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ANNA UNIVERSITY, CHENNAI

**AFFILIATED INSTITUTIONS
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM
MASTER OF BUSINESS ADMINISTRATION (GENERAL)**

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs) :

MBA programme curriculum is designed to prepare the post graduate students

- I. To have a thorough understanding of the core aspects of the business.
- II. To provide the learners with the management tools to identify, analyze and create business opportunities as well as solve business problems.
- III. To prepare them to have a holistic approach towards management functions.
- V. To inspire and make them practice ethical standards in business.

PROGRAMME OUTCOMES (POs):

On successful completion of the programme,

1. Ability to apply the business acumen gained in practice.
2. Ability to understand and solve managerial issues.
3. Ability to communicate and negotiate effectively, to achieve organizational and individual goals.
4. Ability to upgrade their professional and managerial skills in their workplace.
5. Ability to explore and reflect about managerial challenges, develop informed managerial decisions in a dynamically unstable environment.
6. Ability to take up challenging assignments.
7. Ability to understand one's own ability to set achievable targets and complete them.
8. Ability to pursue lifelong learning.
9. To have a fulfilling business career.

Programme Educational Objectives	Programme Outcomes								
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
I	✓	✓					✓		
II				✓	✓	✓			
III	✓		✓		✓	✓	✓		
IV				✓		✓	✓	✓	
V		✓	✓					✓	✓

			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
YEAR 1	SEM 1	Principles of Management	✓	✓	✓		✓				
		Accounting for Management	✓			✓					
		Economic Analysis for Business	✓	✓						✓	✓
		Legal Aspects of Business	✓								
		Organizational Behaviour	✓		✓						
		Statistics for Management	✓								
		Total Quality Management				✓	✓				✓
		Spoken and Written Communication	✓		✓						
	SEM 2	Applied Operations Research		✓				✓		✓	
		Business Research Methods		✓				✓		✓	
		Financial Management	✓	✓		✓	✓			✓	✓
		Human Resource Management	✓	✓		✓	✓			✓	✓
		Information Management	✓	✓		✓	✓			✓	✓
		Operations Management	✓	✓		✓	✓			✓	✓
Marketing Management			✓		✓	✓			✓		
Data Analysis and Business Modeling					✓	✓		✓		✓	
YEAR 2	SEM 3	International Business Management				✓	✓				✓
		Strategic Management	✓	✓		✓	✓	✓	✓	✓	✓
		Elective I	Given below for each stream/Specialization								
		Elective II									
		Elective III									
		Elective IV									
		Elective V									
		Elective VI									
		Summer Training	✓	✓	✓	✓	✓	✓	✓	✓	✓
	SEM 4	Project Work	✓	✓	✓	✓	✓	✓	✓	✓	✓

			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
		Stream/ Specialization : Marketing Management									
		Brand Management	✓		✓		✓			✓	✓
		Consumer Behaviour	✓				✓	✓	✓	✓	✓
		Customer Relationship Management	✓				✓	✓	✓	✓	✓
		Integrated Marketing Communication	✓		✓		✓				✓
		Retail Marketing	✓		✓		✓			✓	✓
		Services Marketing	✓				✓	✓	✓		✓
		Social Marketing	✓				✓	✓	✓	✓	✓
		Stream/ Specialization : Financial Management									
		Banking Financial Services Management	✓		✓		✓			✓	✓
		Corporate Finance	✓		✓	✓				✓	✓
		Derivatives Management	✓		✓				✓	✓	✓
		Merchant Banking and Financial Services	✓		✓		✓			✓	✓
		Security Analysis and Portfolio Management	✓				✓				✓
		Strategic Investment and Financing Decisions	✓		✓			✓		✓	✓
		Stream/ Specialization : Human Resource Management									
		Entrepreneurship Development	✓		✓		✓			✓	✓
		Industrial Relations and Labour Welfare	✓		✓		✓			✓	✓
		Labour Legislations	✓		✓			✓			✓
		Managerial Behaviour and Effectiveness	✓		✓		✓			✓	✓
		Organizational Theory, Design and Development	✓		✓		✓			✓	✓
		Strategic Human Resource Management			✓			✓			✓
		Stream/ Specialization : Systems Management									
		Advanced Database Management System	✓	✓	✓		✓	✓	✓		✓
		Data mining for Business Intelligence	✓		✓			✓			✓
		E-Business Management	✓					✓			✓
		Software Project Management and Quality									

	Enterprise Resource Planning	✓			✓			✓	✓
	Stream/ Specialization : Operations Management								
	Logistics Management	✓		✓				✓	✓
	Materials Management	✓				✓		✓	
	Product Design	✓		✓		✓			✓
	Project Management	✓		✓		✓		✓	✓
	Services Operations Management	✓		✓		✓			✓
	Supply Chain Management	✓		✓		✓		✓	✓

ANNA UNIVERSITY, CHENNAI
AFFILIATED INSTITUTIONS
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM
MASTER OF BUSINESS ADMINISTRATION (FULL TIME)

CURRICULA AND SYLLABI I TO IV SEMESTERS

SEMESTER - I

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	BA5101	Economic Analysis for Business	PC	4	4	0	0	4
2.	BA5102	Principles of Management	PC	3	3	0	0	3
3.	BA5103	Accounting for Management	PC	4	4	0	0	4
4.	BA5104	Legal Aspects of Business	PC	3	3	0	0	3
5.	BA5105	Organizational Behaviour	PC	3	3	0	0	3
6.	BA5106	Statistics for Management	PC	3	3	0	0	3
7.	BA5107	Total Quality Management	PC	3	3	0	0	3
PRACTICALS								
8	BA5111	Spoken and Written Communication #	EEC	4	0	0	4	2
TOTAL				27	23	0	4	25

No end semester examination is required for this course.

SEMESTER - II

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	BA5201	Applied Operations Research	PC	3	3	0	0	3
2.	BA5202	Business Research Methods	PC	3	3	0	0	3
3.	BA5203	Financial Management	PC	3	3	0	0	3
4.	BA5204	Human Resource Management	PC	3	3	0	0	3
5.	BA5205	Information Management	PC	3	3	0	0	3
6.	BA5206	Operations Management	PC	3	3	0	0	3
7.	BA5207	Marketing Management	PC	4	4	0	0	4
PRACTICALS								
8	BA5211	Data Analysis and Business Modelling	EEC	4	0	0	4	2
TOTAL				26	22	0	4	24

SEMESTER - III

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	BA5301	International Business Management	PC	3	3	0	0	3
2	BA5302	Strategic Management	PC	3	3	0	0	3
3		Professional Elective I ***	PE	3	3	0	0	3
4		Professional Elective II***	PE	3	3	0	0	3
5		Professional Elective III***	PE	3	3	0	0	3
6		Professional Elective IV***	PE	3	3	0	0	3
7		Professional Elective V***	PE	3	3	0	0	3
8		Professional Elective VI***	PE	3	3	0	0	3
PRACTICALS								
9	BA5311	Summer Training	EEC	2	0	0	2	1
TOTAL				26	24	0	2	25

*** Chosen electives should be from two streams of management of three electives each.

SEMESTER - IV

SI. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
PRACTICALS								
1.	BA5411	Project Work	EEC	24	0	0	24	12
TOTAL					0	0	24	12

TOTAL NO. OF CREDITS:86

PROFESSIONAL CORE (PC)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.		Principles of Management	PC	3	3	0	0	3
2.		Accounting for Management	PC	4	4	0	0	4
3.		Economic Analysis for Business	PC	4	4	0	0	4
4.		Legal Aspects of Business	PC	3	3	0	0	3
5.		Organizational Behaviour	PC	3	3	0	0	3
6.		Statistics for Management	PC	3	3	0	0	3
7.		Marketing Management	PC	4	4	0	0	4
8.		Spoken and Written Communication	PC	4	0	0	4	2
9.		Applied Operations Research	PC	3	3	0	0	3
10.		Business Research Methods	PC	3	3	0	0	3
11.		Strategic Management	PC	3	3	0	0	3
12.		Financial Management	PC	3	3	0	0	3
13.		Human Resource Management	PC	3	3	0	0	3
14.		Information Management	PC	3	3	0	0	3
15.		Operations Management	PC	3	3	0	0	3
16.		International Business Management	PC	3	3	0	0	3
17.		Total Quality Management	PC	3	3	0	0	3

PROFESSIONAL ELECTIVES (PE)

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
Stream/ Specialization : Marketing Management								
1.	BA5001	Brand Management	PE	3	3	0	0	3
2.	BA5002	Consumer Behaviour	PE	3	3	0	0	3
3.	BA5003	Customer Relationship Management	PE	3	3	0	0	3
4.	BA5004	Integrated Marketing Communication	PE	3	3	0	0	3
5.	BA5005	Retail Marketing	PE	3	3	0	0	3
6.	BA5006	Services Marketing	PE	3	3	0	0	3
7.	BA5007	Social Marketing	PE	3	3	0	0	3
Stream/ Specialization : Financial Management								
8.	BA5008	Banking Financial Services Management	PE	3	3	0	0	3
9.	BA5009	Corporate Finance	PE	3	3	0	0	3
10.	BA5010	Derivatives Management	PE	3	3	0	0	3
11.	BA5011	Merchant Banking and Financial Services	PE	3	3	0	0	3
12.	BA5012	Security Analysis and Portfolio Management	PE	3	3	0	0	3
13.	BA5013	Strategic Investment and Financing Decisions	PE	3	3	0	0	3
Stream/ Specialization : Human Resource Management								
14.	BA5014	Entrepreneurship Development	PE	3	3	0	0	3
15.	BA5015	Industrial Relations and Labour Welfare	PE	3	3	0	0	3
16.	BA5016	Labour Legislations	PE	3	3	0	0	3
17.	BA5017	Managerial Behaviour and Effectiveness	PE	3	3	0	0	3
18.	BA5018	Organizational Theory, Design and Development	PE	3	3	0	0	3
19.	BA5019	Strategic Human Resource Management	PE	3	3	0	0	3
Stream/ Specialization : Systems Management								
20.	BA5020	Advanced Database Management System	PE	3	3	0	0	3

21.	BA5021	Datamining for Business Intelligence	PE	3	3	0	0	3
22.	BA5022	Enterprise Resource Planning	PE	3	3	0	0	3
23.	BA5023	Software Project Management and Quality	PE	3	3	0	0	3
24.	BA5024	E-Business Management	PE	3	3	0	0	3
Stream/ Specialization : Operations Management								
25.	BA5025	Logistics Management	PE	3	3	0	0	3
26.	BA5026	Materials Management	PE	3	3	0	0	3
27.	BA5027	Product Design	PE	3	3	0	0	3
28.	BA5028	Project Management	PE	3	3	0	0	3
29.	BA5029	Services Operations Management	PE	3	3	0	0	3
30.	BA5030	Supply Chain Management	PE	3	3	0	0	3

EMPLOYABILITY ENHANCEMENT COURSES (EEC)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	BA5111	Spoken and Written Communication #	EEC	4	0	0	4	2
2.	BA5211	Data Analysis and Business Modeling	EEC	4	0	0	4	2
3.	BA5311	Summer Training	EEC	2	0	0	2	1
4.	BA5411	Project Work	EEC	24	0	0	24	12

OBJECTIVES:

- To introduce the concepts of scarcity and efficiency; to explain principles of micro economics relevant to managing an organization; to describe principles of macro economics to have the understanding of economic environment of business.

