arising during the course of restructuring.
- Offensive and defensive practices for hostile takeovers.
- Accounting for Mergers and Acquisitions.

References:

1. Clement, M.N. and D.S. Granspan, *Winning at Mergers and Acquisitions*, Business Book Press, 1998.
2. Galpin, Timothy and Mark Herndon, *Managing Successful Mergers and Acquisitions*, Watson Wyatt Worldwide,
3. Scharf, Charles A., et.al., *Acquisitions, Mergers, Sales, Buyouts and Takeovers: A Handbook with forms.*, AFP, 1995.
4. Sherman, Andrew J., *Mergers and Acquisitions from A to Z*, AFP, 1995.

5. Burnsteed, William W and G.D Abraham, *Buying and Selling Business*, John Wiley & Sons, 1998.
6. Shiva Ramu, S., *Corporate Growth through Merger and Acquisition*, Sage Publications, New Delhi, 1998.
7. West, T.L., and J.D.Johnes, *Mergers & Acquisitions handbook in small and big size companies*, John Wiley & Sons, 1997.
8. Gaughon, P.A., *Mergers, Acquisitions and Corporate Restructuring*, Business Book Press, 1990.
9. Webb Kimbely A., J.Garrett Rolls Jr., *Mastering the Chaos of Mergers and Acquisitions*, Emory, 1999.

MS5660 STRATEGIC COST MANAGEMENT (4-0-0-6)

Objectives:

The course helps students to understand the real costs and profit drivers of a business so that they can identify and implement cost management strategies in all situations.

Contents:

1. Strategy and Cost Management – Strategy Formulation and Cost System Design – Alternate Strategies.
2. Objectives of cost management system – Causes and symptoms of broken cost systems - remedies – cost of quality and long-term profitability – Activity based costing principles – Activity based management - target costing and continuous improvement – Competing cost philosophies.
3. Cost management for manufacturing and service industries – Cost drivers – Multi objective cost system – Industry experiences in “new” cost systems.
4. Integration of cost systems with shop-floor systems – Cost accounting functions in an integrated systems environment.
5. Managing change – International considerations.

References:

1. Yasutino, Monden, *Japanese Cost Management*, University of Tsukubo, 2000.
2. Bruns, William J., *Activity Accounting – Another way to measure costs*, Harward Business School, 1993.
3. Brinker, Barry J., *Handbook of Cost Management*, Ed., Warren, Gorham & Lament, 2000.
4. Shark, John K., *Cases in Cost Management: A Strategic Emphasis*, South-Western, 2000.

5. Wayne, J Morse, *Management Accounting: A Strategic Approach*, South-Western, 2000.

MS 5670 FINANCIAL INSTITUTIONS AND MARKETS (4-0-0-6)

Objectives:

The aim of the course is to familiarize the students with the different components of financial markets and the role and functions of select financial intermediaries.

Contents:

- Indian Financial system – introduction – structure – finance commission – financial administration – receipts of the Government – Expenditures of the Government.
- Central banking – RBI – instruments of monetary control – secondary debt market – REPOs.
- Money market – introduction – features – instruments – secondary market for money market instruments – money market regulations.
- Foreign Exchange market – exchange control – fixation of exchange rate – exchange control in India – FEMA – foreign exchange transactions of commercial banks in India – currency convertibility – currency forwards, futures and options – trading in foreign exchange market – relationship between money market and foreign exchange market..
- Capital markets – primary market – instruments – legal issues and regulations - secondary market – stock exchanges – brokers – trading in stock exchanges – forward trading – stock index – depositories - regulations.
- International capital markets – instruments – Guidelines – foreign investment in India and its regulations.

References:

1. Machiraju, H.R., *Indian Financial System*, Vikas Publishing House, New Delhi, 1998.
2. Hubbard, R.Glenn, *Money: The Financial System and the Economy*, Atlantic, 1990.

MS 5680 INTERNATIONAL FINANCE (4-0-0-6)

Objectives:

The aim of this course is to provide an understanding of the fundamental concepts and managerial issues pertaining to international finance.

Contents:

- International Finance – overview- International Financial Institutions/Development Banks – World Bank – IBRD – IDA – IFC – MIGA – International Monetary Fund – Special Drawing Rights – Asian Development Bank – Internationalisation process
- The Foreign Exchange Market – SWIFT – Arbitrage – Spot market – Forward market – Cross rates of exchange – Bid – Ask spreads – Balance of payments – Foreign exchange rates – Theories of Foreign Exchange Rate.
- Foreign exchange exposure and management – Management of translation exposure – Methods – Management of transaction exposure – Management of economic exposure - Methods – Strategies.
- Financial Management of the Multinational Firm – Foreign direct investment – Cost of capital and capital structure of the multinational firm – Multinational capital budgeting – Multinational cash management – Country Risk Analysis – International Taxation.
- Financing Foreign Operations – Eurocurrency markets – Instruments – Interest rate swaps – Currency swaps and its pricing – Depository receipts – GDR and ADR – Euro and its implications for India.

References:

1. Buckley, A., Multinational Finance, Prentice Hall, New Jersey, 1992.
2. Levich, R.M., International Financial Markets: Prices and Policies, McGraw Hill, New York, 2001.
3. Vij, M., Multinational Financial Management, Excel Books, New Delhi, 2001.
4. Shapiro, A.C., Multinational Financial Management, Prentice hall of India, New Delhi, 1996.
5. Apte, P.G., International Financial Management, Tata McGraw Hill Publishing Company Ltd., New Delhi, 1999.
6. Jain, P.K., et.al, International Financial Management, Macmillan, New Delhi, 1998.
7. Eun, C.s. and Resnick, B.G., International Financial Management, Irwin McGraw Hill, Singapore, 2001.

MS 5690 COMPUTATIONAL FINANCE

(4-0-0-6)

Objective:

The purpose of this course is to provide a basic understanding of the tools in computational finance and their applications to specific situation in finance.

Content:

- Computational finance – Scope – Applications – Overview of tools and techniques.
- Multiple Regression Models – Autocorrelation, ARIMA, Cross Correlation, Multicollinearity, SEM Application
- Heteroscedascity – testing for Heteroscedascity – ARCH & GARCH Models & their extensions – application
- Stochastic Modeling – Geometric Brownian motion Stock Price Model – Black Scholes Option Pricing, Markov Process, Stochastic Interest Rate Models.
- Risk Management &VaR
- Application of neutral network, genetic Algorithm, expert system to finance
- Financial modeling through use of Matlab, SPSS

References:

1. Winston Wayne.L. Operations Research, Duxdury Press, 3rd edition.
2. DeLurgio, Stephen.A., Forecasting Principles and Applications, Irwin McGraw Hill, Boston, 1998.
3. Methods of Mathematics of finance, Springer – Verlag, New York, 1998.,Karatzas, Ioannis& Shreve, Steven E.
4. Stammphil, Joseph and Goodman, Victor, “The Mathematics of Finance” Modeling and Hedging, Brooks/Cole, Thomson Learning, Pacific Groove, 2001.
5. Alexander, Carol (ed.), Risk Management and Analysis (Vol.1): Measuring and Modeling Financial Risk, John Wiley and Sons, 1998.
6. Greene, William.H., Basic Econometrics, McGrawHill Inc. New York, 2000
7. Day, Alastair L. Mastering financial modeling: A Practioner’s Guide to Applied Corporate Finance, prentice Hall, 2001
8. Benninga, Simon, Financial Modeling, 1997

MS 5700 DERIVATIVES AND RISK MANAGEMENT (4-0-0-6)

Objectives:

This course aims at introducing the fundamentals of derivatives and the application of a few sophisticated techniques and models.

Content:

- Theory of derivatives – products and markets – random behaviour of assets – Black–Scholes model – binomial model
- Interest rate derivatives – internal rate modeling – futures – stock index, currency, forwarding futures – swaps.
- Options – barrier options – path-dependent options – Asian options – look back options.
- Defects in Black–Scholes model – discrete hedging – transaction costs – stochastic volatility - speculating with options hedging.
- Portfolio management – value at risk – credit risk – credit derivatives – risk metrics, credit metrics and crash metrics.
- Pricing derivative securities.

References:

1. Wilmott, Paul, *Derivatives: The Theory and Practice of Financial Engineering*, John Wiley & Sonj, 1998.
2. Hull, John., *Options, Futures and other Derivatives*, Prentice Hall, New Jersey, 1999.
3. *The Bridge Handbook of World Stock, Derivative and Commodity Exchange 2000*, Monde visions, 2000.
4. Redhead, Keith, *Financial Derivatives*, Prentice Hall, New Jersey, 1998.
5. Konishi, Atsuo and Ravi Dattatreya, *Frontiers in Derivatives: State of the Art Model, Valuation Strategies and Products*, ed., McGraw Hill, New York, 1996.
6. Winstone D., *Financial Derivatives*, Chapman and Hall, 1995.
7. Chance, D.M., *An Introduction to Options and Futures*, Dryden, 1989.
8. Eales, B.A., *Financial Risk Management*, McGraw Hill, New York, 1995.

MS 6600 GLOBAL CORPORATE GOVERNANCE (4-0-0-6)

Objectives:

This course provides an overview of corporate governance and the relationship among various participants in determining the direction and performance of corporations, including shareholders, management, directors, employees, customers and other stakeholders. The aim of this course is to give an exposure on the practical steps necessary to meet today's corporate governance requirements in an international perspective. Since corporate governance arrangements vary significantly across countries, the course will cover some of the major corporate governance issues faced by companies across the world. The course will also focus on the impact of weak governance from the investor and policy perspective.

Content

What is a Corporate Governance?

- Introduction to Corporate Governance
- Debt and Equity
- Shareholders: Ownership
- Theories of Corporate Governance

Monitoring Mechanism

- Separation of Ownership and Control
- Monitoring Duties of Board of Directors
- The Board and Strategy
- Management: Performance
- Roles of Directors
- Change of Control of a Corporation – takeovers
- Board Personalities

INTERNATIONAL CORPORATE GOVERNANCE PRACTICES

- Institutions and the Legal System
- Managers and Boards of Directors
- Executive Compensation
- Family Firms
- Enforcement
- Corporate Governance and the Media
- Governance in Transition and in Public Enterprises
- Corporate Social Responsibility & Ethics

CORPORATE GOVERNANCE & FINANCIAL MARKETS

- Financial markets, institutional investors, and corporate governance
- Stakeholder theory; socially responsible investment
- Dispersion of capital

References:

1. Colley, J., Doyle, J., Stettinius, W., & G. Logan (2003). Corporate governance: McGraw-Hill.
2. McGraw-Hill.
3. Kim, K. & J. Nofsinger (2007). Corporate Governance. Pearson Education nc.
4. Mallin, C. (2004). Corporate governance. Oxford University Press.
5. Kesho Prasad (2006). Corporate Governance; Prentice Hall India
6. Corporate Governance, Kenneth A. Kim and John R. Nofsinger, Pearson Education Inc.

7. Lawrence E Mitchell, Lewis D Solomon and Lawrence A Cunningham, (1997) Corporate Finance & Governance, Carolina Academic Press.

MS6620 INFRASTRUCTURE FINANCE (4-0-0-6)

Objectives:

This course introduces the students to the uniqueness of infrastructure financing and explains how to minimize risk and maximize return in such projects.

Contents:

- Infrastructure financing in India.
- Financial instruments market access, dealing with risk, incentives and approvals, environment and tax issues.
- Infrastructure project evaluation techniques – bidding process.
- Infrastructure finances ratings and credit services.
- Utilities- Electric, Gas, Water.
- Transport Projects -- BOLT.
- Power and Energy Projects.
- Telecommunication Projects, Housing Projects.