UNIT I INTRODUCTION**8**

The themes of economics – scarcity and efficiency – three fundamental economic problems – society's capability – Production possibility frontiers (PPF) – Productive efficiency Vs economic efficiency – economic growth & stability – Micro economies and Macro economies – the role of markets and government – Positive Vs negative externalities.

UNIT II CONSUMER AND PRODUCER BEHAVIOUR**13**

Market – Demand and Supply – Determinants – Market equilibrium – elasticity of demand and supply – consumer behaviour – consumer equilibrium – Approaches to consumer behaviour – Production – Short-run and long-run Production Function – Returns to scale – economies Vs diseconomies of scale – Analysis of cost – Short-run and long-run cost function – Relation between Production and cost function.

UNIT III PRODUCT AND FACTOR MARKET**13**

Product market – perfect and imperfect market – different market structures – Firm's equilibrium and supply – Market efficiency – Economic costs of imperfect competition – factor market – Land, Labour and capital – Demand and supply – determination of factor price – Interaction of product and factor market – General equilibrium and efficiency of competitive markets.

UNIT IV PERFORMANCE OF AN ECONOMY – MACRO ECONOMICS**13**

Macro-economic aggregates – circular flow of macroeconomic activity – National income determination – Aggregate demand and supply – Macroeconomic equilibrium – Components of aggregate demand and national income – multiplier effect – Demand side management – Fiscal policy in theory.

UNIT V AGGREGATE SUPPLY AND THE ROLE OF MONEY**13**

Short-run and Long-run supply curve – Unemployment and its impact – Okun's law – Inflation and the impact – reasons for inflation – Demand Vs Supply factors – Inflation Vs Unemployment tradeoff – Phillips curve – short- run and long-run – Supply side Policy and management- Money market- Demand and supply of money – money-market equilibrium and national income – the role of monetary policy.

TOTAL: 60 PERIODS**OUTCOMES:**

- Students are expected to become familiar with both principles of micro and macro economics. They would also become familiar with application of these principles to appreciate the functioning of both product and input markets as well as the economy.

REFERENCES :

- Paul A. Samuelson, William D. Nordhaus, Sudip Chaudhuri and Anindya Sen, Economics, 19th edition, Tata McGraw Hill, New Delhi, 2010.
- William Boyes and Michael Melvin, Textbook of economics, Biztantra, 9th Edition, 2012.
- N. Gregory Mankiw, Principles of Economics, 7th edition, Cengage, New Delhi, 2014
- Richard Lipsey and Alec Charystal, Economics, 12th edition, Oxford, University Press, New Delhi, 2011.
- Karl E. Case and Ray C. Fair, Principles of Economics, 12th edition, Pearson, Education Asia, New Delhi, 2014.

OBJECTIVES :

- Acquire a reasonable knowledge in accounts
- Analysis and evaluate financial statements

UNIT I FINANCIAL ACCOUNTING**12**

Introduction to Financial, Cost and Management Accounting- Generally accepted accounting principles, Conventions and Concepts-Balance sheet and related concepts- Profit and Loss account and related concepts - Introduction to inflation accounting- Introduction to human resources accounting.

UNIT II COMPANY ACCOUNTS**12**

Meaning of Company -Maintenance of Books of Account-Statutory Books- Profit or Loss Prior to incorporation- Final Accounts of Company- Alteration of share capital- Preferential allotment, Employees stock option- Buyback of securities.

UNIT III ANALYSIS OF FINANCIAL STATEMENTS**12**

Analysis of financial statements – Financial ratio analysis, cash flow (as per Accounting Standard 3) and funds flow statement analysis.

UNIT IV COST ACCOUNTING**12**

Cost Accounts - Classification of manufacturing costs - Accounting for manufacturing costs. Cost Accounting Systems: Job order costing - Process costing- Activity Based Costing- Costing and the value chain- Target costing- Marginal costing including decision making- Budgetary Control & Variance Analysis - Standard cost system.

UNIT V ACCOUNTING IN COMPUTERISED ENVIRONMENT**12**

Significance of Computerised Accounting System- Codification and Grouping of Accounts- Maintaining the hierarchy of ledgers- Prepackaged Accounting software.

TOTAL: 45+15 = 60 PERIODS**OUTCOME**

- Possess a managerial outlook at accounts.

REFERENCES :

1. M.Y.Khan & P.K.Jain, Management Accounting, Tata McGraw Hill, 2011.
2. R.Narayanaswamy, Financial Accounting – A managerial perspective, PHI Learning, New Delhi, 2011.
3. Jan Williams, Financial and Managerial Accounting – The basis for business Decisions, 15th edition, Tata McGraw Hill Publishers, 2010.
4. Horngren, Surdem, Stratton, Burgstahler, Schatzberg, Introduction to Management Accounting, PHI Learning, 2011.
5. Stice & Stice, Financial Accounting Reporting and Analysis, 8th edition, Cengage, 2010.
6. Singhvi Bodhanwala, Management Accounting -Text and cases, PHI Learning, 2009.
7. Ashish K. Battacharya, Introduction to Financial Statement Analysis, Elsevier, 2009.
8. Sawyers, Jackson, Jenkins, Arora, Managerial Accounting, 2nd edition, Cengage, 2011
9. Godwin, Alderman, Sanyal , Financial Accounting, 2nd edition, Cengage, 2011
10. Narashiman.M.S, Financial statement analysis, Cengage, 2016.

OBJECTIVE:

- To provide an overview of theories and practices in organizational behavior in individual, group and organizational level.

UNIT I FOCUS AND PURPOSE 5

Definition, need and importance of organizational behaviour – Nature and scope – Frame work – Organizational behaviour models.

UNIT II INDIVIDUAL BEHAVIOUR 12

Personality – types – Factors influencing personality – Theories – Learning – Types of learners – The learning process – Learning theories – Organizational behaviour modification.

Misbehaviour – Types – Management Intervention. Emotions - Emotional Labour – Emotional Intelligence – Theories. Attitudes – Characteristics – Components – Formation – Measurement-Values. Perceptions – Importance – Factors influencing perception – Interpersonal perception- Impression Management. Motivation – Importance – Types – Effects on work behavior.

UNIT III GROUP BEHAVIOUR 10

Organization structure – Formation – Groups in organizations – Influence – Group dynamics – Emergence of informal leaders and working norms – Group decision making techniques – **Team building** - Interpersonal relations – Communication – Control.

UNIT IV LEADERSHIP AND POWER 8

Meaning – Importance – Leadership styles – Theories – Leaders Vs Managers – Sources of power – Power centers – Power and Politics.

UNIT V DYNAMICS OF ORGANIZATIONAL BEHAVIOUR 10

Organizational culture and climate – Factors affecting organizational climate – Importance. Job satisfaction – Determinants – Measurements – Influence on behavior. Organizational change – Importance – Stability Vs Change – Proactive Vs Reaction change – the change process – Resistance to change – Managing change. Stress – Work Stressors – Prevention and Management of stress – Balancing work and Life. Organizational development – Characteristics – objectives –. Organizational effectiveness Developing Gender sensitive workplace

TOTAL: 45 PERIODS**OUTCOME:**

- Students will have a better understanding of human behavior in organization. They will know the framework for managing individual and group performance.

REFERENCES :

- Stephen P. Robins, Organisational Behavior, PHI Learning / Pearson Education, Edition 17, 2016 (Global edition)
- Fred Luthans, Organisational Behavior, McGraw Hill, 12th Edition,
- Mc Shane & Von Glinov, Organisational Behaviour, 4th Edition, Tata Mc Graw Hill, 2007.
- Nelson, Quick, Khandelwal. ORGB – An innovative approach to learning and teaching. Cengage, 2nd edition. 2012
- Ivancevich, Konopaske & Maheson, Organisational Behaviour & Management, 7th edition, Tata McGraw Hill, 2008.
- Udai Pareek, Understanding Organisational Behaviour, 3rd Edition, Oxford Higher Education, 2011.
- Jerald Greenberg, Behaviour in Organization, PHI Learning. 10th edition. 2011

OBJECTIVE:

- To learn the applications of statistics in business decision making.

UNIT I INTRODUCTION 9

Basic definitions and rules for probability, conditional probability independence of events, Baye's theorem, and random variables, Probability distributions: Binomial, Poisson, Uniform and Normal distributions.

UNIT II SAMPLING DISTRIBUTION AND ESTIMATION 9

Introduction to sampling distributions, sampling distribution of mean and proportion, application of central limit theorem, sampling techniques. Estimation: Point and Interval estimates for population parameters of large sample and small samples, determining the sample size.

UNIT III TESTING OF HYPOTHESIS - PARAMETIRC TESTS 9

Hypothesis testing: one sample and two sample tests for means and proportions of large samples (z-test), one sample and two sample tests for means of small samples (t-test), F-test for two sample standard deviations. ANOVA one and two way.

UNIT IV NON-PARAMETRIC TESTS 9

Chi-square test for single sample standard deviation. Chi-square tests for independence of attributes and goodness of fit. Sign test for paired data. Rank sum test. Kolmogorov-Smirnov – test for goodness of fit, comparing two populations. Mann – Whitney U test and Kruskal Wallis test. One sample run test.

UNIT V CORRELATION AND REGRESSION 9

Correlation – Coefficient of Determination – Rank Correlation – Regression – Estimation of Regression line – Method of Least Squares – Standard Error of estimate.

TOTAL: 45 PERIODS**OUTCOME:**

To facilitate objective solutions in business decision making under subjective conditions.

REFERENCES:

- Richard I. Levin, David S. Rubin, Sanjay Rastogi Masood Husain Siddiqui, Statistics for Management, Pearson Education, 7th Edition, 2016.
- Prem.S.Mann, Introductory Statistics, 7th Edition, Wiley India, 2016.
- Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani, An Introduction to Statistical Learning with Applications in R, Springer, 2016.
- Aczel A.D. and Sounderpandian J., "Complete Business Statistics", 6th edition, Tata McGraw Hill Publishing Company Ltd., New Delhi, 2012.
- Anderson D.R., Sweeney D.J. and Williams T.A., Statistics for business and economics, 11th edition, Thomson (South – Western) Asia, Singapore, 2012.
- N. D. Vohra, Business Statistics, Tata McGraw Hill, 2012.
- Ken Black, Applied Business Statistics, 7th Edition, Wiley India Edition, 2012.

OBJECTIVE:

- To learn the quality philosophies and tools in the managerial perspective.

UNIT I INTRODUCTION**9**

Quality – vision, mission and policy statements. Customer Focus – customer perception of quality, Translating needs into requirements, customer retention. Dimensions of product and service quality. Cost of quality.

UNIT II PRINCIPLES AND PHILOSOPHIES OF QUALITY MANAGEMENT**9**

Overview of the contributions of Deming, Juran Crosby, Masaaki Imai, Feigenbaum, Ishikawa, Taguchi techniques – introduction, loss function, parameter and tolerance design, signal to noise ratio. Concepts of Quality circle, Japanese 5S principles and 8D methodology.

UNIT III STATISTICAL PROCESS CONTROL**9**

Meaning and significance of statistical process control (SPC) – construction of control charts for variables and attributed. Process capability – meaning, significance and measurement – Six sigma - concepts of process capability. Reliability concepts – definitions, reliability in series and parallel, product life characteristics curve. Total productive maintenance (TMP), Terotechnology. Business

process Improvement (BPI) – principles, applications, reengineering process, benefits and limitations.

UNIT IV TOOLS AND TECHNIQUES FOR QUALITY MANAGEMENT**9**

Quality functions development (QFD) – Benefits, Voice of customer, information organization, House of quality (HOQ), building a HOQ, QFD process. Failure mode effect analysis (FMEA) – requirements of reliability, failure rate, FMEA stages, design, process and documentation. Seven Tools (old & new). Bench marking and POKA YOKE.

UNIT V QUALITY SYSTEMS ORGANIZING AND IMPLEMENTATION**9**

Introduction to IS/ISO 9004:2000 – quality management systems – guidelines for performance improvements. Quality Audits. TQM culture, Leadership – quality council, employee involvement, motivation, empowerment, recognition and reward - TQM framework, benefits, awareness and obstacles.

TOTAL: 45 PERIODS**OUTCOME:**

- To apply quality philosophies and tools to facilitate continuous improvement and ensure customer delight.

REFERENCES :

- Dale H. Besterfield, Carol Besterfield – Michna, Glen H. Besterfield, Mary Besterfield – Sacre, Hermant – Urdhwareshe, Rashmi Urdhwareshe, Total Quality Management, Revised Third edition, Pearson Education, 2011
- Shridhara Bhat K, Total Quality Management – Text and Cases, Himalaya Publishing House, II Edition 2010
- Douglas C. Montgomery, Introduction to Statistical Quality Control, Wiley Student Edition, 4th Edition, Wiley India Pvt Limited, 2008.
- James R. Evans and William M. Lindsay, The Management and Control of Quality, Sixth Edition, Thomson, 2005.
- Poomima M. Charantimath, Total Quality Management, Pearson Education, Second Edition, 2011
- Indian standard – quality management systems – Guidelines for performance improvement (Fifth Revision), Bureau of Indian standards, New Delhi.

OBJECTIVES :

- To familiarize learners with the mechanics of writing
- To enable learners to write in English precisely and effectively.
- To enable learners to speak fluently and flawlessly in all kinds of communicative contexts with all nationalities.

UNIT I PERSONAL COMMUNICATION 12

Day-to-day conversation with family members, neighbours, relatives, friends on various topics, context specific - Journal writing, mails/emails, SMS, greeting cards, situation based – accepting/declining invitations, congratulating, consoling, conveying information, oral reports, extempore.

UNIT II EMPLOYABILITY SKILLS 12

Interview skills – HR and technical – Types of interview, preparation for interview, mock interview, Group Discussion – Communication skills in Group Discussion, Structure of GD, GD process, successful GD techniques. Time management and effective planning – identifying barriers to effective time management, time management techniques, relationship between time management and stress management.

UNIT III WORK PLACE COMMUNICATION 12

e-mails, minutes, reports of different kinds – annual report, status report, survey report, proposals, memorandums, presentations, interviews, profile of institutions, speeches, responding to enquiries, complaints, resumes, applications, summarizing, strategies for writing.

UNIT IV RESEARCH WRITING 12

Articles for publication (Journals), developing questionnaire, writing abstract, dissertation, qualities of research writing, data (charts, tables) analysis, documentation.

UNIT V WRITING FOR MEDIA AND CREATIVE WRITING 12

Features for publication (Newspapers, magazines, newsletters, notice-board), case studies, short stories, travelogues, writing for children, translation, techniques of writing.

TOTAL: 60 PERIODS

Note: It is an activity based course. Student individually or as a group can organize event(s), present term papers etc. This will be evaluated by the faculty member(s) handling the course and the consolidated marks can be taken as the final mark.

No end semester examination is required for this course.

OUTCOMES :**Learners should be able to**

- Get into the habit of writing regularly.
- Express themselves in different genres of writing from creative to critical to factual writing.
- Take part in print and online media communication
- Read quite widely to acquire a style of writing and
- Identify their area of strengths and weaknesses in writing.
- Speak confidently with any speakers of English, including native speakers.
- Speak effortlessly in different contexts – informal and formal.

REFERENCES :

1. Raymond V Lesikar, John D Pettit, and Mary E Flatly, 2009. Lesikar's Basic Business Communication, 11th ed. Tata McGraw-Hill, New Delhi.
2. E.H. McGrath, S.J. 2012, Basic Managerial Skills for All. 9th ed. Prentice-Hall of India, New Delhi.

Management books

- Robin Sharma - The greatness guide
- Steven Covey - 7 Habits of Effective people
- Arindham Chaudhuri- Count your chickens before they hatch
- Ramadurai - TCS Story

Blogs : Seth Godwin, Guy Kawasaki, Kiruba Shankar

Review : Harvard Business review

Reports : Deloitte Netsis

Magazines : Bloomberg Businessweek, Economist

3. Richard Denny, 'Communication to Win'; Kogan Page India Pvt. Ltd., New Delhi, 2008.

BA5201

APPLIED OPERATIONS RESEARCH

L T P C
3 0 0 3

OBJECTIVE:

- To learn the concepts of operations research applied in business decision making.

UNIT I INTRODUCTION TO LINEAR PROGRAMMING (LP) 9

Introduction to applications of operations research in functional areas of management. Linear Programming-formulation, solution by graphical and simplex methods (Primal - Penalty, Two Phase), Special cases. Dual simplex method. Principles of Duality. Sensitivity Analysis.

UNIT II LINEAR PROGRAMMING EXTENSIONS 9

Transportation Models (Minimising and Maximising Problems) – Balanced and unbalanced Problems – Initial Basic feasible solution by N-W Corner Rule, Least cost and Vogel's approximation methods. Check for optimality. Solution by MODI / Stepping Stone method. Case of Degeneracy. Transshipment Models. Assignment Models (Minimising and Maximising Problems) – Balanced and Unbalanced Problems. Solution by Hungarian and Branch and Bound Algorithms. Travelling Salesman problem. Crew Assignment Models.

UNIT III INTEGER PROGRAMMING AND GAME THEORY 9

Solution to pure and mixed integer programming problem by Branch and Bound and cutting plane algorithms. Game Theory-Two person Zero sum games-Saddle point, Dominance Rule, Convex Linear Combination (Averages), methods of matrices, graphical and LP solutions.

UNIT IV INVENTORY MODELS, SIMULATION AND DECISION THEORY 9

Inventory Models – EOQ and EBQ Models (With and without shortages), Quantity Discount Models. Decision making under risk – Decision trees – Decision making under uncertainty. Monte-carlo simulation.

UNIT V QUEUING THEORY AND REPLACEMENT MODELS 9

Queuing Theory - single and Multi-channel models – infinite number of customers and infinite calling source. Replacement Models-Individuals replacement Models (With and without time value of money) – Group Replacement Models.

TOTAL: 45 PERIODS

OUTCOME:

- To facilitate quantitative solutions in business decision making under conditions of certainty, risk and uncertainty.

REFERENCES :

1. Paneerselvam R., Operations Research, Prentice Hall of India, Fourth Print, 2008.
2. N. D Vohra, Quantitative Techniques in Management, Tata Mcgraw Hill, 2010.
3. Hamdy A Taha, Introduction to Operations Research, Prentice Hall India, Ninth Edition, 2010.
4. Anderson , Sweeney Williams Solutions Manual to Accompany AnIntroduction to Management Science Quantitative Approaches To Decision, Cengage , 12th edition , 2012
5. G. Srinivasan, Operations Research – Principles and Applications, II edition , PHI, 2010.
6. Bernard W.Taylor ,Introduction to Management Science , 12 th edition, 2012

OBJECTIVE:

- To familiarise the students to the principles of scientific methodology in business enquiry; to develop analytical skills of business research; to develop the skills for scientific communications.

UNIT I INTRODUCTION

9

Business Research – Definition and Significance – the research process – Types of Research – Exploratory and causal Research – Theoretical and empirical Research – Cross –Sectional and time – series Research – Research questions / Problems – Research objectives – Research hypotheses – characteristics – Research in an evolutionary perspective – the role of theory in research.

UNIT II RESEARCH DESIGN AND MEASUREMENT

9

Research design – Definition – types of research design – exploratory and causal research design – Descriptive and experimental design – different types of experimental design – Validity of findings – internal and external validity – Variables in Research – Measurement and scaling – Different scales – Construction of instrument – Validity and Reliability of instrument.

UNIT III DATA COLLECTION

9

Types of data – Primary Vs Secondary data – Methods of primary data collection – Survey Vs Observation – Experiments – Construction of questionnaire and instrument – Validation of questionnaire – Sampling plan – Sample size – determinants optimal sample size – sampling techniques – Probability Vs Non–probability sampling methods.

UNIT IV DATA PREPARATION AND ANALYSIS

9

Data Preparation – editing – Coding –Data entry – Validity of data – Qualitative Vs Quantitative data analyses – Bivariate and Multivariate statistical techniques – Factor analysis – Discriminant analysis – cluster analysis – multiple regression and correlation – multidimensional scaling – Conjoint Analysis - Application of statistical software for data analysis.

UNIT V REPORT DESIGN, WRITING AND ETHICS IN BUSINESS RESEARCH

9

Research report – Different types – Contents of report – need of executive summary – chapterization – contents of chapter – report writing – the role of audience – readability – comprehension – tone – final proof – report format – title of the report – ethics in research – ethical behaviour of research – subjectivity and objectivity in research.

TOTAL: 45 PERIODS**OUTCOME:**

- Students would become acquainted with the scientific methodology in business domain. They would also become analytically skillful. They would become familiar with the nuances of scientific communications.

REFERENCES :

- Donald R. Cooper, Pamela S. Schindler and J K Sharma, Business Research methods, 11th Edition, Tata Mc Graw Hill, New Delhi, 2012.
- Alan Bryman and Emma Bell, Business Research methods, 3rd Edition, Oxford University Press, New Delhi, 2011.
- Uma Sekaran and Roger Bougie, Research methods for Business, 5th Edition, Wiley India, New Delhi, 2012.
- William G Zikmund, Barry J Babin, Jon C.Carr, Atanu Adhikari, Mitch Griffin, Business Research methods, A South Asian Perspective, 8th Edition, Cengage Learning, New Delhi, 2012.