References:

1. Mudge, Richard R. and Susan Jakubiok, *Financing Infrastructure: Innovations at the local level*, National League of Cities, 1988.
2. McDowell, Bruce D., *Future of Infrastructure Finance*, CETS, 1996.
3. *India Power Projects – Regulation and Policy and Finance – Vol. 1&2*, Asia Law and Practice.
4. *Project Finance – Practical case studies*, CMS.
5. *Project and Infrastructure Finance in Asia*, Asia Law and Practice.
6. Bhattacharya, K. P., *Affordable Housing and Infrastructure in India*, Ed., Vedams Academic Books, 1998.

MS 6640 VENTURE CAPITAL AND ENTREPRENEURSHIP FINANCING (4-0-0-6)

Objectives:

This course will cover the elements of entrepreneurial finance, specifically the venture capital industry, its functioning and relevance. The course will cover a diverse set of start-up ventures (technology based, low technology, services) and the early stages of company development. The course would try and address key questions that challenge entrepreneurs and venture capitalists alike: how much money can and should be raised; what is a reasonable valuation of the company; and how should the funding be structured.

The focus of this course will be on analyzing the unique financial issues which face entrepreneurial firms and to develop a set of skills that have wide applications for such situations. This course aims to develop financial and managerial skills that are important for students who might be interested in financing startups in a venture capital setting, becoming an entrepreneur, providing services to entrepreneurs and venture capitalists, purchasing a business, or pursuing a career in an entrepreneurial setting.

Contents:

- Understanding the various sources of capital for entrepreneurial firms
- Overview of Venture capital and private equity funds
- Relevance of Venture capital
 - Factors that make it difficult for the types of firms backed by venture capital investors to meet their financing needs through traditional mechanisms
 - How venture capital addresses these challenges
- Identification of opportunity
 - Models of entrepreneurship
- Evaluating entrepreneurial business opportunities
 - Developing a framework to qualitatively and quantitatively assess markets and opportunities
 - Financial analysis
 - Due diligence issues
- Valuation techniques
 - Real options in entrepreneurial firms
- Financial structuring and contracts
- Monitoring investments
- Venture capital exits
 - IPO
 - Acquisitions

References :

1. George Fenn, Nellie Liang, and Steven Prowse (1997) *The Private Equity Industry: An Overview*, (Financial Markets, Institutions and Instruments Series, Volume 6, Number 4), Blackwell Publishers. Boston.
2. Paul Gompers and Josh Lerner (1999), *The Venture Capital Cycle*, MIT Press, Cambridge.
3. Robert D. Hisrich and Michael P. Peters (2002), *Entrepreneurship*, Tata McGraw Hill Publishing, New Delhi.
4. William Bygrave and Jeffry Timmons (1992), *Venture Capital at the Crossroads*, Harvard Business School Press, Boston.

MS 6670 ADVANCED CORPORATE FINANCE (4-0-0-6)

Objectives:

This is an advanced corporate finance course and is appropriate for students seeking to deepen their understanding of core finance principles. It will build on the concepts learnt in the basic financial management course. It will provide a strong conceptual foundation in capital budgeting, capital structure and financing decisions. The course will expose the students to the complexities of 'board-room' financial decision making.

Contents:

- Overview and Introduction
Theory of corporate finance; Classical theory of investments and finance; Theory of the Firm; Theory of contracts; Agency theory and transaction costs
- Capital structure and financing
Revisiting MM propositions; Moral hazard and adverse selection principles; Concept of optimal capital structure; Incentive issues caused by high leverage; Relationship between capital structure and capital costs; Financial engineering in Corporate Finance
- Options and their Valuation, and Corporate Liabilities
Call and Put options; Option valuation; Black Scholes formula, Applications of option pricing; Hybrid securities such as warrants and convertibles; Real options
- Dividends review
The dividend puzzle; Agency cost explanations of dividends
- Financial Strategies for Value Creation
New valuation techniques - including equity cash flows, Cross-border valuation; Interaction between a firm's financial and business strategies

- Financial Planning
Approaches to financial planning; Short term financial planning; Credit and cash management; Leasing; Types of leases; Financial lease; Valuing financial leases

Text books:

1. Jensen, M.C. and Smith, C.W. (Eds.) *The Modern Theory of Corporate Finance*. New York: McGraw Hill (1984).
2. Brealey, R.A. and Myers, S.C. *Principles of Corporate Finance*. 4th Edition. New Delhi: Tata McGraw Hill Publishing Company (1996).
3. Martha A. and Kulatilaka, N. *Real Options: Managing Strategic Investment in an Uncertain World*. Boston: Harvard Business School Press (1999).
4. Schallheim, J.S. *Lease or Buy*. Boston, Mass: Harvard Business School Press (1994).
5. Hull, J.C. *Options, Futures, and Other Derivatives*. 4th Edition. Upper Saddle River, NJ: Prentice Hall. (1999).

References:

1. Myers, S.C. (1974). *Interactions of corporate financing and investment decisions: Implications for capital budgeting*, *Journal of Finance*, 29: 1-25
2. Smith, C.W. et al, (1990). *Managing financial risk*, *Journal of Applied Corporate Finance*, pp 370-391
3. Finnerty, J.D. (1988). *Financial engineering in corporate finance: An overview*, *Financial Management*, pp 14-33
4. Barclay, M.J. et al (1995). *The determinants of corporate leverage and dividend policies*, *Journal of Applied Corporate Finance*, 7 (4), pp 4-19
5. Fama, E.F. and French, K.R. (2001). *Disappearing dividends: Changing firm characteristics or lower propensity to pay?* *Journal of Financial Economics*, April issue.

Journals: *Journal of Applied Corporate Finance*, *Financial Management*, *Euro money*, *Risk*

**MS 6680 FIXED INCOME SECURITIES:
STRUCTURE AND TRADING (4-0-0-6)**

Objectives:

The aim of this course is to impart knowledge and skills required in fixed income/debt market operations.

Contents:

- **Fixed Income Securities Market**
Market Segments, Participants, Instrument Features, Trading Mechanism in NSE and Emerging Debt Markets, Bond market indices and benchmarks.
- **Regulatory and Procedural Aspects**
Public Debt Act, 1944, SEBI (Guidelines for Disclosure and Investor Protection), 2000- Market Practices and Procedures
- **Government Securities market**
Bonds Issuance Process, T-Bill Auction, G-Sec Market Trends, Secondary Market Trading Process, Settlement of Trades, Role of Clearing Corporations of India Limited (CCIL), Liquidity Adjustment Facility (LAF)

- **Repo Market**
Structure and Pricing, Trading Patterns, Settlement of Repo Transactions, Repo Market in India.
- **Valuation of Bonds**
Yield Curve and Term structure of Interest Rates, Bootstrapping, Alternative Methods to Estimate Yield Curve, Theories of Term Structure of Interest Rates
- **Price, Yield and Interest Rate Risk**
Duration, Modified Duration, Portfolio Duration, Hedging Strategy and Duration, Analysis of Bonds with Embedded Options
- **Securitisation and Mortgage Backed Security (MBS)**
Fixed Rate and Adjustable Rate Mortgages, Measures of Prepayment, Creation of MBS, Valuation, Mortgage Derivatives
- **Fixed Income Portfolio Management**
Matched Funding, Horizon Matching, Indexation, Portfolio Insurance
- **Fixed Income derivatives**
Mechanism of FRA, IRF and IRS

References:

1. Sundaresan, Suresh. "*Fixed Income Markets and their Derivatives*", Thomson: South-Western, Singapore, 2002.

2. Choudhry, Moorad, *"The Bond and Money Markets, Strategy, Trading, Analysis"*, Butterworth-Heinemann, Oxford, 2003.
3. Thai ,Christopher, *"Quantitative Analysis, Trading Strategies, and Risk Management for Fixed-Income Markets"*, World Scientific Publishing, New Jersey, 2004.
4. *"The Handbook of Fixed Income Securities"*, Irwin, Boston, 2004.
5. Fabozzi, Frank J., *"The Handbook of Fixed Income Securities"*, 6th Edition, McGraw-Hill, New York, 2000.
6. Questa, Giorgio S., *"Fixed Income Analysis for the Global Financial Market: Money Market, Foreign Exchange, Securities, and Derivatives"*, Wiley, New Jersey, 1999.

Journals: Journal of Finance, Journal of Financial and Quantitative Analysis, Journal of Fixed Income, Applied Financial Economics.

MS6690 WORKING CAPITAL MANAGEMENT (4-0-0-6)

Objectives:

The purpose of this course is to provide an understanding of the concepts and mechanics of working capital management. The course will use case studies in all units.

Contents:

- Working capital management – determinants and estimation of working capital requirements.
- Accounts receivables management; factoring.
- Inventory management
- Cash management
- Working capital finance: trade credit, bank finance, commercial papers
Current asset – current liability management.

References:

1. Brealey, Richard A and Myers Stewart E., *Principles of Corporate Finance.*, McGraw Hill Inc., New Delhi, 1990.
2. Smith, K.V., *Readings in Short term Financial Management*, West Publishing Co., 1988.
3. Prindl, A., *Currency Management*, John Wiley, New York, 1978.

4. Hill, Ned C., and William L. Satoris, *Short Term Financial Management – Text & Cases*, Macmillan, New York, 1992.
5. Kallberg, Jarl G., and Kenneth L. Parkinson, *Corporate Liquidity and Measurement*, Richard D. Irwin, Homewood, Illinois, 1993.
6. Vander, Weide James and Steven F. Maier, *Managing Corporate Liquidity*, John Wiley, New York, 1985.

MS 6700 MARKET MICROSTRUCTURE

(4-0-0-6)

Objectives:

The course provides understanding about the price formation process across various market structures. The interlinkages between information, prices and volume facilitate to develop trading strategies.

Contents:

- Markets and Market Making
 - Nature of Markets
 - Market structures
 - Prices and Markets
 - Trading Industry
- Inventory Models
 - Order driven Markets
 - Order arrival and market making
 - Prices and Inventories in Competitive markets
 - Inventory models and Market Maker behavior
- Information based models
 - Informed and Uninformed Traders
 - Trade quantities and price behavior
 - Glosten-Milgrom Model
 - Sequential Trade Models and Price Behavior
- Strategic Trader Models
 - Price behavior and multiple informed traders: Trading Mechanism
 - Strategic behavior and uninformed traders
- Information and Price process
 - Information and sequence of prices
 - The Volume Critique
 - The Role of time in Price Adjustment

- Market Liquidity and Viability
 - Nature of Liquidity
 - Liquidity and Market performance
 - Liquidity and Transaction Cost Measurement
 - Bid-Ask Spread
 - Impact Cost
- Market Volatility and Stability
 - Performance Evaluation and Prediction
- Issues in Market Structures
 - Competition
 - Insider Trading
 - Bubbles, Crashes , Circuit Breakers
 - Market Transparency and Trader Anonymity
 - Policy Issues in Market Structures

References:

1. Maureen O'Hara,,(1997), Market Microstructure Theory, Blackwell Publishers
2. Larry Harris (2007), Trading and Exchanges :Market Microstructure for Practitioners, Oxford University Press
1. Llijal.Zovko(1999), Topics in Micro Structure, Amsterdam University Press

Journals:

1. Financial markets, Institutions and Instruments
2. Journal of quantitative Finance

MS 6710 FINANCIAL RISK MANAGEMENT (4-0-0-6)

Objectives:

Risk Management has evolved over the past decade as an indispensable function of business organizations. This course covers the basic concepts of modeling, measuring and managing financial risks. This course will examine a number of notorious cases and help you to design risk management reports and systems.

Contents:

- **Risk in Perspective**
 - Risk and Randomness and Examples of financial disasters
 - Measurement and Management
 - Aggregate Risk: Capital allocation

- **Sources of Risk :**
 - Currency Risk : Volatility, Correlations, Cross Rate Volatility and DevaluationRisk
 - Fixed Income Risk: Interest rates and Credit spread Risk
 - Equity Risk
 - Commodity Risks
- **Modeling Risk Factors :**
 - Risk simplification: Diagonal model and Factor models
 - Optimal Hedging
 - Implied Distributions
- **Credit Risk Modeling**
 - Measuring Default Risk from market prices
 - Credit Exposure
 - Credit Metrics and Credit analytics
 - Off balance sheet financing and lessons on credit risk management
- **Market Risk Management:** VAR methods, Risk budgeting, Volatility risk and implied volatility, Liquidity Risk and Leverage, Hedge funds and their measures
- **Operational Risk management:** Identifying, Assessing and managing operational risk
- **Enterprise Risk Management**
 - Framework
 - Concepts and Elements
 - Processes
 - Risk management policy
- **Regulatory framework: Basel Accord**

References:

1. Philippe Jorion, Financial Risk Manager Handbook + Test Bank: FRM Part I / Part II (Wiley Finance and Global Association of Risk Professionals) , 2010, Wiley Finance, New Jersey , US
2. Alexander J. Alexander J. McNeil, Rudiger Frey and Paul Embrechts , Quantitative Risk Management concepts, Techniques, Tools by ,2005 Princeton series in Finance

MARKETING ELECTIVES

MS 5710 CONSUMER BEHAVIOUR

(4-0-0-6)

Objectives:

The course stresses on understanding the concepts of consumer behaviour, how they are used in business practice and how they relate to one another.

Contents:

- Consumer behaviour – introduction – outcomes
- Motivation, ability and opportunity; exposure, attention and perception
- Categorizing and comprehending information
- Attitude formation and change – memory and retrieval
- Process of decision making – post-decision processes
- The consumer's culture – reference groups – psychographics
- Consumer behaviour outcomes – consumer welfare

References:

1. Hoyer W.D., and Deborah J. MacInnis, *Consumer Behaviour*, Houghton Millin Co., New York, 1999.
2. Schiffman L.G., Kanuk L.L., *Consumer Behaviour*, Prentice Hall, New Delhi, 1998.

MS 5720 ADVERTISING AND PUBLICITY**(4-0-0-6)****Objectives:**

The Objective of the course is to provide an approach to the management of advertising that is sophisticated, practical and relevant to planning, decision-making and control.

Contents:

- Advertising management – advertiser – facilitating institutions – perspectives on advertising
- Advertising planning and decision-making – situation analysis – marketing program – segmentation strategies – social and legal factors – budget decision
- Advertising objectives – image and competitive position – attitude and market structure – behavioural objectives
- Communications – persuasion and market processes – copy decisions – copy testing
- Media decisions – media research
- Economic, social and legal constraints

References:

1. Aaker, David A., and John G. Myers, *Advertising Management*, Prentice-Hall of India, New Delhi, 1989.
2. Martin, Claude R., Jr., Ed., *Current Issues and Research in Advertising*, Ann Arbor Michigan, University of Michigan, 1983.
3. Wilkie, William L., *Consumer Research and Corrective Advertising*, Cambridge, Mass Marketing Science Institute, 1973.

MS 5730 INTERNATIONAL MARKETING**(4-0-0-6)****Objectives:**

The purpose of the course is to educate future managers to meet international challenges. The course provides foundations that are useful for explanation, prediction and control of international business activities.

Contents:

- Process of international marketing, domestic vs. international marketing - characteristics of MNCs – benefits of international marketing
- World market environment – political – legal – culture

- Marketing research and information system – market analysis and foreign market entry strategies – consumer behaviour in the international context
- International marketing decisions; product strategies – product planning – branding and packaging – distribution strategies – channels – physical distribution and documentation; promotion strategies – personal selling – publicity, sales promotion – advertising – internet marketing; pricing strategies
- Trade distortions and marketing barriers, legal protection

References:

1. Onkvisit, Sak., and John J. Shaw., *International Marketing*, Prentice Hall of India, New Delhi, 1997.
2. Ashok Korwar, *Creating Markets across the Globe*, Tata McGraw Hill, New Delhi, 1997.

**MS5740 PLANNING AND MANAGING
RETAIL BUSINESS**

(4-0-0-6)

Objectives:

The objectives of this Course are to provide students with a basic & better understanding of Marketing Concepts as applied to Retailing, the different formats in retailing, the conceptual issues as applied to retailing and Current and future developments in India and elsewhere.

Contents:

- Overview of Retailing
- Theories of Retailing
- Location & Site selection Decisions
- Store Design, Layout and Visual Merchandising
- Pricing & Promotion Decisions
- Decisions on Stock keeping units
- Understanding segmentation & Positioning
- National/Regional Brands Vs Store Brands
- Internet & Electronic Retailing
- Role of Technology in Retailing
- Future trends & Innovation in Retailing
- Strategic Concerns

References:

1. Michael Levy & Barton A. Weitz, "Retail Management", Irwin/McGraw Hill (1998)
2. Berry Berman & Joel R. Evass, "Retail Management – A Strategic Approach".
3. David Gilbert, "Retail Marketing Management" Financial Times – Prentice Hall (1999)
www.stir.ac.uk/departments/management/marketing/irs/sites.htm
 (A comprehensive junction providing links to academic & Commercial sites)

MS5750 BRAND MANAGEMENT

(4-0-0-6)

Objectives:

- To examine and understand the processes of building, Designing, measuring and maintaining brand equity
- To discuss actual applications of Brand Management Strategies and methodologies presented in class, together with cases and exercises.

Contents:

- Module 1 – All brand related definitions and basic concepts, diverse interpretations, and the emerging concepts like "brands as a Central force in business".
- Module 2 – Brand Promise, Brand Vision, Brand Architecture and different approaches to Brand Building, with a major focus on Brand Awareness strategies.
- Module 3 – Converting a commodity into a Brand; the Indian experience
- Module 4 - Brand Audit, Brand Valuation methods and approaches.
- Module 5 – Brand Building and the web.

References:

1. Kevin Lane Keller, "Strategic Brand Management : Building, Measuring and managing Brand Equity", Prentice Hall(1998)
2. David A. Aaker& Erich Joachimsthaler, "Brand Leadership: Building Assets in the Information Society", Free Press (2000)
3. Duane Knapp, " The Brand Mindset: Five Essential Strategies for Building Brand Advantage Throughout your Company", McGraw Hill (1999)
4. Geoffrey A. Moore, "Crossing the Chasm", Harpen Business Publishing Co.,(1999)
5. Deidre Breakenridge, " Cyberbranding" Prentice Hall (2001)

Track the website www.interbrand.com

MS5760 MARKETING ON THE INTERNET**(4-0-0-6)****Objectives:**

To give students a framework for understanding and implementing marketing on the Internet

To understand not only how successful net marketing operates, but how existing Organisations should combine the Internet with their traditional market approaches.

Contents:

- Economic opportunities created by the net
- Net marketing themes such as information based marketing, online quality enhancement, personalization, Community building, real time marketing and on-line customer management.
- Building traffic to a site, methods of acquiring & retaining visitors
- Ways to combine the Net with the existing operations. Key issues like Channel conflict, supply chain Management and Pricing.

References:

1. Jim Sterne, " World Wide Web Marketing: Integrating the Web into your Marketing Strategy", John Wiley & Sons, Inc.
2. John Hagel III and John Seely Brown, "Out of the Box: Strategies for Achieving Profits Today & Growth Tomorrow Through Web Services", Harvard Business School Press (2002)
3. Allan Afuah & Christopher L.Tucci, "Internet Business Models and Strategies: Text and Cases," McGraw Hill/Irwin (2000)
4. Kenneth C.Laudon and GrolGuericioTraver, "E-Commerce: Business, Technology, Society," Addison-Wesley Publishing Company (2002)

MS 5770 STRATEGIC MARKETING**(4-0-0-6)****Objectives:**

The primary concern of any organization is to understand and appreciate the following question – "What Products? and What Markets?". This course will try to answer these concerns through conceptual, analytic and practical inputs.

Contents:

- Module 1 – Difference between Strategic Marketing & Marketing Strategy, Limits to Market share, Driving Forces, Price Wars, Strategies to attack and defend, Share increase strategies, Organisational culture, Strategic

Windows Adding Value to the customer, ways to predict the behaviour of competition.

- Module 2 – Analysing Market opportunity and assessing company Capability, Cost Dynamics: Scale and Experience Effects.
- Module 3 – Analytical Tools and methods, Portfolio Analysis, Market Attractiveness – Business Position Assessment, PIMS (Profit Impact of Marketing Strategy) learnings and their relevance to Indian environment. Establishing the Strategic Marketing Plan with reference to Multi Product/Multi Market organizations and also for Single product Organisations. Issues in Implementation.

References:

1. Derek F. Abell & John S. Hammord “STRATEGIC MARKET PLANNING: Problems and Analytical Approaches”, Prentice – Hall (1979)
2. Derek F. Abell “Managing with Dual Strategies – Marketing the present : Pre emptying the Future”, Free Press (1993)
3. Henry Mintzberg, “The Rise and Fall of Strategic Planning: Reconciling Roles for Planning, Plans, Planners” Free Press (1993)
4. Michael Hammer, “The Agenda: What every business must do to dominate the decade”, Crown Publishing (2001)
5. Roger A. Kerin Robert A. Peterson, “Strategic Marketing Problems: cases and comments”, Prentice Hall (2001)

Website: www.mckinseyquarterly.com

MS 5780 E-BUSINESS STRATEGIES

(4-0-0-6)

Objectives:

This course focuses on new business models emerging in e-commerce, in functional areas such as e-marketing, e-support/service and e-procurement. The course objectives are:

- To give students a framework for understanding and implementing business strategy on the web, including marketing strategy, customer service strategy and procurement operations.
- To understand not only how successful net marketing operates, but how existing operations should combine the Internet with traditional operations and marketing channels.

Contents:

- Defining e-business strategy and e-business evolution

- E-business models: direct to customer, full-service provider, whole of enterprise, portals, agents, auctions, aggregators, shared infrastructure, virtual community, value net integrator, content provider, etc.
- Integrated strategy approaches in e-business models: How firms develop and integrate new technology, new business innovations, and policy in their e-business models to sustain competitive advantage

Focused Topics:

- Economic opportunities created by the net
- E-marketing strategies, including personalization and community building
- Ways to combine the net with existing operations – issues like channel conflict, supply chain management and pricing
- Building traffic to a site. Acquiring and retaining visitors.
- E-support and service strategies
- Branding Strategy and Domain Names
- E-business design
- Innovation and Business Method Patents in the Models
- Information Value and the economics of information
- Customer Relationship Management over the internet
- Mobile E-Commerce
- Ethics in the digital age
- E-Government

References:

1. Ravi Kalakota and Marcia Robinson, E-Business, Roadmap for success, Addison Wesley & Pearson Education Asia, 2000
2. Jim Sterne, World Wide Web marketing: Integrating the web into your marketing strategy, John Wiley and Sons, 2001
3. P. Weill and M. Vitale, Place to Space: Migrating to e-Business Models, Harvard Business School Press, April 2001, ISBN: 1-57851-245-X., 2001
4. Carl Shapiro and Hal Varian, Information Rules: A Strategic Guide to the Network Economy, Harvard Business School Press, 1998
5. Garth Saloner and Michael Spence, Creating and Capturing Value: Perspectives and Cases on Electronic Commerce, 2001

MS 6580 SALES AND DISTRIBUTION MANAGEMENT (4-0-0-6)

Objectives:

This course covers the theories, concepts, techniques, and practices related to Sales and Distribution Management.

Contents:

- Importance of developing an analytical approach towards Sales Management.
- Practical aspects of Sales Management; forecasting, field supervision, territory management, and quota setting.
- Human relations aspects in Sales Management and the importance of the Sales Manager's role in getting the best out of his people.
- Channel selection, design, and implementation.
- Differences between intensive, selective, and exclusive channels, different formats of channels, when to choose what, and why.
- Elements and principles of managing channel conflict.