OBJECTIVES:

Facilitate student to

- Understand the operational nuances of a Finance Manager
- Comprehend the technique of making decisions related to finance function

UNIT I FOUNDATIONS OF FINANCE:**9**

Introduction to finance - Financial Management – Nature, scope and functions of Finance, organization of financial functions, objectives of Financial management, Major financial decisions – Time value of money – features and valuation of shares and bonds – Concept of risk and return – single asset and of a portfolio.

UNIT II INVESTMENT DECISIONS:**9**

Capital Budgeting: Principles and techniques - Nature of capital budgeting- Identifying relevant cash flows - Evaluation Techniques: Payback, Accounting rate of return, Net Present Value, Internal Rate of Return, Profitability Index - Comparison of DCF techniques Concept and measurement of cost of capital - Specific cost and overall cost of capital.

UNIT III FINANCING AND DIVIDEND DECISION:**9**

Leverages - Operating and Financial leverage – measurement of leverages – degree of Operating & Financial leverage – Combined leverage, EBIT – EPS Analysis- Indifference point.

Capital structure – Theories – Net Income Approach, Net Operating Income Approach, MM Approach – Determinants of Capital structure.

Dividend decision- Issues in dividend decisions, Importance, Relevance & Irrelevance theories – Walter's – Model, Gordon's model and MM model. – Factors determining dividend policy – Types of dividend policies – forms of dividend

UNIT IV WORKING CAPITAL MANAGEMENT:**9**

Principles of working capital: Concepts, Needs, Determinants, issues and estimation of working capital - Accounts Receivables Management and factoring - Inventory management - Cash management - Working capital finance : Trade credit, Bank finance and Commercial paper.

UNIT V LONG TERM SOURCES OF FINANCE:**9**

Indian capital and stock market, New issues market Long term finance: Shares, debentures and term loans, lease, hire purchase, venture capital financing, Private Equity.

TOTAL: 45 PERIODS**OUTCOME:**

- Possess the techniques of managing finance in an organization

REFERENCES :

1. M.Y. Khan and P.K.Jain Financial management, Text, Problems and cases Tata McGraw Hill, 6th edition, 2011.
2. M. Pandey Financial Management, Vikas Publishing House Pvt. Ltd., 10th edition, 2012.
3. Aswat Damodaran, Corporate Finance Theory and practice, John Wiley & Sons, 2011.
4. James C. Vanhorne –Fundamentals of Financial Management– PHI Learning, 11th Edition, 2012.
5. Prasanna Chandra, Financial Management, 9th edition, Tata McGraw Hill, 2012.
6. G.Sudersena Reddy, Financial Management- Principles & Practices, Himalaya Publishing House, 2nd Edition, 2010
7. Srivatsava, Mishra, Financial Management, Oxford University Press, 2011
8. Parasuraman.N.R, Financial Management, Cengage, 2014.
9. William R.Lasher, Financial Management, 7th Edition, Cengage, 2014 .
10. Brigham and Ehrhardt, Financial Management, 14th edition, Cengage, 2015.

OBJECTIVE:

- To provide knowledge about management issues related to staffing, training, performance, compensation, human factors consideration and compliance with human resource requirements.

UNIT I PERSPECTIVES IN HUMAN RESOURCE MANAGEMENT 5

Evolution of human resource management – The importance of the human factor – Challenges – Inclusive growth and affirmative action -Role of human resource manager – Human resource policies – Computer applications in human resource management – Human resource accounting and audit.

UNIT II THE CONCEPT OF BEST FIT EMPLOYEE 8

Importance of Human Resource Planning – Forecasting human resource requirement –matching supply and demand - Internal and External sources. Recruitment - Selection – induction – Socialization benefits.

UNIT III TRAINING AND EXECUTIVE DEVELOPMENT 10

Types of training methods –purpose- benefits- resistance. Executive development programmes – Common practices - Benefits – Self development – Knowledge management.

UNIT IV SUSTAINING EMPLOYEE INTEREST 12

Compensation plan – Reward – Motivation – Application of theories of motivation – Career management – Development of mentor – Protégé relationships.

UNIT V PERFORMANCE EVALUATION AND CONTROL PROCESS 10

Method of performance evaluation – Feedback – Industry practices. Promotion, Demotion, Transfer and Separation – Implication of job change. The control process – Importance – Methods – Requirement of effective control systems grievances – Causes – Implications – Redressal methods.

TOTAL: 45 PERIODS**OUTCOME:**

- Students will gain knowledge and skills needed for success as a human resources professional

REFERENCES :

- Dessler Human Resource Management, Pearson Education Limited, 14th Edition, 2015.
- Decenzo and Robbins, Fundamentals of Human Resource Management, Wiley, 11th Edition, 2013.
- Luis R.Gomez-Mejia, David B.Balkin, Robert L Cardy. Managing Human Resource. PHI Learning. 2012
- Bernadin , Human Resource Management ,Tata Mcgraw Hill ,8th edition 2012.
- Wayne Cascio, Managing Human Resource, McGraw Hill, 2007.
- Ivancevich, Human Resource Management, McGraw Hill 2012.
- Uday Kumar Haldar, Juthika Sarkar. Human Resource management. Oxford. 2012

OBJECTIVES :

- To understand the importance of information in business
- To know the technologies and methods used for effective decision making in an organization.

UNIT I	INTRODUCTION	10
Data, Information, Intelligence, Information Technology, Information System, evolution, types based on functions and hierarchy, System development methodologies, Functional Information Systems, DSS, EIS, KMS, GIS, International Information System.		
UNIT II	SYSTEM ANALYSIS AND DESIGN	10
Case tools - System flow chart, Decision table, Data flow Diagram (DFD), Entity Relationship (ER), Object Oriented Analysis and Design(OOAD), UML diagram.		
UNIT III	DATABASE MANAGEMENT SYSTEMS	9
DBMS – HDBMS, NDBMS, RDBMS, OODBMS, Query Processing, SQL, Concurrency Management, Data warehousing and Data Mart		
UNIT IV	SECURITY, CONTROL AND REPORTING	8
Security, Testing, Error detection, Controls, IS Vulnerability, Disaster Management, Computer Crimes, Securing the Web, Intranets and Wireless Networks, Software Audit, Ethics in IT, User Interface and reporting.		
UNIT V	NEW IT INITIATIVES	8
Role of information management in ERP, e-business, e-governance, Data Mining, Business Intelligence, Pervasive Computing, Cloud computing, CMM.		

TOTAL: 45 PERIODS**OUTCOME**

- Gains knowledge on effective applications of information systems in business

REFERENCES :

1. Robert Schultheis and Mary Summer, Management Information Systems – The Managers View, Tata McGraw Hill, 2008.
2. Kenneth C. Laudon and Jane Price Laudon, Management Information Systems – Managing the digital firm, PHI Learning / Pearson Education, PHI, Asia, 2012.
3. Rahul de, MIS in Business, Government and Society, Wiley India Pvt Ltd, 2012
4. Gordon Davis, Management Information System : Conceptual Foundations, Structure and Development, Tata McGraw Hill, 21st Reprint 2008.
5. Haag, Cummings and Mc Cubbrey, Management Information Systems for the Information Age, McGraw Hill, 2005. 9th edition, 2013.
6. Turban, McLean and Wetherbe, Information Technology for Management –Transforming Organisations in the Digital Economy, John Wiley, 6th Edition, 2008.
7. Raymond McLeod and Jr. George P. Schell, Management Information Systems, Pearson Education, 2007.
8. James O Brien, Management Information Systems – Managing Information Technology in the E-business enterprise, Tata McGraw Hill, 2004.
9. Raplh Stair and George Reynolds, Information Systems, Cengage Learning, 10th Edition, 2012
10. Corey Schou and Dan Shoemaker, Information Assurance for the Enterprise – A Roadmap to Information Security, Tata McGraw Hill, 2007.
11. Frederick Gallegor, Sandra Senft, Daniel P. Manson and Carol Gonzales, Information Technology Control and Audit, Auerbach Publications, 4th Edition, 2013.

OBJECTIVE:

- To provide a broad introduction to the field of operations management and explain the concepts, strategies, tools and techniques for managing the transformation process that can lead to competitive advantage.

UNIT I INTRODUCTION TO OPERATIONS MANAGEMENT 9 Operations Management – Nature, Importance, historical development, transformation processes, differences between services and goods, a system perspective, functions, challenges, current priorities, recent trends; Operations Strategy – Strategic fit, framework; Supply Chain Management

UNIT II FORECASTING, CAPACITY AND FACILITY DESIGN 9

Demand Forecasting – Need, Types, Objectives and Steps. Overview of Qualitative and Quantitative methods. Capacity Planning – Long range, Types, Developing capacity alternatives. Overview of sales and operations planning. Overview of MRP, MRP II and ERP. Facility Location – Theories, Steps in Selection, Location Models. Facility Layout – Principles, Types, Planning tools and techniques.

UNIT III DESIGN OF PRODUCT, PROCESS AND WORK SYSTEMS 9

Product Design – Influencing factors, Approaches, Legal, Ethical and Environmental issues. Process – Planning, Selection, Strategy, Major Decisions. Work Study – Objectives, Procedure. Method Study and Motion Study. Work Measurement and Productivity – Measuring Productivity and Methods to improve productivity.

UNIT IV MATERIALS MANAGEMENT 9

Materials Management – Objectives, Planning, Budgeting and Control. Purchasing – Objectives, Functions, Policies, Vendor rating and Value Analysis. Stores Management – Nature, Layout, Classification and Coding. Inventory – Objectives, Costs and control techniques. Overview of JIT.

UNIT V SCHEDULING AND PROJECT MANAGEMENT 9

Project Management – Scheduling Techniques, PERT, CPM; Scheduling - work centers – nature, importance; Priority rules and techniques, shop floor control; Flow shop scheduling – Johnson's Algorithm – Gantt charts; personnel scheduling in services.

TOTAL: 45 PERIODS**OUTCOME:**

- Understanding of the strategic and operational decisions in managing manufacturing and service organizations and appreciation of the role of operations management function in an organization.

REFERENCES :

- Richard B. Chase, Ravi Shankar, F. Robert Jacobs, Nicholas J. Aquilano, Operations and Supply Management, Tata McGraw Hill, 12th Edition, 2010.
- Norman Gaither and Gregory Frazier, Operations Management, South Western Cengage, 2002.
- William J Stevenson, Operations Management, Tata McGraw Hill, 11th Edition, 2015.
- Russel and Taylor, Operations Management, Wiley, 8th Edition, 2015.
- Kanishka Bedi, Production and Operations Management, Oxford University, 3rd Edition, 2013.
- Chary S. N, Production and Operations Management, Tata McGraw Hill, 5th Edition, 2013.
- Aswathappa K and Shridhara Bhat K, Production and Operations Management, Himalaya Publishing House, Revised Second Edition, 2008.
- Mahadevan B, Operations Management Theory and practice, Pearson Education, 3rd Edition, 2015
- Pannerselvam R, Production and Operations Management, Prentice Hall India, Second Edition, 2008.