Text books:

- Ingram – LaForge-Avila-SchweperJr- Williams, Sales Management Analysis and Decision Making, (Thomson) – Cengage – VI Edition.
- Spiro, Stanton and Rich, Management of Sales Force, Tata McGraw Hill Edition

MS 6590 CUSTOMER RELATIONSHIP MARKETING (4-0-0-6)**Objectives:**

To introduce students to the underlying philosophy, concepts and tools of Customer Relationship Marketing and to help them understand the economics of customer loyalty. The intention is to facilitate the development of practical insight among students that will help them in identifying profitable vs. unprofitable customers, and enable them to analyze and design relational programs and strategies.

Contents:

- *Introduction* – Transaction vs. Relationship marketing – paradigm shift in Marketing, Evolution.
- *Terms, definitions and models* –Customer satisfaction, trust and commitment, loyalty types and models of customer loyalty, relational bonds, loyalty ladder.
- *Customer database management* – Developing customer databases, customer profitability analysis, selection and targeting, CLV.
- *Customer based value metrics* - Primary and popular metrics - share of category requirement, size of wallet, share of wallet, Strategic metric – RFM.
- *Relationship marketing process* - Designing, implementing and optimizing loyalty programs; industry cases.

- Functional vs. emotional needs, handling complaints, customer service, brand communities, online marketing and CRM.

Text books:

1. Kumar, V. and Werner J. Reinartz (2006) "Customer Relationship Management: A Database Approach", Wiley India.
2. Baron, Steve, Tony Conway, and Gary Warnaby (2010) "Relationship Marketing: A Consumer Experience Approach", New Delhi: Sage Publications.

References:

1. Kumar, V. (2008) "Managing Customers for Profit: Strategies to Increase Profits and Build Loyalty" Wharton School Publishing, Pearson India.
2. Sheth, Jagdish N. and AtulParvatiyar (2000) "Handbook of Relationship Marketing", New Delhi: Sage Publications.

MS 6720 INDUSTRIAL AND SERVICES MARKETING (4-0-0-6)

Objectives:

This course explores the role of marketing for industrial and services organisations. The marketing variable's distinctive impact on industrial and service organizations are also discussed with practical implications.

Contents:

1. Industrial marketing - Strategic variables - market selection and product planning, pricing strategy, distribution strategy - Buyer seller relations, organisational buyer behaviour models.
2. Role and importance of services marketing, strategic variables - price, promotion strategies

References:

1. Kotler, Philip; Marketing Management, Prentice Hall of India, New Delhi, 2000.
2. Armstrong, Gary and Philip Kotler; Principles of Marketing, Prentice Hall, New Delhi, 1992.

3. Stanton, William; Fundamentals of Marketing, McGraw Hill, New Delhi, 1990.
4. Hill, Alexander and Cross-; Industrial Marketing, AITBS, New Delhi, 1988.
5. Corey E Raymond; Industrial Marketing - Cases and Concepts, Prentice Hall, New Jersey, 1988.
6. Lovelock, Christopher H.; Services Marketing, Prentice Hall, New Jersey, 1996.
7. Ramaswamy, V. S., and S. Namakumari; Marketing Management - The Indian Context, Tata McGraw Hill, New Delhi, 1990.

INFORMATION SYSTEMS ELECTIVES

MS 5810 DECISION SUPPORT SYSTEMS

(4-0-0-6)

Objectives:

Provide a broad overview of analytic Decision Support Systems (DSS) in the industry. This course introduces various decision support methodologies, including deterministic and stochastic models. Deterministic models include mathematical programming formulations, with a special focus on supporting logistic and location decisions. Stochastic models include the analysis of queuing systems, marketing models and financial spreadsheet models, with applications in services management, marketing research and options pricing. Extensive examples will be provided of real-life decision support systems from Airline operations, the Public Sector and Marketing decision support. Emphasis will be placed on developing analytic thinking and model-building skills.

Contents:

- Introduction to the formulation and classification of Mathematical Programming problems.
- Sensitivity analysis and duality.
- Formulation of network models.
- Formulation of integer programming models.
- Location models.
- Vehicle routing models.
- Random variables and probability distributions.
- Introduction to queuing models.
- Marketing decision support – logit and probit models for consumer choice behavior.
- Marketing decision support – use of brand scanner data.
- Marketing decision support – sales force optimization.
- Financial spreadsheet models – options pricing.
- Financial spreadsheet models – bond portfolio immunization.
- Architecture of DSS.
- Overview of DSS software and applications.
- Databases for DSS.
- Executive Information Systems (EIS).
- Information and Decision Support Systems – a comparison.

References:

1. Hillier, Frederick S., and Gerald J. Lieberman; *“Introduction to Operations Research”*; Seventh Edition, Tata McGraw-Hill, New Delhi, 2001. (Required text)
2. Camm, Jeffrey D., and James R. Evans; *“Management Science and Decision Technology”*; South-Western College Publishing, Cincinnati, 2000.
3. Bradley, Stephen P., Arnoldo C. Hax, and Thomas L. Magnanti; *“Applied Mathematical Programming”*; Addison-Wesley, Reading, Massachusetts, 1977.
4. Thierauf, Robert J.; *“Decision Support Systems for Effective Planning and Control – A case study approach”*; Prentice-Hall, Englewood Cliffs, 1982.

MS 5820 SOFTWARE ENGINEERING AND PROJECTMANAGEMENT**(4-0-0-6)****Objectives:**

The increasing use of information technology in organizational operations, the dramatic developments in hardware and software, the complexity of organizational processes and their automation, and the demands of competition in the marketplace, all of these have contributed to the need for ‘engineering’ software and ‘managing’ software projects. This requires discipline among the stakeholders participating in the entire software life cycle beginning with identifying user requirements and apparently (but, never) ending with implementation and maintenance.

This course introduces students to the elementary concepts and techniques of Software Engineering and Project Management, with a focus on applications to business organizations and their software development efforts.

Contents:

- Software – Product and Process aspects.
- The Software Development Life Cycle (SDLC), and Process Models.
- User Requirements and Software Requirements specification.
- The Physical System – Analysis and Modelling approaches.
- Software Design – Concepts and Principles.
- Quality and testing issues.
- Process and Project Metrics.
- Software Project Management concepts.
- Software Project Planning and Risk Analysis.
- Software Project Implementation – Scheduling, Monitoring and Control.

References:

1. Pressman, Roger S., Software Engineering – A Practitioner’s Approach (Fifth Edition), McGraw-Hill, Singapore, 2001.
2. BehforoozAli and Frederick J. Hudson, Software Engineering Fundamentals, Oxford University Press, New York, 1996.
3. Fairley, Richard, Software Engineering Concepts, Tata McGraw-Hill, New Delhi, 1997.
4. Gillies, Alan C., and Peter Smith, Managing Software Engineering - CASE studies and solutions, Chapman & Hall, London, 1994.
5. Royce, Walker, Software Project Management - A unified framework, Addison-Wesley, New Delhi, 2000.
6. Hughes, Bob and Mike Cotterell, Software Project Management (Second Edition), Tata McGraw-Hill, New Delhi, 1999.

MS 5830 BUSINESS ANALYSIS FOR IT SOLUTIONS (4-0-0-6)**Objective:**

The Course seeks to address the Business/IT interface in architecting business solutions. It will lay theoretical foundations and provide a conceptual framework for solving business problems by leveraging IT tools and techniques.

Contents:

- Evolution of the IT industry; IT Leaders’ Big Decisions; Social Trends and IT; Economic Trends and IT; Business Trends and IT; Indian IT industry.
- Analysts’ View Points; Key Parameters in the IT Industry; Enterprise Architecture (EA) and Strategy; EA – a holistic View; Software Stack.
- Strategy; Adaptive Fit View of the Strategy; Solution Development Cycle; Role of a Business Analyst.
- Strategic Level Metrics; Tactical Level Metrics; Gaps in Metrics; Needs and Requirements; Effective Requirements Definition; Key Knowledge Areas.
- Enterprise Analysis; Requirements Planning and Management; Requirements Elicitation; Requirements Analysis and Documentation; Requirements Communication; Solution Assessment and Validation.
- Business Rules; Business Case Design.
- Case Study; Aerofirma Inc.; EA, Requirements and Zachman Framework.
- Business Process Management (BPM) and Business Process Re-engineering (BPR); Business Technology Convergence; BPM Enabling Tools.
- Preview of convergence of BPM, UML and Database Design; Selection of BPM Tools; Business Process Analysis; Scenarios of Focus.

- Gartner Business Value Model; Key Principles of Real Time Enterprise; Routes to Strategic Business Improvements; Provision for spillovers.

References:

1. International Institute of Business Analysis (2006) "Business Analysis Body of Knowledge". Version 1.6, <http://www.theiiba.org>.

Additional reading materials will be given prior to the beginning of the course.

MS 5840 IT CONSULTING

(4-0-0-6)

Pre – requisites:

- a. Basic knowledge of Computer Hardware, Networks and Software Concepts.
- b. Basic knowledge of the Software Development Life – Cycle **(SDLC)**.

Objectives:

This course introduces framework for IT consulting across the entire spectrum of services from Blueprint to Building Blocks, Enterprise Architecture Definition, Application Design, Program Management for Implementation & Roll-out, Product & Partner Evaluations, Outsourcing Options, Benchmarking Processes & Quality, Metrics & Measurement and IT Governance Models.

Contents:

- Introduction to IT Consulting
 - Scope and Definitions
 - Current state and Future trends
 - Consulting frameworks
 - How to Choose a Consultant
- IT Consulting Methodology
 - Engagement Model
 - Engagement Methodology
 - Engagement Team
 - Engagement Pricing
- Enterprise Business Plans
 - Understand Business drivers
 - Identification of Technology drivers
 - Mapping of Business & Technology drivers
- IT Blueprint / Road map

Study of AS IS State
Recommendations on TO BE State
GAP Analysis & Strategies for bridging
Evaluation of Technology Stack
Features of Technology Stack
Future proofing of Technology Stack

- Governance Models
Identification of Stakeholders
Understanding Interfaces
Defining Governance Models
- Product / Partner Selection
Evaluation Methodology
Evaluation Criteria
Outsourcing Options
In-sourcing, Co-sourcing, Outsourcing
- Benchmarking Process / Quality
Benchmarking current levels
Industry Accreditations – **CMM** approaches
Metrics & Measurements
Identifying Metrics
Defining Measurement Frameworks
Assimilation of Baseline data

References:

1. Freedman , Rick; The IT Consultant – A Commonsense Framework for Managing the Client Relationship; John Wiley; New York, 2000.
2. Cope, Mick; Seven Cs of Consulting – The Definitive Guide to the Consulting Process; 2nd Edition; Pearson Education; London, 2003.
3. Purba, Sanjiv and Bob Delaney; IT Consulting; Osborne / McGraw – Hill; New York, 2003.

MS5850 OBJECT-ORIENTED ANALYSIS AND DESIGN(4-0-0-6)

Objectives:

The Object-Oriented paradigm is a systematic and structured way, of perceiving, Understanding, modeling, analyzing and designing systems. Although its applications have mostly related to computing and information systems, the basic concepts and techniques have a much wider scope for applications in other areas including organizational systems and processes. This methodology's conceptual relationship with the more general knowledge area of Systems Thinking enables its application for achieving improved

organizational efficiency. The methodology is also a powerful means for general problem-solving.

This course provides students with an introduction to the basic concepts and techniques of Object-Oriented Analysis and Design, with a focus on applications to business organizations.