OBJECTIVES:

- Developing an understanding of ideas and nuances of modern marketing
- Describe the process to formulate and manage the B2B marketing strategy including all key components.
- Explain the techniques to conduct market analysis practices including market segmentation and targeting.
- Compare and contrast different perspectives that characterize the study of consumer behavior.
- Explain the role of IMC in the overall marketing program.

UNIT I	INTRODUCTION	12
Marketing – Definitions - Conceptual frame work – Marketing environment : Internal and External - Marketing interface with other functional areas – Production, Finance, Human Relations Management, Information System. Marketing in global environment – Prospects and Challenges.		
UNIT II	MARKETING STRATEGY	12
Marketing strategy formulations – Key Drivers of Marketing Strategies - Strategies for Industrial Marketing – Consumer Marketing — Services marketing – Competitor analysis - Analysis of consumer and industrial markets – Strategic Marketing Mix components.		
UNIT III	MARKETING MIX DECISIONS	12
Product planning and development – Product life cycle – New product Development and Management – Market Segmentation – Targeting and Positioning – Channel Management – Advertising and sales promotions – Pricing Objectives, Policies and methods.		
UNIT IV	BUYER BEHAVIOUR	12
Understanding industrial and individual buyer behavior - Influencing factors – Buyer Behaviour Models – Online buyer behaviour - Building and measuring customer satisfaction – Customer relationships management – Customer acquisition, Retaining, Defection.		
UNIT V	MARKETING RESEARCH & TRENDS IN MARKETING	12
Marketing Information System – Research Process – Concepts and applications : Product – Advertising – Promotion – Consumer Behaviour – Retail research – Customer driven organizations - Cause related marketing - Ethics in marketing –Online marketing trends.		

TOTAL: 60 PERIODS**OUTCOMES:**

- knowledge of analytical skills in solving marketing related problems
- awareness of marketing management process

REFERENCES :

1. Philip Kotler and Kevin Lane Keller, Marketing Management, PHI 14th Edition, 2012
2. KS Chandrasekar, "Marketing management-Text and Cases", Tata McGraw Hill, First edition, 2010
3. Lamb, hair, Sharma, Mc Daniel– Marketing – An Innovative approach to learning and teaching-A south Asian perspective, Cengage Learning — 2012
4. Paul Baines, Chris Fill and Kelly Page, Marketing, Oxford University Press, 2nd Edition, 2011.
5. Micheal R. Czinkota & Masaaki Kotabe, Marketing Management, Cengage, 2000.

OBJECTIVE :

- to have hands-on experience on decision modeling.

[Business models studied in theory to be practiced using Spreadsheet / Analysis Software]

S.No.	Exp. No.	Details of experiments	Duration
		Name	
1	1	Descriptive Statistics	4
2	2	Hypothesis - Parametric	4
3	3	Hypothesis – Non-parametric	4
4	4	Correlation & Regression	4
5	5	Forecasting	4
6	-	Extended experiment – 1	4
7	6	Portfolio Selection	4
8	7	Risk Analysis & Sensitivity Analysis	4
9	8	Revenue Management	4
10	-	Extended experiment – 2	4
11	9	Transportation & Assignment	4
12	10	Networking Models	4
13	11	Queuing Theory	4
14	12	Inventory Models	4
15	-	Extended experiments – 3	4

- Spreadsheet Software and
- Data Analysis Tools

TOTAL: 60 PERIODS

OUTCOME

- Knowledge of spreadsheets and data analysis software for business modeling.

TEXTBOOKS

1. David M. Levine et al, "Statistics for Managers using MS Excel' (6th Edition) Pearson, 2010
2. David R. Anderson, et al, 'An Introduction to Management Sciences: Quantitative approaches to Decision Making, (13th edition) South-Western College Pub, 2011.
3. Hansa Lysander Manohar , " Data Analysis and Business Modelling using MS Excel ",PHI Learning private Ltd, 2017.
4. William J. Stevenson, Ceyhun Ozgur, 'Introduction to Management Science with Spreadsheet', Tata McGraw Hill, 2009.
5. Wayne L. Winston, Microsoft Excel 2010: Data Analysis & Business Modeling, 3rd edition, Microsoft Press, 2011.
6. Vikas Gupta, Comdex Business Accounting with Ms Excel, 2010 and Tally ERP 9.0 Course Kit, Wiley India, 2012
7. Kiran Pandya and Smriti Bulsari, SPSS in simple steps, Dreamtech, 2011.

OBJECTIVE:

- To familiarize the students to the basic concepts of international business management.

UNIT I INTRODUCTION**6**

International Business –Definition – Internationalizing business-Advantages – factors causing globalization of business- international business environment – country attractiveness –Political, economic and cultural environment – Protection Vs liberalization of global business environment.

UNIT II INTERNATIONAL TRADE AND INVESTMENT**11**

Promotion of global business – the role of GATT/WTO – multilateral trade negotiation and agreements – VIII & IX, round discussions and agreements – Challenges for global business – global trade and investment – theories of international trade and theories of international investment – Need for global competitiveness – Regional trade block – Types – Advantages and disadvantages – RTBs across the globe – brief history.

UNIT III INTERNATIONAL STRATEGIC MANAGEMENT**11**

Strategic compulsions-Standardization Vs Differentiation – Strategic options – Global portfolio management- global entry strategy – different forms of international business – advantages - organizational issues of international business – organizational structures – controlling of international business – approaches to control – performance of global business- performance evaluation system.

UNIT IV PRODUCTION, MARKETING, FINANCIAL AND HUMAN RESOURCE MANAGEMENT OF GLOBAL BUSINESS**11**

Global production –Location –scale of operations- cost of production – Make or Buy decisions – global supply chain issues – Quality considerations- Globalization of markets, marketing strategy – Challenges in product development , pricing, production and channel management- Investment decisions – economic- Political risk – sources of fund- exchange –rate risk and management – strategic orientation – selection of expatriate managers- Training and development – compensation.

UNIT V CONFLICT MANAGEMENT AND ETHICS IN INTERNATIONAL BUSINESS MANAGEMENT**6**

Disadvantages of international business – Conflict in international business- Sources and types of conflict – Conflict resolutions – Negotiation – the role of international agencies –Ethical issues in international business – Ethical decision-making.

TOTAL: 45 PERIODS**OUTCOME:**

- Students would be familiar with global business environment, global strategic management practices and get acquainted with functional domain practices. They would be familiar with conflicts situations and ethical issues in global business.

REFERENCES:

- Charles W.I. Hill and Arun Kumar Jain, International Business, 6th edition, Tata McGraw Hill, New Delhi, 2010.
- John D. Daniels and Lee H. Radebaugh, International Business, Pearson Education
- K. Aswathappa, International Business, 6th Edition, Tata Mc Graw Hill, New Delhi, 2015.
- Michael R. CzinPPkota, Ilkka A. Ronkainen and Michael H. Moffet, International Business, 7th Edition, Cengage Learning, New Delhi, 2010.
- Rakesh Mohan Joshi, International Business, Oxford University Press, New Delhi, 2009.
- Vyuptakesh Sharan, International Business, 3rd Edition, Pearson Education in South Asia, New Delhi, 2011.

OBJECTIVE:

- To learn the major initiatives taken by a company's top management on behalf of corporate, involving resources and performance in external environments. It entails specifying the organization's mission, vision and objectives, developing policies and plan to understand the analysis and implementation of strategic management in strategic business units.

UNIT I STRATEGY AND PROCESS 9

Conceptual framework for strategic management, the Concept of Strategy and the Strategy Formation Process – Stakeholders in business – Vision, Mission and Purpose – Business definition, Objectives and Goals - Corporate Governance and Social responsibility-case study.

UNIT II COMPETITIVE ADVANTAGE 9

External Environment - Porter's Five Forces Model-Strategic Groups Competitive Changes during Industry Evolution-Globalization and Industry Structure - National Context and Competitive advantage Resources- Capabilities and competencies–core competencies-Low cost and differentiation Generic Building Blocks of Competitive Advantage- Distinctive Competencies-Resources and Capabilities durability of competitive Advantage- Avoiding failures and sustaining competitive advantage-Case study.

UNIT III STRATEGIES 10

The generic strategic alternatives – Stability, Expansion, Retrenchment and Combination strategies - Business level strategy- Strategy in the Global Environment-Corporate Strategy-Vertical Integration-Diversification and Strategic Alliances- Building and Restructuring the corporation- Strategic analysis and choice - Environmental Threat and Opportunity Profile (ETOP) - Organizational Capability Profile - Strategic Advantage Profile - Corporate Portfolio Analysis - SWOT Analysis - GAP Analysis - Mc Kinsey's 7s Framework - GE 9 Cell Model - Distinctive competitiveness - Selection of matrix - Balance Score Card-case study.

UNIT IV STRATEGY IMPLEMENTATION & EVALUATION 9

The implementation process, Resource allocation, designing organizational structure-Designing Strategic Control Systems- Matching structure and control to strategy-Implementing Strategic change-Politics-Power and Conflict-Techniques of strategic evaluation & control-case study.

UNIT V OTHER STRATEGIC ISSUES 8 Managing Technology and Innovation-Strategic issues for Non Profit organizations. New Business Models and strategies for Internet Economy-case study

TOTAL: 45 PERIODS**OUTCOME:**

- This Course will create knowledge and understanding of management concepts principles and skills from a people, finance, marketing and organizational perspectives the development of appropriate organizational policies and strategies within a changing context to meet stakeholder interests information systems to learn from failure key tools and techniques for the analysis and design of information systems, including their human and organizational as well as technical aspects.

REFERENCES:

- Hill. Strategic Management : An Integrated approach, 2009 Edition Wiley (2012).
- John A. Parnell. Strategic Management, Theory and practice Biztantra (2012).
- Azhar Kazmi, Strategic Management and Business Policy, 3rd Edition, Tata McGraw Hill,2008
- Adriau H Aberberg and Alison Rieple, Strategic Management Theory & Application, Oxford University Press, 2008.
- Gupta, Gollakota and Srinivasan, Business Policy and Strategic Management – Concepts and Application, Prentice Hall of India, 2005.
- Dr.Dharma Bir Singh, Strategic Management & Business Policy, KoGent Learning Solutions Inc., Wiley, 2012.
- John Pearce, Richard Robinson and Amitha Mittal, Strategic Management, McGraw Hill, 12th Edition, 2012

OBJECTIVES :

- To understand the basic Principles of branding.
- To understand the key issues in crafting and evaluating brand strategies
- To improve the skills in delivering persuasive brand presentations.
- To evaluate brand extension and its contribution to parent brand
- To develop an understanding of brand equity and a range of performance related outcomes.