Contents:

- * Introduction to the Object-Oriented paradigm
 - The need,
 - Examples,
 - Basic notations and conventions,

- * Object-Oriented Modeling Concepts
 - Objects,
 - Classes,
 - Relationships,
 - Encapsulation,
 - Message sending,
 - Generalization/Specialization Hierarchies and Inheritance
 - Polymorphism, Reuse

- * Models and the Unified Modeling Language
 - Types of models
 - Use-case diagrams
 - Class diagrams
 - Object diagrams
 - Sequence diagrams
 - Collaboration diagrams
 - State-chart diagrams
 - *Activity diagrams*
 - Component diagrams
 - Deployment diagrams

- * Introduction to Design Patterns

References:

1. Satzinger, John W., and Tore U. Orvik; *The Object-Oriented Approach Concepts, System Development and Modeling with UML*; Second Edition, Course Technology, Singapore, 2002.
2. Weisfeld, Maft; *The Object-Oriented Thought Process*; Techmedia, New Delhi, 2000.
3. Rumbaugh, James et al., *Object-Oriented Modeling and Design*; Prentice-Hall of India, New Delhi, 1991.
4. Priestley, Mark; *Practical Object-Oriented Design with UML*; McGraw Hill, London, 2000.

5. Coad, Peter and Edward Yourdon; *Object-Oriented Analysis*; Second Edition, Pearson Education, New Delhi, 2001.
6. Brown, David William; *An Introduction to Object-Oriented Analysis - Objects and UML in Plain English*; Second Edition, John Wiley, New York, 2002.
7. Gamma, Erich et al, *Design Patterns- Elements of Reusable Object-Oriented Software*; Pearson Education, New Delhi, 2001.

MS5860 INTRODUCTION TO DATABASE SYSTEMS (4-0-0-6)

Objectives:

Databases are ubiquitous in contemporary computing systems. From a purely strategic point of view, databases have served the interests of business intelligence, both internal and external, to organizations. From the operations point of view, databases are considered to be vital resources in several organizations. The difference between successful, competitive organizations and those that struggle for survival can be traced back to their respective databases in many cases, and especially their design, organization, contents and security systems.

This course provides students with an introduction to the basic concepts and techniques related to the conception, design, implementation and use of Database Systems, with a focus on applications to business functions.

Contents:

Data and Databases

The need, Examples, File Systems, DBS - Types and Architectures, Uses of DBS

Data Modelling

Types of Data Models, Entity-Relationship Modeling, Relational Data Models

Database System Design

Database Organization, Normalization, Performance Tuning, Database System Implementation, Schemas, Domains, Tables and Views, Editing, Access issues, Use of SQL

Overview of Advanced Concepts

Transaction Management, Distributed Databases, Data Warehousing, OLAP, and Data Mining, Multimedia Databases, Management Considerations

Case Studies

References:

1. Rob, Peter and Carlos Coronel; *Database Systems Design, implementation & Management*, Fourth Edition, Course Technology, Singapore, 2001.
2. Teorey, Toby; *Database MooWing & Design*; Third Edition, Harcourt Asia, Singapore, 2000.
3. Harrington, Jan L.; *Relational Database Design*; Harcourt India, New Delhi, 2001.
4. Elmasri, Ramez and Shamkant B. Navathe; *Fundamentals of Database Systems*; Second Edition, Addison-Wesley, Singapore, 1999.

MS5880 INTRODUCTION TO COMPUTER NETWORKING

(4-0-0-6)

Objectives:

This is a general introductory course on Networking, Network Structures, Forms, Types and Technologies, Communication Protocols, Network Security, and related topics within the context of business applications and management issues. This should enable students to develop a basic understanding of this subject and also appreciate its relationships with other subjects within the professional specialization of Information Systems and Technology offered in a masters level business programme.

Contents:

- **Introduction to** Networking Concepts, Protocol, OSI Layer (Repeater, Bridge, Router, Gateway, etc. Data Link Layer)
- **HDLC, PPP**
- **Ethernet** -Introduction to ATM (Asynchronous Transfer Mode), Introduction to Internet, Principle, architecture, addressing (IP Address), Network Layer
- **IP protocol, routing, Subnet, Supernet** -Transport Layer, TCP, Sliding window, UDP, ports/sockets
- **Network Management System (SNMP)**
- **Security** -System level security, Network level security (**Firewall, proxy, etc**), **NAT**, Transaction Security (Private key encryption, Public key encryption)
- Advanced Topics VLAN, VPN, VoIP, IPv6, ADSL
- **Networking Practice & Experience** (analysis, design, implementation and maintenance of a network)

References:

1. Tannenbaum, Andrew S.; “*Computer Networks*” (4th Edition), Pearson, New Delhi, 2003.
2. Stallings, William; “*Business Data Communications*” (2nd Edition), Pearson, New Delhi, 2003.
3. Stallings, William; “*Local Area Networks*” (3rd Edition), Macmillan 1990.
4. Panko, Raymond R.; “*Business Data Networks and Telecommunications*” (4th Edition), Prentice-Hall of India, New Delhi, 2002.
5. Comer, D. E., “*Internetworking with TCP/IP*”, Vol. 1, (3rd Edition), Prentice-Hall, Englewood Cliffs, 2001.

MS5890 IT SYSTEMS MANAGEMENT

(4-0-0-6)

Objectives:

Today’s Managers face the challenge of deploying and managing Information Technology (IT) solutions in their organizations. While the conceptualization selection building of an information technology solution is an important aspect of a manager’s life, there is an urgent need to understand the fundamentals of IT Systems Management from a business perspective.

This course introduces a framework for IT Systems Management across the entire life cycle. This includes building of a business case, defining and managing the change process, selecting and deploying a specific hardware, network storage and software solution, operating the solution, managing security, performance and business continuity, supporting the resolution of problems and exceptions, and measuring the impact on the business.

Contents:

- Introduction of IT Systems Management
 - Scope and definitions
 - Current and future Technology – hardware, software, storage, networks
 - Systems Management frameworks
- Change Management Processes
 - Identifying the need for change
 - Making a business case and measuring return on investment
 - Managing change – people, tools processes
- Configuration Management Process
 - Current and Target Architecture Definitions
 - Vendor Selection
 - Solution Deployment
- Operations Management Process
 - Application Management

- Performance Management
- Capacity Planning
- Business Continuity and Disaster Recovery

References:

1. Schiesser, Rich; "It Systems Management". Prentice-Hall of India, New Delhi, 2002.
2. Frenzel, Carrol W.; "Management of Information Technology", Boyd & Fraser, Boston, 1992.
3. Davenport, Thomas H.; "Information Ecology – Mastering the information and knowledge environment", Oxford University Press, New York, 1997.

Additional Reading :

1. Phillips, Joseph; "IT Project Management – On track from start to finish", Tata McGraw-Hill, New Delhi, 2002.
2. Williams, Brian K., Stacey C. Sawyer, and Sarah E. Hutchinson; "Using Information Technology – A practical introduction to computers and communications", 3rd edition, Tata McGraw-Hill, New Delhi, 1999.
3. Turban, Efraim., Rainer, R. Kelly, and Potter, Richard E.; "Introduction to Information Technology", John Wiley, 2003.

MS6810 SOFTWARE DEVELOPMENT OUTSOURCING (4-0-0-6)

Objectives:

Software development outsourcing is the practice of developing software by another company. Offshore outsourcing involves software development in another country, and it has become a major source of revenue for many software companies in India.

This course will discuss business practices in software development outsourcing and their limitations. It will emphasize the issues and risks in such outsourcing, and methods to manage these risks.

Contents:

- Software development outsourcing objectives
- Various types of outsourcing relationships with vendors
- Short term and long term implications of outsourcing
- Risks in outsourcing and methods to manage risks
- Selective outsourcing
- Offshore software development outsourcing
- Risks in offshore outsourcing and methods to manage risks

- Selective offshore outsourcing

References:

1. L.P. Willcocks, and Lacity, M.C. (1997), *Strategic Sourcing of Information Systems: Perspectives and Practices*, John Wiley & Sons, New York.
2. M.C. Lacity, and Willcocks, L.P. (2000), *Global Information Technology Outsourcing: In Search of Business Advantage*, John Wiley & Sons, New York.
3. L.M. Applegate, F.W. McFarlan, J.L. McKenney, (1999) *Corporate Information Systems Management*, Irwin McGraw-Hill, New York.

**MS6830 INFORMATION SYSTEMS AUDITING
AND CONTROL (4-0-0-6)**

Objectives:

In recent years, the subject of information technology controls and auditing has gained significant attention among public and private firms as well as regulatory bodies because:

- a) More and more of the business processes, especially those involving financial transactions, are automated using IT,
- b) Security of Information has become more important because of the connected nature of modern enterprises enabled by IT,
- c) Audit of computer-based transactions requires a radically different approach that that used traditionally for manual transactions based systems.

Consequently, computer-assisted audit tools have been developed to verify the adequacy of organizations' internal controls and to audit these controls.

This course is devoted to an indepth study of control and audit of information systems in business organizations. IT controls and their evaluation, computer-based auditing techniques, and security aspects will be dealt with in the course. Recent developments in IT such as client-server systems and Internet and their impact on auditing, control, and security will also be explore in the course.

Contents:

- Conducting as IS Audit
What is an audit?
Traditional auditing techniques

Effect of computers on the auditing process

- Principles of IT Controls
- Management Controls
 - General and Systems Development Controls
 - Programming and Data management Controls
 - Security Management Controls
 - Operations Management Controls
 - Quality Assurance Management Controls
- Specific IT Controls
 - Boundary and Input Controls
 - Processing and Database Controls
 - Output and Communication Controls
- IS Auditing
 - Evidence Collection: Computer Assisted Auditing Techniques
 - Auditing Code
 - Auditing Use Acceptance Tests
 - Concurrent Auditing Techniques
 - Control Flow Charts and other Tools
- Evidence Evaluation Techniques
 - IT Security
 - Security Design Methods: Implications for IS Development
 - Technology-specific issues in IT Auditing

References:

1. Ron Weber, *Information Systems Control and Audit*, Third Edition, Prentice Hall, Upper Saddle Rivver, NJ, USA, 1998
2. Donald Watne and Peter Turney, *Auditing EDP Systems*, Second Edition, Prentice-Hall Publishers, Upper Saddle River NJ, USA, 1990.
3. Donald Warren, Lynn Edelson, and Xenia Parket, *Handbook of IT Auditing*, Warren, Gorham, and Lamont Publishers, Boston, MA, USA, 1997.
4. James Hickman, *Practical IT Auditing*, Warren, Gorham, and Lamont Publishers, Boston, MA, USA, 1997.

MS6840 DATA WAREHOUSING AND DATA MINING (4-0-0-6)

Objectives:

This course provides a broad overview of data warehousing and data mining, with specific focus on applications to Customer Relationship Management (CRM). At the end of this course, students should be familiar with the Customer Management Lifecycle and the use of data mining techniques in customer acquisition and management. The course reviews data mining techniques such as Market Basket Analysis, Decision Trees and Automatic Cluster Detection, besides traditional statistical classification models such as Logistic Regression and Discriminant Analysis. Emphasis will be placed on applying these methodologies to realistic business situations.

Contents:

- Introduction to Data Warehousing, Data Mining and the Customer Management Lifecycle. Examples from the credit card industry, insurance, airlines and banking.
- Overview of basic statistics concepts and methods.
- Introduction to Data Warehousing – The business dimensional lifecycle.
- Data Warehousing – Project planning for managing a data warehouse Project.
- Data Warehousing – Requirements gathering.
- Data Warehousing examples from the Healthcare industry.
- Online Analytic Processing (OLAP).
- Automatic Cluster Detection.
- Link Analysis.
- Neural Networks & Genetic Algorithms.
- Data Mining in customer acquisitions, e.g. credit card acquisition campaigns. Use of Logistic Regression models.
- Data Mining in customer acquisitions – Discriminant Analysis models.
- Data Mining in customer acquisitions – Measuring Customer Lifetime Value.
- Customer Management – managing a credit card customer base.
- Introduction to decision tree modeling.
- Setting customer management policy – effect of management policies on customer spending and credit losses.
- Management of customer attrition and collections efforts.
- Overview of CRM products and companies.
- Market Basket Analysis.
- Web mining applications in e-marketing.
- Web mining applications in e-marketing-click-through rates and conversion rates for Banner ads. Placement of banner advertisements.
- Designing E-loyalty programs.
- Text mining and knowledge management systems.
- Spatial data mining.
- Data Visualization.

References:

- 1) Han, Jiawei and MichelineKamber, *Data Mining: Concepts and Techniques*, Academic Press, New Delhi, 2001.
- 2) Michael J. A. Berry and Gordon Linoff, *Data Mining Techniques for Marketing, Sales and Customer Support*, John Wiley, New York, 2000.
- 3) Ralph Kimball, Laura Reeves, Margy Ross and Warren Thornthwaite, *The Data Warehouse Lifecycle Toolkit*, John Wiley, New York, 2000.
- 4) Sholom M. Weiss, NitinInturkhya, *Predictive Data Mining*, Morgan Kaufmann, New York, 2001.

**MS 6850 SOFTWARE ESTIMATION METHODS
AND MODELS****(4-0-0-6)****Objectives:**

The aim of this course is to provide an exposure to various models and procedures in the software development.

Contents:

- Software Development Life Cycle (SDLC) models
- Measurement of software development
 - Terminologies, Different Phases in estimation
- Software estimation dimensions
 - Size, Effort, Cost, Schedule
- Estimation methods and their features
 - Lines of Code, LOC models (COCOMO, Putnam, SLIM), Function/Feature
- Points Analysis, Wideband Delphi
- Calibration of models for organizational implementation
- Software estimation tools
 - Work Breakdown Structures, Statistical Regression, Neural Networks
 - Packages (e.g., Check Point)
- Causes for inaccurate software estimation and remedies
- Estimation methods for other SDLC models.

References:

1. Rick Freedman, *The IT Consultant – A Commonsense Framework for Managing the Client Relationship*, ossey-Bass/Preiffer, New York, 200. ISBN: 0787951730
2. Garmus, Dravid and David Herron, *Function Point Analysis – Measurement Practices for Successful Software Projects*, Addison-Wesley, New York 2000.

3. Capers Jones, *Estimating Software Costs*, McGraw-Hill, New York. ISBN 0-07-913-941.
4. Boehm, Barry et al., (2000) *Software Development Cost Estimation Approaches – A Survey*, *Annals of Software Engineering*, Vol.10, pp. 177-205.

MS 6860 ENTERPRISE RESOURCE PLANNING (4-0-0-6)

Objectives:

Students will be exposed to the scope of Enterprise Resource Planning (ERP) systems, the motivating factors for implementing ERP systems in corporations and the enabling role of ERP systems in improving the performance of corporate functions. Students will comprehend the challenges associated with implementing large-scale ERP systems and the impact of these systems on key business processes (especially, Human Resource Management). Students will gain an understanding of business process integration achieved through successful adoption of an ERP system by a firm. Students will explore the features of PeopleSoft software (installed in the HR Lab) through hands-on experience and ERP-based projects related to HRM practices will also be undertaken.

Contents:

- **Overview of ERP:** What is ERP – Why ERP - Evolution of ERP – Major Players in ERP – Generic solution vs. Industry-specific solution.
- **Choosing the right ERP System:** Building a Business case - Business Models available – In-house ERP vs. ASP vs. Outsourced model – Selection of a business model – Product vendor evaluation – Evaluation of Implementation Partner.
- **ERP Services:** Types of services – Implementation, Global Rollouts and Consolidations, ASM, Upgrade Services, Hybrid services like ERP Testing
- **Design and Implementation Challenges:** Designing and implementing ERP systems - Approaches - Implementation methodologies – Business Process Re-Engineering - Preparing Organization for Change.
- **Impact of ERP on Human Resource Management:** Challenges pertaining to Human Capital Management and the role of ERP in enhancing HR value proposition.
- **Process Integration using ERP:** Financials –SCM –CRM – Business Analytics.
- **Future of ERP:** Current Business scenario, Impact of Web 2.0 on ERP.

Text books:

1. Vinod Kumar Garg and N. K. Venkitakrishnan, *Enterprise Resource Planning: Concepts and Practice*, Prentice Hall of India, New Delhi, 2006.
2. Mary Sumner, *Enterprise Resource Planning*, Prentice Hall, New York, 2004.
3. Graeme Shanks, Peter Seddon, Leslie Willcocks (Editors), *Second-Wave Enterprise Resource Planning Systems: Implementing for Effectiveness*, Cambridge University Press, Cambridge 2003.

References:

1. Sock Hwa Chung and Charles A. Snyder (2000), ERP adoption: a technological evolution approach, *International Journal of Agile Management Systems*, Vol.2, No.1, pp.24-32.
2. Christopher P. Holland and Ben Light (1999), A Critical Success Factors Model For ERP Implementation, *IEEE Software*, Vol.16, Issue 3, pp.30-36.
3. Thomas Davenport (1998), "Putting the enterprise into the enterprise system", *Harvard Business Review*, Vol. 76, Issue 4, pp.121-131.

MS 6870 IT SERVICES AND OUTSOURCING (4-0-0-6)

Objectives:

The course outlines sourcing models in IT services and theories that support outsourcing of IT and Services. It enables students to understand the rationale behind IT outsourcing decisions and the dynamics of decision processes while analyzing global services delivery in IT services from both client and service provider perspectives.

Contents:

- Drivers for global sourcing of services, sourcing models in IT, offshore and onshore, economics of outsourcing, economics of offshore outsourcing, transaction cost economics, costs – benefits and business case for outsourcing, comparative advantage in outsourcing, politics of outsourcing.
- Strategic decision process in outsourcing, core competence, resource based view, multi-vendor and selective sourcing, offshore strategy and governance, country selection, vendor-location decision.
- Contracts in IT outsourcing, transition management, performance management and SLAs, relationship management, client risks in offshore IT outsourcing, vendor perspective in IT outsourcing, IT services portfolio, offshore software development, Remote Infrastructure Management, Quality Standards, beyond offshoring.

Text books:

1. Lacity, M. and Rottman, J.W. (2008) *Offshore outsourcing of IT work, Client and Supplier Perspectives*, Palgrave Macmillan, New York.
2. Carmel E. & Tjia P. (2005), *Offshoring Information Technology, Sourcing and Outsourcing to a Global Workforce*, Cambridge University Press; Cambridge, UK
3. Robinson, M., Kalakota, R. and Sharma, S. (2005) *Global Outsourcing, Executing an Offshore Nearshore or Offshore Strategy*, Mivar Press: GA, USA

References:

1. Kobayashi-Hillar, M. (2005) *Outsourcing to India: The offshore advantage*, Springer: London
2. Oshri, I. Kottlarsky, J. and Willcocks, L.P. (2007) *Managing Disperse Expertise in IT Offshore Outsourcing: Lessons from Tata Consultancy Services*, *MISQ Executive*, Vol.6, No.2, pp. 53-65.
3. Aundhe, M.D. and Mathew, S.K. (2009) *Risk Mitigation in Offshore IT outsourcing contracts: A Service provider Perspective*, *European Management Journal*, Vol.27, No.6, pp. 418-428.
4. Nohria N. (2005) *Feed R & D or farm it out ?* *Harvard Business Review*, Vol.83, No. 7/8, pp. 17-21.

Case Study: Strategic Outsourcing at BhartiAirtel Limited, HBS 9-107-003

INTEGRATIVE MANAGEMENT ELECTIVES

MS 5212 INTELLECTUAL PROPERTY FOR ENTREPRENEURS AND MANAGERS (4-0-0-6)

Objectives:

The course aims to introduce the concept of Intellectual Property (IP) in business environment with special focus on entrepreneurs. It outlines various facets of IP and elaborates the different ways in which IP adds value to businesses. The course is structured to bring out current & emerging issues relating to IP and Business management. Students from M.S. (Entrepreneurship) may also enrol for this course.

Contents:

- **An Introduction to Intellectual Property**
 - ❖ The Idea of IP
 - ❖ Patents and Technological Innovations
 - ❖ Trade Secrets and Confidential Information
 - ❖ Copyrights and Designs
 - ❖ Trademarks, Branding and Franchising

- **Intellectual Property in Business**
 - ❖ Innovation Entrepreneurship and Start ups
 - ❖ IP landscaping
 - ❖ Developing an IP strategy
 - ❖ IP exploitation
 - ❖ IP risk mitigation
 - ❖ IP valuation
 - ❖ Infringements of IP rights

- **Technology Transfer, IP Licensing and Contracts**

- **IP and Competition**

- **IP in Specific Industries**
 - ❖ IP in Life Science Industries
 - ❖ IP in Fashion Industry
 - ❖ IP in Information Technology Industries

References:

1. Peter F. Drucker, Innovation and Entrepreneurship: Practice and Principles, Harper & Row Publishers Inc., New York (Reprint, 2014)
2. Epstein Marc J. Making Innovation Work: How to Manage It, Measure It, and Profit from It, Pearson Power, New Delhi (First Impression, 2008)
3. [W. Chan Kim](#), [Renee Mauborgne](#), Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant, Harvard Business School Press, Boston (Revised, 2015)
4. Lionel Bently & Brad Sherman, Intellectual Property Law, OUP, Oxford (4th ed. 2014)

MS 5370 TOTAL QUALITY MANAGEMENT

(4-0-0-6)

Objectives:

By the end of the course, students will be able to: Recognize and generalize the basic philosophies of quality management; apply the basic techniques and tools of quality management; determine the effectiveness of the quality management principles

Contents:

- Evolution of Quality as Strategy – Defining Quality – Philosophies of Quality Gurus and Experts.
- Measures of Quality Product and Quality Process: The traditional model of Cost-of-Quality and the emerging Cost-of -Quality model.
- The Process of Continuous Improvement
 - a. **Basic Tools:** Analysis of data using simple statistical techniques, graphical tools and diagrams.
 - b. **Statistical Process Control:** Control charts for attributes and variables, and the use of probability distributions.
 - c. **Advanced Tools:** Enhancing the seven-step method, Process Capability and Six-Sigma Quality, Taguchi's Loss Function and the Design of Experiments, and Case Study.
- Quality Function Deployment (QFD) QFD and the House of Quality, Research Methodology and issues, and Case Study.
- Benchmarking - Competitive, Process and Strategic Benchmarking.
- An Introduction to TQM in Service Quality - Defining Service Quality, Service Paradox, and Customer Perception of Service Quality.
- Empirical Studies - Empirical Studies and Models of TQM in Manufacturing and Service Industries.

References:

1. Rao, A., L. P. Carr, I. Dambolena, R. J. Kopp, J. Martin, F. Rafii, and P. F. Schlesinger; *Total Quality Management: A Cross-Functional Perspective*, John Wiley, New York, 1996.
2. Dale, B.G.; (Editor), *Managing Quality*, Prentice Hall, New York, 1994.
3. Bank, J.; *the Essence of Total Quality Management*, Prentice Hall of India, New Delhi, 1998.
4. Berk, Joseph and S. Berk; *Total Quality Management*, First Indian Edition, Excel Books, New Delhi, 1995.

**MS 5870 INTRODUCTION TO KNOWLEDGE
MANAGEMENT**

(4-0-0-

6)

Objectives:

This course is designed to introduce the fundamentals of knowledge management to MBA students, and enable them to appreciate its critical role in enhancing organizational performance and competitiveness.