UNIT I INTRODUCTION**8**

Basics Understanding of Brands – Definitions - Branding Concepts – Functions of Brand - Significance of Brands – Different Types of Brands – Co branding – Store brands.

UNIT II BRAND STRATEGIES**10**

Strategic Brand Management process – Building a strong brand – Brand positioning – Establishing Brand values – Brand vision – Brand Elements – Branding for Global Markets – Competing with foreign brands.

UNIT III BRAND COMMUNICATIONS**8**

Brand image Building – Brand Loyalty programmes – Brand Promotion Methods – Role of Brand ambassadors, celebrities – On line Brand Promotions.

UNIT IV BRAND EXTENSION**9**

Brand Adoption Practices – Different type of brand extension – Factors influencing Decision for extension – Re-branding and re-launching.

UNIT V BRAND PERFORMANCE**10**

Measuring Brand Performance – Brand Equity Management - Global Branding strategies - Brand Audit – Brand Equity Measurement – Brand Leverage -Role of Brand Managers– Branding challenges & opportunities.

TOTAL: 45 PERIODS**OUTCOMES :**

- Have a solid understanding of the key 'branding' concepts, methods and tools used by marketing practitioners.
- Be able to more confidently engage in and contribute to 'brand building' projects, developments, and discussions.

REFERENCES :

1. Kevin Lane Keller, Strategic Brand Management: Building, Measuring and Managing Brand Equity, Pearson, 4th Edition, 2013.
2. Aker, David, Building Strong Brands, Simon and Schuster, 1995
3. Kapferer J.N, Strategic Brand Management, 4th edition, Kogan Press, 2008
4. Moorthi YLR, Brand Management – I edition, Vikas Publishing House 2001.

OBJECTIVES :

- To understand the concepts of consumer behaviour and its application in purchase decisions.
- To Analyse of the reasons and motives for consumer buying behaviour
- To analyse the relationship between psychological social and cultural drivers behind consumer behaviour and marketing
- To identify the dynamics of human behaviour and the basic factors that influence the consumers decision process.

UNIT I INTRODUCTION 9

Concepts – Significance – Dimensions of Consumer Behavior – Application of knowledge of Consumer Behaviour in marketing decisions.

UNIT II CONSUMER BEHAVIOR MODELS 9

Industrial and individual consumer behaviour models - Howard- Sheth, Engel – Kollat, Webstar and wind Consumer Behaviour Models – Implications of the models on marketing decisions.

UNIT III INTERNAL INFLUENCES 9

Psychological Influences on consumer behavior – motivation – perception – personality Learning and Attitude- Self Image and Life styles – Consumer expectation and satisfaction.

UNIT IV EXTERNAL INFLUENCES 9

Socio-Cultural, Cross Culture - Family group – Reference group – Communication - Influences on Consumer behavior

UNIT V PURCHASE DECISION PROCESS 9

High and low involvement - Pre-purchase and post-purchase behavior – Online purchase decision process – Diffusion of Innovation – Managing Dissonance - Emerging Issues.

TOTAL: 45 PERIODS**OUTCOMES :**

- identify the major individual, social and cultural factors that affect consumers' decision making process;
- explain and analyze the major stages which consumers usually go through when making a consumption-related decision
- understand the essence of how consumers make decisions and assess the relevant implications for marketing practitioners

REFERENCES :

1. Leon G Schiffman, Joseph Wisemblit, S Ramesh Kumar , Consumer Behaviour, 11th edition, Pearson, 2015
2. Barry J.Babin, Eric G.Harris, Ashutosh Mohan, Consumer Behavior: A South Asian Perspective, Cengage Learning, Indian Edition, 6th Edition, 2016
3. P.C.Jain and Monika Bhatt., Consumer Behavior in Indian Context, S.Chand & Company, 2013.
4. Srabanti Mukherjee, Consumer behavior, Cengage Learning, 2012.
5. Assael, Consumer Behavior - A Strategic Approach, Biztranza, 2008
6. Dinesh kumar ,Consumer Behaviour, Oxford University Press,2015.

OBJECTIVE:

- To understand the need and importance of maintaining a good customer relationship.

UNIT I INTRODUCTION**9**

Definitions - Concepts and Context of relationship Management – Evolution - Transactional Vs Relationship Approach – CRM as a strategic marketing tool – CRM significance to the stakeholders.

UNIT II UNDERSTANDING CUSTOMERS**9**

Customer information Database – Customer Profile Analysis - Customer perception, Expectations analysis – Customer behavior in relationship perspectives; individual and group customer's - Customer life time value – Selection of Profitable customer segments.

UNIT III CRM STRUCTURES**9**

Elements of CRM – CRM Process – Strategies for Customer acquisition – Retention and Prevention of defection – Models of CRM – CRM road map for business applications.

UNIT IV CRM PLANNING AND IMPLEMENTATION**9**

Strategic CRM planning process – Implementation issues – CRM Tools- Analytical CRM – Operational CRM – Call center management – Role of CRM Managers.

UNIT V TRENDS IN CRM**9**

e- CRM Solutions – Data Warehousing – Data mining for CRM – an introduction to CRM software packages.

TOTAL: 45 PERIODS**OUTCOME :**

- To use strategic customer acquisition and retention techniques in CRM.

REFERENCES :

- G.Shainesh, Jagdish, N.Sheth, Customer Relationship Management A Strategic Prespective, Macmillan 2010
- Alok Kumar et al, Customer Relationship Management : Concepts and applications, Biztantra, 2008
- H.Peeru Mohamed and A.Sahadevan, Customer Relation Management, Vikas Publishing 2005.
- Jim Catheart, The Eight Competencies of Relationship selling, Macmillan India, 2005.
- Assel, Consumer Behavior, Cengage, 6th Edition.
- Kumar, Customer Relationship Management - A Database Approach, Wiley India, 2007.
- Francis Buttle, Customer Relationship Management : Concepts & Tools, Elsevier, 2004.
- Zikmund. Customer Relationship Management, Wiley 2012 ..

OBJECTIVE:

- This course introduces students to the basic concepts of advertising and sales promotion and how business organizations and other institutions carry out such activities.

UNIT I INTRODUCTION TO ADVERTISEMENT 9

Concept –definition-scope-Objectives-functions-principles of advertisement – Social, Economic and Legal Implications of advertisements – setting advertisement objectives – Advertisement Agencies – Selection and remuneration – Advertisement campaigns – case studies.

UNIT II ADVERTISEMENT MEDIA 9

Media plan – Type and choice criteria – Reach and frequency of advertisements – Cost of advertisements - related to sales – Media strategy and scheduling. design and execution of advertisements -Message development – Different types of advertisements – Layout – Design appeal – Copy structure – Advertisement production – Print – Radio. T.V. and Web advertisements – Media Research – Testing validity and Reliability of ads – Measuring impact of advertisements – case studies.

UNIT III SALES PROMOTION 9

Scope and role of sale promotion – Definition – Objectives of sales promotion - sales promotion techniques – Trade oriented and consumer oriented. Sales promotion – Requirement identification – Designing of sales promotion campaign – Involvement of salesmen and dealers – Out sourcing sales promotion national and international promotion strategies – Integrated promotion – Coordination within the various promotion techniques – Online sales promotions- case studies.

UNIT IV PERSONAL SELLING 9

Introduction – Meaning – Functions- Personal selling process – Evaluation – Compensation – Motivation- Territory Management – Sales Report Preparation and Presentation- Ethical Issues

UNIT V PUBLICITY AND PUBLIC RELATIONS 9

Introduction – Meaning – Objectives –Scope-Functions-integrating PR in to Promotional Mix-Marketing Public Relation function- Process of Public Relations-advantages and disadvantages of PR-Measuring the Effectiveness of PR- PR tools and techniques. Difference between Marketing, PR and Publicity -- Social publicity – Web Publicity and Social media – Publicity Campaigns

TOTAL: 45 PERIODS**OUTCOME :**

- Insight into the importance of advertising and sales promotion campaigns planning and objective setting in relation to consumer decision making processes.

REFERENCES :

1. George E Belch and Michel A Belch, Advertising & Promotion, Tata McGraw Hill, 10th edition, 2014
2. Wells, Moriarty & Burnett, Advertising, Principles & Practice, Pearson Education, 7th Edition, 2007.
3. Kenneth Clow. Donald Baack, Integrated Advertisements, Promotion and Marketing communication, Prentice Hall of India, New Delhi, 3rd Edition, 2006.
4. Terence A. Shimp and J.Craig Andrews, Advertising Promotion and other aspects of Integrated Marketing Communications, CENGAGE Learning, 9th edition, 2016
5. S. H. H. Kazmi and Satish K Batra, Advertising & Sales Promotion, Excel Books, New Delhi, 3rd Revised edition edition, 2008.
6. Julian Cummings, Sales Promotion: How to Create, Implement and Integrate Campaigns that Really Work, Kogan Page, London, Fifth Edition Edition ,2010.
7. Jaishri Jefhwaney, Advertising Management, Oxford University Press, 2nd Edition, 2013.

OBJECTIVE:

- To understand the concepts of effective retailing

UNIT I INTRODUCTION**9**

An overview of Global Retailing – Challenges and opportunities – Retail trends in India – Socio economic and technological Influences on retail management – Government of India policy implications on retails.

UNIT II RETAIL FORMATS**9**

Organized and unorganized formats – Different organized retail formats – Characteristics of each format – Emerging trends in retail formats – MNC's role in organized retail formats.

UNIT III RETAILING DECISIONS**9**

Choice of retail locations - internal and external atmospherics – Positioning of retail shops – Building retail store Image - Retail service quality management – Retail Supply Chain Management – Retail Pricing Decisions. Mercandising and category management – buying.

UNIT IV RETAIL SHOP MANAGEMENT**9**

Visual Merchandise Management – Space Management – Retail Inventory Management – Retail accounting and audits - Retail store brands – Retail advertising and promotions – Retail Management Information Systems - Online retail – Emerging trends .

UNIT V RETAIL SHOPPER BEHAVIOUR**9**

Understanding of Retail shopper behavior – Shopper Profile Analysis – Shopping Decision Process - Factors influencing retail shopper behavior – Complaints Management - Retail sales force Management – Challenges in Retailing in India.

TOTAL: 45 PERIODS**OUTCOME:**

- To manage the retail chains and understand the retail customer's behavior

REFERENCES :

1. Michael Havy ,Baston, Aweitz and Ajay Pandit, Retail Management, Tata Mcgraw Hill, Sixth Edition, 2007
2. J K Nayak, Prakash C.Dash, Retail Management, Cengage, 2017
3. Dr.Harjit Singh, Retail Management A Global Perspective, S.Chand Publishing, 3rd Edition,2014
4. Patrick M. Dunne and Robert F Lusch, Retailing, Cengage, 8th edition, 2013.
5. Chetan Bajaj, Rajnish Tow and Nidhi V. Srivatsava, Retail Management, Oxford University Press, 3rd Edition 2016.
6. Swapna Pradhan, Retail Management -Text and Cases, Tata McGraw Hill, 4th Edition, 2012.
7. Ramkrishnan and Y.R.Srinivasan, Indian Retailing Text and Cases, Oxford University Press, 2008

BA5006

SERVICES MARKETING

L T P C
3 0 0 3

OBJECTIVE:

- To understand the meaning of services and the significance of marketing the services.