Contents:

- The rise of Knowledge Management
- Traditional Methods
- Factors of Productivity
- The Learning Organization
- The Role of Information Technology
- Implications to Leadership and Competitiveness
- Concepts of Knowledge
- Definitions
- Attributes
- A Classification Framework
 - * Forms
 - * Types
 - * Organizational Levels
 - * Structure
 - * States
 - * Domains
- Knowledge and Organizational Strategy
- Elements of Organizational Strategy
- Knowledge for Strategy Formulation and Implementation
- Knowledge and Organizational Leadership
- Knowledge and Organizational Processes
- Elements of Organizational Processes
- Knowledge for Process Effectiveness and Efficiency
- Knowledge Environment and Infrastructure

- * Structure
- * Climate and Culture
- * Technology and Systems
- Knowledge Management Processes and Practices
- Knowledge Creation and Acquisition
- Knowledge Documentation and Retrieval
- Knowledge Sharing and Application

References:

1. Bukowitz, Wendi R., and Ruth Williams, "*The Knowledge Management Fieldbook*", Prentice-Hall, New York. 1999.
2. Despres, C., and Daniele Chauvel (eds.), "*Knowledge Horizons: The Present and the Promise of Knowledge Management*", Butterworth-Heinemann, New Delhi. 2001.
3. Gamble, Paul R., and John Blackwell; "*Knowledge Management – A state of the art guide*"; Kogan Page, London. 2001.
4. Morey, D., Mark Maybury, and BhavaniThuraisingham (eds.), "*Knowledge Management: Classic and Contemporary Works*", Universities Press, Hyderabad. 2001.
5. Nonaka, I., and H. Takeuchi; "*The Knowledge Creating Company: How Japanese companies create the dynamics of innovation*"; Oxford University Press, New York. 1995.
6. Prusak L., and T. Davenport; "*How Organizations Manage What They Know*"; Harvard Business School Press, Boston. 1998.
7. Tiwana, A.; "*The Knowledge Management Toolkit*"; Prentice-Hall, New Jersey. 2000.

MS5910 BUSINESS STRATEGY: ANALYSIS AND FORMULATION

(4-0-0-6)

Objectives:

To provide an understanding of how specific strategies can be formulated.

Contents:

- Strategies – Different Alternatives – Choice of Strategies – Scenario Analysis & Strategic Audit
- Mergers & Corporate restructuring – Framework for Analysis, Comparative Patterns, Types of restructuring

- Portfolio restructuring, Conglomerate Restructuring, Financial restructuring, Organisational restructuring
- Globalization strategies – Types – Theories – Factors influencing strategies of global players.
- Strategic Alliances, Value Based Management Strategies, e-business strategies

References:

1. Shiva Ramu, S., Restructuring & Break-ups, Sage Publications, New Delhi, 1999.
2. Xavier M.J., Strategic Marketing: A Guide for Developing Sustainable Competitive Advantage, Sage Publications, New Delhi, 1999.
3. Hunger, David.J., Wheeler, Thomas L., Strategic Management, Addison Weekly Longmann Inc., New York, 1999.
4. Nohra, Kewel K., Painless Transformation: A Case Study & Crompton Greaves Turnaround Macmillan India, 1999.
5. Mattos P.K., Corporate Restructuring: An In Perspective, Macmillan India, New Delhi, 1998.
6. Weston, Fred J.Chang, Kwang S, Hong, Swan E., Mergers, Restructuring & Corporate Control, Prentice Hall of India, New Delhi, 1996.

MS5920 CREATIVITY AND INNOVATION

(4-0-0-6)

Objectives:

'Creativity' and 'Innovation' are vital for human progress. There are two dimensions of human progress:

- a) Reactive progress - through solving existing problems, and
- b) Proactive progress - through breaking new ground or going beyond existing frontiers (probably leading to newer problems).

The extent of our progress on both dimensions is dependent on our ability to be creative and innovative.

In different contexts, 'Creativity' commonly connotes our manifested capability to bring forth new ideas. 'Creativity' is the cause and essence of all what we observe as out of the ordinary, yet attractive, useful, relevant, insightful, and spiritually elevating.

In a contemporary sense, 'Innovation' refers to the whole process of developing and spreading the use of a product (a physical entity) or an idea (a conceptual entity) across space and time through a variety of activities - scientific, technological, business and organizational. 'Innovation hinges on Creativity'.

The subjects of 'Creativity' and 'Innovation' have received an intense attention from scholars and practitioners from various Knowledge of 'Creativity' and 'Innovation', and their application should be invaluable to all students.

Contents:

- Introduction to 'Creativity' and 'Innovation' - The need
 - Examples,
 - Basic mental processes.
- Concepts and Methods
 - Types of thinking,
 - Idea-generation frameworks and methods,
 - Idea-evaluation frameworks and methods,
 - Idea-implementation frameworks and methods.

References:

1. Lumsdaine, Edward and Monika Lumsdaine; Creative Problem Solving - Thinking skills for a changing world; McGraw-Hill; New York. 1995.
2. De Bono, Edward; Serious Creativity - Using the power of lateral thinking to create new ideas; HarperCollins, New Delhi. 1992.
3. De Bono, Edward; Lateral Thinking for Management; Penguin; London. 1990.
4. De Bono, Edward; Parallel Thinking - From Socratic to de Bono thinking; Penguin; London. 1995.
5. Harrison, Allen F., and Robert M. Branson; The Art of Thinking; Berkley books; New York. 1984.
6. Perkins, David; The Eureka Effect - The art and logic of breakthrough thinking; W.W.Norton; New York. 2000.
7. Ray, Michael and Rochelle Myers; Creativity in Business; Doubleday; New York. 1986.

MS 5990 TECHNOLOGY MANAGEMENT (4-0-0-6)

Objectives:

The aim of this course is to provide an exposure to impart the skills in Technology Management, ability to appreciate, evaluate/assess, and control the use of technology in business and assess the impact of technology from the economic, societal, environmental and legal points of view.

Contents:

Technology – An Introduction

- Definitions: Classifications;
- Brief history of development in agriculture, food, construction, energy, manufacturing, transport, communications, health-care, and information technologies;
- Global/macro-issues;
- Organisational / micro-issues.

Technological Change

- Technology characteristics;
- Functional capabilities and change indicators;
- Theories, Models and Measurement of technological change;
- Technology life-cycles;
- Time scales of technology development;
- Innovation, substitution and diffusion models.

Technology Forecasting (TF)

- Importance;
- Overview and classification of forecasting methodologies;
- Exploratory and Normative TF;
- Technology generations and inter-generational interactions.

Technology assessment (TA) and impact Analysis

- Assessment objectives and types;
- Components and conduct of technology assessment;
- Macro and micro-level economic, social and environmental impacts;
- Techniques of impact analysis;
- Impact evaluation.

Trade in Technology

- Technology evaluation and pricing;
- Technology transfer – by diffusion and through contracts;
- Technology Marketing;
- Institutional arrangements and legal issues;
- Patents, Transfer Rights, and Controls.

Strategic Management of Technology

- Technology strategy – macro and micro levels;
- Technology Planning, choice and adaptation;
- Technology considerations in business strategy – Manufacturing and Information Technologies;
- Use of TF;
- Technology alliances.

References:

1. Forbers, Naushad and David Wield; *From Followers to Leaders – Managing technology and innovation*; Routledge, London, 2002.
2. Harrison, Norma and Danny Samson; *Technology Management*; McGraw Hill, New York, 2002.
3. Ford, David and Michel Sare; *Managing and Marketing Technology*; Thomson Learning, Singapore, 2001.
4. Khalil, Tarek M.; *Management of Technology – The Key to competitiveness and Wealth creation*; - McGraw Hill, Singapore, 2000.
5. Burgelman, Robert A., et al; *Strategic management of Technology and Innovation*; Second Edition, Irwin, Change, 1996.
6. Gaynor, Gerard H.; *Hand book of Technology Management*; McGraw Hill, New York, 1996.
7. Betz, Frederick; *Strategic Technology Management*; McGraw Hill, Singapore, 1994.
8. Steele, Lowell W.; *Managing Technology – The Strategic view*; McGraw Hill, New York, 1989.
9. Porter, Allan L., et al.; *A Guidebook for Technology Assessment and Environmental Impact Analysis*; Elsevier, New York, 1980.
10. Hawthorne, Edward P.; *The Management of Technology*; McGraw Hill, Maidenhead, 1978.

MS6032 Predictive and Prescriptive Data Analytics (4-0-0-6)**Objectives:**

This course seeks to present students with a wide range of modern data analytic techniques, concepts and their application to practical problems. It is structured around the broad contours of the different types of data analytics seen in industry, namely predictive and prescriptive analytics.

Contents:

- Distribution Fitting and Simulation:
 - o Method of Moments, MLE, Regression fitting
 - o Goodness of fit tests
 - o Basics of Simulation with Examples
- Predictive Analytics through Supervised Learning:
 - o Linear Regression - Ordinary Least Square regression, Ridge and Lasso regressions
 - o KNN approaches for regression and Classification

- o Classification: Logistics regression, Discriminant Analysis(Linear and Quadratic), and Support Vector Machines
- o Classification and Regression trees, Random Forests
- o Neural Networks
- o Model validation approaches, Bias-Variance Dichotomy, Differentiating model based approaches and algorithmic approaches
- Unsupervised learning:
 - o Clustering
 - o Association Rule Mining
- Prescriptive Analytics:
 - o Converting prediction to recommendation: Recommender systems, Business rules and algorithms
 - o Optimization of models and data
 - o Simulation
- Creating data when it is absent:
 - o Design of Experiments (DOE)
 - o Reinforcement Learning
 - o Active Learning

References:

1. Hastie, Trevor, et al. *The elements of statistical learning*. Vol. 2. No. 1. New York: springer, 2009.
2. James, Gareth, et al. *An introduction to statistical learning*. Vol. 6. New York: springer, 2013.
3. Montgomery, Douglas C. *Design and analysis of experiments*. John Wiley & Sons, 2008.

MS6070 QUALITY ASSURANCE MANAGEMENT (4-0-0-6)

Objectives:

This course will introduce the students to the fundamental concepts of and the statistical tools and techniques for Quality Assurance Management. It will enable them to plan, organize, implement and control Quality Assurance Systems; participate in process/business related design, kaizen/six-sigma projects.

Contents:

- Statistical Applications
 - Introduction to 7 QC Tools
 - Pareto diagrams
 - X and R control charts
 - P-charts for attributes
 - Control chart variations – analysis and interpretation
 - SPC – measurement, analysis and implementation
 - Patterns of variation
 - Process capability analysis
 - Sampling Plans and OC Curves
- Design of Experiments (DOE)
 - Statistical design of experiments
 - Types of experiments
 - Full/Fractional factorial experiments, Latin squares, Randomized block plans
 - Interactions among factors
 - One-way/Two way ANOVA Three factor, three level experiments
 - Case studies
 - Taguchi methods (Loss functions, Signal/Noise factors)
- Overview of Reliability and Risk Management
 - Reliability and Systems reliability
 - Failure modes and mechanisms
 - Failure rate, MTBF, Maintainability, Availability
 - FMEA, Fault-tree analysis
 - Product safety and liability

References:

1. Bedi, Kanishka (2006) "Quality Management", OUP, New Delhi.
2. Ott, Ellis R., E.G. Schilling and D.V. Neubauer (2005) "Process Quality Control", ASQC Press, NY.
3. Anderson, Mark J., and P.J. Whitcomb (2007) "DOE Simplified", ASQC Press, NY
4. Juran, J.M. (1988) "Quality Control Handbook", McGraw-Hill, NY
5. Doty, Leonard A. (1989) "Reliability for Technologies", Industrial Press, NY

MS 6170 PROJECT MANAGEMENT

(4 -0-0-6)

Objectives:

This course intends to develop human resources with basic competence in and sound understanding of the theory and practice of project management. More specifically: introduce students to the purpose, principles, problems and challenges, concepts, techniques, and practice of Project Management and its various facets; impart skills in project planning, execution and control methods; introduce students to Project Management software and applications.