UNIT I INTRODUCTION

9

Definition – Service Economy – Evolution and growth of service sector – Nature and Scope of Services – Unique characteristics of services - Challenges and issues in Services Marketing.

UNIT II SERVICE MARKETING OPPORTUNITIES

9

Assessing service market potential - Classification of services – Expanded marketing mix – Service marketing – Environment and trends – Service market segmentation, targeting and positioning.

UNIT III SERVICE DESIGN AND DEVELOPMENT

9

Service Life Cycle – New service development – Service Blue Printing – GAP model of service quality – Measuring service quality – SERVQUAL – Service Quality function development.

UNIT IV SERVICE DELIVERY AND PROMOTION

9

Positioning of services – Designing service delivery System, Service Channel – Pricing of services, methods – Service marketing triangle - Integrated Service marketing communication.

UNIT V SERVICE STRATEGIES

9

Service Marketing Strategies for health – Hospitality – Tourism – Financial – Logistics - Educational – Entertainment & public utility Information technique Services

TOTAL: 45 PERIODS

OUTCOME:

- Will be able to apply the concepts of services marketing in promoting services.

REFERENCES :

1. Christopher H.Lovelock and Jochen Wirtz, Services Marketing, Pearson Education, New Delhi, 7th edition, 2011.
2. Hoffman, Marketing of Services, Cengage, 4th Edition, 2010.
3. Kenneth E Clow, et al, Services Marketing Operation Management and Strategy, Biztantra, 2nd Edition, New Delhi, 2004.
4. Valarie Zeithaml et al, Services Marketing, 5th International Edition, Tata McGraw Hill, 2007.
5. Gronroos, Service Management and Marketing –Wiley India, 3rd Edition, 2009.

BA5007

SOCIAL MARKETING

L T P C
3 0 0 3

OBJECTIVE:

- To enhance Competiveness in Social Marketing by ethical values and social media in Marketing.

UNIT I INTRODUCTION

9

Social marketing - Definition - Scope and concept - Evolution of Social marketing - Need for Social marketing - A comparative study between Commercial and Social marketing - Use of market research - social change tools - Factors influencing Social marketing - Challenges and opportunities.

UNIT II SOCIAL MARKETING PROCESS AND PLANNING 9

Introduction - Environment Monitoring - Social Class and self-efficacy - social capital - Social ecology - Advocacy - A global phenomenon - Social marketing Process - Stages - Ethical considerations. Planning - Formative Research in Social marketing. Analysis - Problem - Environment - Resource.

Segmentation - Motives and benefits - Sheth's and Frazier's attitude - behavior segmentation - Stage approach to segmentation - Selecting target audiences - Cross cultural targeting - cultural and individual tailoring.

UNIT III SOCIAL MARKETING MIX 9

Social marketing mix - policy - product - place - price - promotion - people - partnership. Rating & Reviews - Virtual world - Using media in social marketing - Importance - effectiveness of mass media in social marketing - Practical model for media use in social marketing - Advertisement -Publicity - Edutainment - Civic or Public - Choosing media & methods.

Role of media in social marketing campaigns - planning and developing Social media campaigning – Campaign vs Programme - Programme planning models – conceptual model Lawrence Green's PRECEDE-PROCEED model.

UNIT IV ETHICAL ISSUES AND CHALLENGES 9

Ethical principles - Codes of behaviour - Critics of social marketing - Critic of power imbalance in social marketing - Criticism of unintended consequences - Competition in social marketing- Definition - monitoring - countering competition - competition and principle of differential advantage - Internal competition.

UNIT V TRENDS IN SOCIAL MARKETING 9

Future of Social marketing - setting priorities in social marketing - Repositioning strategies- Future of Public sector – NGO – Private sector social marketing.

Social Media marketing - Importance - Big Brands & Small business - E mail marketing -Social Media Tools –Marketing with Social network sites, blogging, micro blogging, podcasting with Podomatic

TOTAL: 45 PERIODS

OUTCOME:

- Applying Ethical Principles in Social Marketing through advanced marketing medias

REFERENCES :

1. Rob Donovan & Nadine Henley. (2011). Principles and Practice of Social Marketing-an international perspective. Cambridge University Press.
2. Kotler, P., Roberto, N., & Lee, N. (2008). Social Marketing – Influencing Behaviors for Good. (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.
3. French, J., Blair-Stevens, C., McVey, D., & Merritt, R. Social Marketing and Public Health. Oxford, UK: University Press 2010.
4. Hastings, G. Social Marketing: Why should the Devil Have All the Best Tunes, Routledge 2013
5. Social marketing in the 21st Century- Alan R. Andreasen- sage Publication, 2012

OBJECTIVES:

- Grasp how banks raise their sources and how they deploy it and manage the associated risks
- Understand e-banking and the threats that go with it.

UNIT I OVERVIEW OF INDIAN BANKING SYSTEM 9

Overview of Indian Banking System, Functions of banks, key Acts governing the functioning of Indian banking system – RBI Act 1934, Negotiable Instruments Act 1881, Banking Regulations Act 1948 – Rights and obligations of a banker, Overview of Financial statement of banks – Balance sheet and Income Statement.

UNIT II SOURCES AND APPLICATION OF BANK FUNDS 9

Capital adequacy, Deposits and non-deposit sources, Designing of deposit schemes and pricing of deposit services, application of bank funds – Investments and Lending functions, Types of lending – Fund based, non-fund based, asset based – Different types of loans and their features, Major components of a typical loan policy document, Steps involved in Credit analysis, Credit delivery and administration, Pricing of loans, Customer profitability analysis.

UNIT II CREDIT MONITORING AND RISK MANAGEMENT 9

Need for credit monitoring, Signals of borrowers' financial sickness, Financial distress prediction models – Rehabilitation process, Risk management – Interest rate, liquidity, forex, credit, market, operational and solvency risks – risk measurement process and mitigation, Basic understanding of NPAs and ALM.

UNIT IV MERGERS, DIVERSIFICATION AND PERFORMANCE EVALUATION 9

Mergers and Diversification of banks into securities market, underwriting, Mutual funds and Insurance business, Risks associated therewith. Performance analysis of banks – background factors, ratio analysis and CAMELS.

UNIT V HIGH TECH E-BANKING 9

Payment system in India – Paper based, e-payments – Electronic banking – advantages – Plastic money, E-money – Forecasting of cash demand at ATMs – Security threats in e-banking and RBI's initiatives.

TOTAL: 45 PERIODS**OUTCOME:**

- Price various types of loans proposed by banks to various prospective borrowers with different risk profiles and evaluate the performance of banks

REFERENCES :

1. Padmalatha Suresh and Justin Paul, "Management of Banking and Financial Services, Pearson, Delhi, 2012.
2. Meera Sharma, "Management of Financial Institutions – with emphasis on Bank and Risk Management", PHI Learning Pvt. Ltd., New Delhi 2010.
3. Peter S. Rose and Sylvia C. and Hudgins, "Bank Management and Financial Services", Tata McGraw Hill, New Delhi, 2012.
4. Madura, Financial Institutions & Markets, 10th edition, Cengage, 2016.

OBJECTIVES :

Student will acquire

- Nuances involved in short term corporate financing
- Good ethical practices

UNIT I INDUSTRIAL FINANCE 9

Indian Capital Market – Basic problem of Industrial Finance in India. Equity – Debenture financing – Guidelines from SEBI, advantages and disadvantages and cost of various sources of Finance - Finance from international sources, financing of exports – role of EXIM bank and commercial banks.– Finance for rehabilitation of sick units.

UNIT II SHORT TERM-WORKING CAPITAL FINANCE 6

Estimating working capital requirements – Approach adopted by Commercial banks, Commercial paper- Public deposits and inter corporate investments.

UNIT III ADVANCED FINANCIAL MANAGEMENT 12

Appraisal of Risky Investments - certainty equivalent of cash flows and risk adjusted discount rate - risk analysis in the context of DCF methods using Probability information - nature of cash flows - Sensitivity analysis - Simulation and investment decision, Decision tree approach in investment decisions.

UNIT IV FINANCING DECISION 10

Simulation and financing decision - cash inadequacy and cash insolvency - determining the probability of cash insolvency- Financing decision in the Context of option pricing model and agency costs- Inter-dependence of investment- financing and Dividend decisions.

UNIT V CORPORATE GOVERNANCE 8

Corporate Governance - SEBI Guidelines- Corporate Disasters and Ethics-Corporate Social Responsibility- Stakeholders and Ethics- Ethics, Managers and Professionalism.

TOTAL: 45 PERIODS

OUTCOME :

- Good ethical corporate manager

REFERENCES :

1. Richard A.Brealey, Stewart C.Myers and Mohanthy, Principles of Corporate Finance, Tata McGraw Hill, 9th Edition, 2011
2. I.M.Pandey, Financial Management, Vikas Publishing House Pvt., Ltd., 12th Edition, 2012.
3. Brigham and Ehrhardt, Corporate Finance - A focused Approach, Cengage Learning, 2nd Edition, 2011.
4. M.Y Khan, Indian Financial System, Tata McGraw Hill, 6th Edition, 2011
5. Smart, Megginson, and Gitman, Corporate Finance, 2nd Edition, 2011.
6. Krishnamurthy and Viswanathan, Advanced Corporate Finance, PHI Learning, 2011.
7. Website of SEBI
8. Besley, Brigham, Parasuraman, Corporate Finance, Cengage Learning, 2015
9. Michael C.Ehrhardt, Eugene F.Brigham, Corporate Finance – A focused approach, Cengage Learning, 2011.
10. Madura, International Corporate Finance, 10th edition, Cengage Learning, 2014.

OBJECTIVE :

- To understand the nuances involved in derivatives and to understand the basic operational mechanisms in derivatives.

UNIT I INTRODUCTION 9

Derivatives – Definition – Types – Forward Contracts – Futures Contracts – Options – Swaps – Differences between Cash and Future Markets – Types of Traders – OTC and Exchange Traded Securities – Types of Settlement – Uses and Advantages of Derivatives – Risks in Derivatives.

UNIT II FUTURES CONTRACT 9

Specifications of Futures Contract - Margin Requirements – Marking to Market – Hedging uses Futures – Types of Futures Contracts – Securities, Stock Index Futures, Currencies and Commodities – Delivery Options – Relationship between Future Prices, Forward Prices and Spot Prices.