Contents:

- The nature of projects
- Types of projects
- Project identification
- Project evaluation and selection
- Project planning
- Project implementation/execution
- Project monitoring and control
- Project review
- Project management software

References:

1. Harvey Maylor, Project Management (Second Edition);. Pitman, London, 1999.
2. P. Gopalakrishnan and V. E. Ramamoorthy, Textbook of Project Management (Reprinted Edition); Macmillan India, New Delhi, 1998.
3. David I. Cleland, Project Management - Strategic Design and Implementation; McGraw-Hill, Singapore, 1995.
4. Harold Kerzner, Project Management - A Systems Approach to Planning, Scheduling and Controlling; CBS Publishers, New Delhi, 1987.
5. Adedeji B. Badiru, Project Management Tools for Engineering and Management Professionals; Institute of Industrial Engineers, Norcross, 1991.
6. W. Alan Randolph and Barry Z. Posner, Effective Project Planning and Management; Prentice-Hall of India, New Delhi, 1988.
7. Joseph J. Moder, Cecil R. Phillips, Edward W. Davis, Project Management with CPM, PERT and Precedence Diagramming (Third Edition); CBS Publishers, New Delhi, 1986.
8. Bruce T. Barkley and James H. Saylor Customer-Driven Project Management; McGraw-Hill, Singapore, 1994

MS 6220 COMPETITIVE INTELLIGENCE AND STRATEGIES

(4-0-0-6)

Objectives:

The objective of the course is to provide insights into competitive strategies, design and implementation of Competitive Intelligence (CI) mechanisms as well as development of early warning systems in corporations. Inputs on CI needs of business firms and ways to protect a company's secrets or intellectual assets will be provided. Students will be exposed to tools and techniques related to compiling and packaging of competitive intelligence information with due emphasis on ethical imperatives.

Contents:

- **Competitive Advantage and Strategies:** Sources of competitive advantage (Economies of Scale, Supply-side and Demand-side perspectives) – Assessing competitive advantage – Co-Creation of Value and Experience Innovation – Analytical tools and frameworks – Cooperation – Pricing strategies.
- **Competitor Analysis:** Competitive benchmarking techniques – Capabilities and competencies – Activity/Value chain – Technology strategy – Resources and assets – Organizational infrastructure – Alliances and relationships – Culture.
- **Competitive Intelligence (CI) Mechanisms:** Origins of industrial espionage – Crisis management – Ethical imperatives – National, industrial, and firm perspectives – Major CI sources and channels – Global case studies.
- **Design and Implementation Challenges:** CI Code of Ethics – Organizing the CI team – CI processes – Gathering internal and external information – Roadmap for implementation – Integration of CI systems with information systems.
- **Early Warning Systems:** Business risk assessment – Business blind spots – Guarding company's secrets and intellectual assets – Design and development of early warning systems – Case studies and examples.

Text books:

1. Tyson, Kirk W.M.; The Complete Guide To Competitive Intelligence, Leading Edge, Chicago, 2002.
2. Prescott, John E., and Stephen H. Miller; Proven Strategies in Competitive Intelligence, John Wiley, New York, 2001.

References:

1. Greenwald, Bruce and Judd Kahn; Competition Demystified, Portfolio, New York, 2005.
2. Prahalad, C. K., VenkatRamaswamy; The Future of Competition, Harvard Business School Press, Boston, 2004.
3. Gilad, Benjamin; Early Warning, American Management Association, New York, 2004.

4. McAfee, Peterson; Competitive Solutions: The Strategist's Toolkit, Princeton University Press, Princeton, 2002.
5. Fahey, Liam; Competitors: Outwitting, Outmaneuvering and Outperforming, John Wiley, New York, 1999.
6. Boncella, Robert J.; "Competitive intelligence and the web", Communications of the Association for Information Systems, Vol. 12, pp. 327-340, 2003.
7. Fitzpatrick, William M., and Donald R. Burke; "Competitive intelligence, corporate security and the virtual organization", Advances in Competitiveness Research, Vol.1, No.1, pp. 20-45, 2003.
8. Nodoushani, Omid and Patricia A Noudoushani; "Industrial espionage: the dark side of the 'digital age'", Competitiveness Review, Vol. 12, Issue 2, pp.96-101, 2002.

**MS 6320 FUNDAMENTALS OF EXPERIMENTATION (4-0-0-6)
FOR MANAGEMENT**

Objectives:

This course introduces the principles and practice of experimentation in a management context. The first phase of the course will provide a qualitative understanding of experimentation as a decision-making tool and its use in driving innovation within organizations. The second phase of the course will introduce students to various practical techniques and tools to conduct experiments.

Contents:

- Foundation: Experimental thinking – Branches of Epistemology: Empiricism versus Rationalism - Differences between experimentation for management and engineering/ science - Experimentation as a tool for driving innovation - Experimentation for decision making - Examples in Marketing, Advertising, Public Policy, Operations, and Finance.
- Basics of an Experimental design:
 - Basic single variable experiments: The one sample t-test, two sample t-test, paired t-test, and Permutation test
 - Design of Experiments (DOE)
 - Concepts of Randomization, Replication, Repetition, Blocking, Confounding, and Interactions.
- Traditional DOE methods for quantitative and qualitative variables:
 - Basic full factorial, fractional factorial, and screening designs

- Methods of analysis: ANOVA, multiple regressions
- Contemporary topics and methods in experimental design:
 - Taguchi Methods
 - EVOP
 - Response Surface Methodology
 - Optimal Learning
 - Reinforcement Learning
 - Algorithmic approaches to Experimentation

Text book:

Montgomery, D. C., (1984). *Design and analysis of experiments*(Vol. 5). New York: Wiley.

References:

1. Sims, P. (2011). *Little bets: How breakthrough ideas emerge from small discoveries*. Random House.
2. Harford, T. (2011). *Adapt: Why success always starts with failure*. Macmillan.
3. Schmidt, S. R., & Launsby, R. G. (1989). *Understanding industrial designed experiments*. Air Academy Press.

MS 6470 SIX-SIGMA AND LEAN WORK (4-0-0-6)

Objectives:

This course is offered to enable students understand the importance and use of Six-Sigma, Lean Work and Lean Six-Sigma in business and industry. It will also enable them to initiate and participate in work place business improvement projects.

Contents:

- **Six Sigma**
 - Six Sigma – Basics and Business metrics
 - Plan of a project/portfolio
 - The DMAIC Method (all Phases in detail)
 - Design for Six Sigma (DFSS)
 - The DMADV model (all Phases in detail)
- **Lean Work – Principles, Concepts and Practices**
 - Eight types of waste
 - TRIZ
 - Lean Practices – Examples and Case Studies

- **Lean Six Sigma**
Integration of Lean and Six-Sigma
Lean Six Sigma tools
Deployment principles and Success stories

References:

1. Womack, James P., and David T Jones (2003) "Lean Thinking", Free Press, New York.
2. Pyzdek, Thomas (2003) "The Six-Sigma Guide for GB, BB and Managers at all levels", McGraw Hill, New York.
3. Waldo, William W., and Tim Jones (2006) "Team Leader's Guide to Lean Kaizen Events", Breakthrough Performance Press, Colorado.
4. George, Michael L., David Rowland, Mark Price, and John Maxey (2006) "Lean Six-Sigma Tools Book", McGraw Hill, New York.
5. Bruce, Greg and Rod Howes (2006) "Six-Sigma in 36-hours", McGraw Hill, New York.

MS 6910 GLOBAL BUSINESS MANAGEMENT (4-0-0-6)

Objectives:

The purpose of this course is to provide students with a basic understanding of how companies become global and manage a global business. This knowledge is necessary in the current context of globalization, the attendant business models and socio-economic scenarios.

Contents:

- International Business – becoming a global company – process – transnational corporation / MNC – Characterization.
- Theories of Global Trade and Integration – Trade Theories – FDI – Indian experience – WTO and Global Business – Trade Blocs and Integration between Countries.
- International Business environment – Political, Economic, Technological and Cultural Environment.
- MNCs – Organization structure - International regulations, Taxations – sovereign risk.
- Global organization strategy, production strategy, marketing strategy, financing strategy and HRM strategy.

References:

1. Aswathappa K, (2003), *International Business*, Tata McGraw-Hill, New Delhi.

2. Rugman, Alan M and Richard M. Hodgetts, (1995), *International Business: A Strategic Management Approach*, McGraw-Hill, New York.
3. Daniels John D, et.al., (1996), *International Business: Environment and Operations*, Addison-Wesley.
4. Ball & McCulloch, (1996), *International Business – The Challenge of Global Competition*, 7th edition, Irwin McGraw-Hill.
5. Griffin &Pustay, (1999), *International Business – A Managerial Perspective*, Addison-Wesley.
6. Czinkotaet. (1996), *International Marketing*, 4th edition, Dryden.
7. Cherunilam, Francis, (1998), *International Business*, Wheeler.
8. Shiva Ramu S, (1994), *International Business - Governance structure*, Wheeler.

MS 6930 INTRODUCTION TO ENTREPRENEURSHIP (4-0-0-6)

Objectives:

The course is designed to provide an overall introduction to the process of turning an idea into a commercially viable venture. There will be a special emphasis on commercializing innovations derived from research and technology development. For students, the course is expected to provide a comprehensive foundation for additional entrepreneurial learning in the form of project. The course is integrative and experiential in nature, drawing from a broad range of business basics. Its main focus will be in-depth exposure to the process of starting and scaling an enterprise from an idea and business plan into a company. This course deals right from the idea generation / conception stage to the implementation stage. This course will cover strategies for idea feasibility and evaluation, financing the enterprise and also finally diverting. The main objective of the course is to experience the challenges of starting and financing a new company. The objective is to equip students who have gone through this course to be:

- Prepared to intelligently evaluate potential start-up opportunities of personal involvement.
- Fully knowledgeable of the major components of full-cycle development of an idea into a successful enterprise.
- Capable of beginning the implementation process on ideas that merit development.

Contents:

- Nature and spirit of entrepreneurship.
- Issues in Commercialization of research.
- The entrepreneurial mind set.
- Concept development and validation.
- Exploring markets, Opportunity recognition, Business models.
- Preparation of business plans.
- Key issues and challenges for startups.
- Implementation and execution issues.
- Survival and sustainable competitiveness.
- The roles of experiences and learning.

References:

1. Dollinger, Marc J (2006), *Entrepreneurship: Strategies and resources (3rd Ed.)*, Pearson Education, UK.
2. Zimmerer, Thomas W and Scarborough, Norman M (2006), *Essentials of entrepreneurship and Small Business Management (4th Edition)*, Pearson Education. UK.
3. Charantimath, P (2006), *Entrepreneurship and Small Business Development*, Pearson Education, South Asia.
4. Gartner, W, Shaver, K, Carter, N & Reynolds, P (2004). *Handbook of Entrepreneurial Dynamics*, Sage Publications, London.

GENERAL ELECTIVE

MS 6990 MANAGEMENT RESEARCH PROJECT (4-0-0-6)

Objectives:

This project-based course would be offered to second year MBA students. This course has three objectives. First, it encourages MBA students to do independent work under the guidance of a faculty supervisor in an area / topic of their interest, where elective courses are currently not being offered. Second, it provides interested students with an opportunity to develop a deeper and a more critical understanding of specialized interdisciplinary topics in management, beyond the coverage provided in coursework. Third, it permits MBA students to do further work on their term papers, which they submit as a part of their coursework.

Contents:

Project topics would encompass all areas of management including:

- Commodity Markets
- Globalization Strategies of Indian Companies
- Strategies in Outsourcing/Multi-sourcing
- Corporate Performance Management (Economic Value Added)
- Corporate Governance
- Business Ethics
- Management Wisdom
- Corporate Social Responsibility
- Business Innovation
- Organizations of the Future
- Bottom-of-the-Pyramid Markets
- Networked Innovation Systems

References:

Would be decided by the student and faculty supervisor based on project topic and scope.