UNIT III OPTIONS 9

Definition – Exchange Traded Options, OTC Options – Specifications of Options – Call and Put Options – American and European Options – Intrinsic Value and Time Value of Options – Option payoff, options on Securities, Stock Indices, Currencies and Futures – Options pricing models – Differences between future and Option contracts.

UNIT IV SWAPS 9

Definition of SWAP – Interest Rate SWAP – Currency SWAP – Role of Financial Intermediary – Warehousing – Valuation of Interest rate SWAPs and Currency SWAPs Bonds and FRNs – Credit Risk.

UNIT V DERIVATIVES IN INDIA 9 Evolution of Derivatives Market in India – Regulations - Framework – Exchange Trading in Derivatives – Commodity Futures – Contract Terminology and Specifications for Stock Options and Index Options in NSE – Contract Terminology and specifications for stock futures and Index futures in NSE – Contract Terminology and Specifications for Interest Rate Derivatives.

TOTAL: 45 PERIODS**OUTCOME :**

- This course aims at providing an in-depth understanding of financial derivatives in terms of concepts, structure, instruments and trading strategies for profit and risk management.

REFERENCES :

- David Dufresne – 'Option and Financial Futures – Valuation and Uses, McGraw Hill International Edition.
- Don M. Chance, Robert Brooks, An Introduction to Derivatives and Risk Management, 9th edition, Cengage, 2015.
- John. C. Hull, Options, Futures and Other Derivative Securities', PHI Learning, 9th Edition, 2012
- Keith Redhead, 'Financial Derivatives – An Introduction to Futures, Forwards, Options and SWAPs',- PHI Learning, 2011.
- S. L. Gupta, Financial Derivatives- Theory, Concepts and Practice, Prentice Hall of India, 2011.
- Stulz, Risk Management and Derivatives, Cengage, 2nd Edition, 2011.
- Varma, Derivatives and Risk Management, 2nd Edition, 2011.
- Website of NSE, BSE.

OBJECTIVES :

To enable student

- Understand the modes of issuing securities
- Acquire financial evaluation technique of leasing and hire purchase

UNIT I MERCHANT BANKING**5**

Introduction – An Over view of Indian Financial System – Merchant Banking in India – Recent Developments and Challenges ahead – merchant banking services offered by banks – NBFC'S offering merchant banking – Banking system – types of banks – payment banking -Legal and Regulatory Framework – Relevant Provisions of Companies Act- SERA- SEBI guidelines- FEMA, etc. - Relation with Stock Exchanges and OTCEI.

UNIT II ISSUE MANAGEMENT**12**

Role of Merchant Banker in Appraisal of Projects, Designing Capital Structure and Instruments – Issue Pricing – Book Building – Preparation of Prospectus Selection of Bankers, Advertising Consultants, etc. - Role of Registrars –Bankers to the Issue, Underwriters, and Brokers. – Offer for Sale – Green Shoe Option – E-IPO, Private Placement – Bought out Deals – Placement with FIs, MFs, FII, etc. Off - Shore Issues. – Issue Marketing – Advertising Strategies – NRI Marketing – Post Issue Activities.

UNIT III OTHER FEE BASED SERVICES**10**

Mergers and Acquisitions – Portfolio Management Services – Credit Syndication – Credit Rating – Mutual Funds - Business Valuation.

UNIT IV FUND BASED FINANCIAL SERVICES**10**

Leasing and Hire Purchasing – Basics of Leasing and Hire purchasing – Financial Evaluation.

UNIT V OTHER FUND BASED FINANCIAL SERVICES**8**

Consumer Credit – Credit Cards – Real Estate Financing – Bills Discounting – factoring and Forfeiting – Venture Capital - venture debt funds – start up financing.

TOTAL: 45 PERIODS**OUTCOME**

- Good knowledge on merchant banking activities

REFERENCES :

1. M.Y.Khan, Financial Services, Tata McGraw-Hill, 12th Edition, 2012
2. Nalini Prava Tripathy, Financial Services, PHI Learning, 2011.
3. Machiraju, Indian Financial System, Vikas Publishing House, 2nd Edition, 2010.
4. J.C.Verma, A Manual of Merchant Banking, Bharath Publishing House, New Delhi,
5. Varshney P.N. & Mittal D.K., Indian Financial System, Sultan Chand & Sons, New Delhi.
6. Sasidharan, Financial Services and System, Tata Mcgraw Hill, New Delhi, 2nd Edition, 2011.
7. Website of SEBI
8. Madura, Financial Institutions & Markets, 10th edition, Cengage, 2016.

OBJECTIVES:

Enables student to

- Understand the nuances of stock market operations.
- Understand the techniques involved in deciding upon purchase or sale of securities.

UNIT I INVESTMENT SETTING**8**

Financial and economic meaning of Investment – Characteristics and objectives of Investment – Types of Investment – Investment alternatives – Choice and Evaluation – Risk and return concepts.

UNIT II SECURITIES MARKETS 10 Financial Market - Segments – Types - - Participants in financial Market – Regulatory

Environment, Primary Market – Methods of floating new issues, Book building – Role of primary market – Regulation of primary market, Stock exchanges in India – BSE, OTCEI , NSE, ISE, and Regulations of stock exchanges – Trading system in stock exchanges –SEBI.

UNIT III FUNDAMENTAL ANALYSIS**9**

Economic Analysis – Economic forecasting and stock Investment Decisions – Forecasting techniques. Industry Analysis : Industry classification, Industry life cycle – Company Analysis Measuring Earnings – Forecasting Earnings – Applied Valuation Techniques – Graham and Dodds investor ratios.

UNIT IV TECHNICAL ANALYSIS**9**

Fundamental Analysis Vs Technical Analysis – Charting methods – Market Indicators. Trend – Trend reversals – Patterns - Moving Average – Exponential moving Average – Oscillators – Market Indicators – Efficient Market theory.

UNIT V PORTFOLIO MANAGEMENT**9**

Portfolio analysis – Portfolio Selection –Capital Asset Pricing model – Portfolio Revision Portfolio Evaluation – Mutual Funds.

TOTAL: 45 PERIODS**OUTCOME**

- Become a good investment analyst

REFERENCES:

1. Donald E.Fischer & Ronald J.Jordan, Security Analysis & Portfolio Management, PHI Learning., New Delhi, 8th edition, 2011.
2. Prasannachandra, Investment analysis and Portfolio Management, Tata McGraw Hill, 2011.
3. Reilly & Brown, Investment Analysis and Portfolio Management, Cengage, 10th edition, 2016.
4. S. Kevin , Securities Analysis and Portfolio Management , PHI Learning , 2012.

OBJECTIVE :

- Enable students to acquire techniques of evaluating strategic investment decisions understand the causes of prediction modes of financial distress.

UNIT I INVESTMENT DECISIONS 9

Project Investment Management Vs Project Management – Introduction to profitable projects – evaluation of Investment opportunities – Investment decisions under conditions of uncertainty – Risk analysis in Investment decision – Types of investments and disinvestments.

UNIT II CRITICAL ANALYSIS OF APPRAISAL TECHNIQUES 10

Significance of Information and data bank in project selections – Investment decisions under capital constraints – capital rationing, Portfolio – Portfolio risk and diversified projects.

UNIT III STRATEGIC ANALYSIS OF SELECTED INVESTMENT DECISIONS 10

Lease financing – Lease Vs Buy decision – Hire Purchase and installment decision – Hire Purchase Vs Lease Decision – Mergers and acquisition – Cash Vs Equity for mergers.

UNIT IV FINANCING DECISIONS 8

Capital Structure – Capital structure theories – Capital structure Planning in Practice.

UNIT V FINANCIAL DISTRESS 8

Consequences, Issues, Bankruptcy, Settlements, reorganization and Liquidation in bankruptcy.

TOTAL: 45 PERIODS**OUTCOME :**

- Possess good knowledge in techniques for making strategic investment decision and tackling financial distress

REFERENCES:

1. Prasanna Chandra, Financial Management, Tata McGraw Hill, 9th Edition, 2012.
2. Prasanna Chandra, Projects : Planning, Analysis, Financing Implementation and Review, TMH, New Delhi, 2011.
3. Bodie, Kane, Marcus: Investment, Tata McGraw Hill, New Delhi, 2010.
4. Brigham E. F & Houston J.F. Financial Management, Thomson Publications, 9 th edition, 2010.
5. M. Pandey, Financial Management, Vikas Publishing House, 10th edition, 2010.
6. M. Y. Khan and P. K. Jain, Financial Management Text and Problems, Tata McGraw Hill Publishing Co, 2011.
7. Website of IDBI Related to Project Finance.

OBJECTIVE:

- To develop and strengthen entrepreneurial quality and motivation in students. To impart basic entrepreneurial skills and understandings to run a business efficiently and effectively.

UNIT I ENTREPRENEURIAL COMPETENCE**6**

Entrepreneurship concept – Entrepreneurship as a Career – Entrepreneurial Personality - Characteristics of Successful, Entrepreneur – Knowledge and Skills of Entrepreneur.

UNIT II ENTREPRENEURIAL ENVIRONMENT**12**

Business Environment - Role of Family and Society - Entrepreneurship Development Training and Other Support Organizational Services - Central and State Government Industrial Policies and Regulations - International Business.

UNIT III BUSINESS PLAN PREPARATION**12**

Sources of Product for Business - Prefeasibility Study - Criteria for Selection of Product - Ownership - Capital - Budgeting Project Profile Preparation - Matching Entrepreneur with the Project - Feasibility Report Preparation and Evaluation Criteria.

UNIT IV LAUNCHING OF SMALL BUSINESS**10**

Finance and Human Resource Mobilization Operations Planning - Market and Channel Selection - Growth Strategies - Product Launching – Incubation, Venture capital, IT startups.

UNIT V MANAGEMENT OF SMALL BUSINESS**5**

Monitoring and Evaluation of Business - Preventing Sickness and Rehabilitation of Business Units- Effective Management of small Business.

TOTAL: 45 PERIODS**OUTCOME:**

- Students will gain knowledge and skills needed to run a business.

REFERENCES:

1. Hisrich, Entrepreneurship, Edition 9, Tata McGraw Hill, New Delhi, 2014
2. S.S.Khanka, Entrepreneurial Development, S.Chand and Company Limited, New Delhi, (Revised Edition) 2013.
3. Mathew Manimala, Entrepreneurship Theory at the Crossroads, Paradigms & Praxis, Biztrantra, 2nd Edition ,2005
4. Prasanna Chandra, Projects – Planning, Analysis, Selection, Implementation and Reviews, Tata McGraw-Hill, 1996.
5. P.Saravanel, Entrepreneurial Development, Ess Pee kay Publishing House, Chennai 1997.
6. Arya Kumar. Entrepreneurship. Pearson, 2012.
7. Donald F Kuratko, T.V Rao. Entrepreneurship: A South Asian perspective. Cengage, 2012

BA5015

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A5015

INDUSTRIAL RELATIONS AND LABOUR WELFARE

**LT P C
3 0 0 3**

OBJECTIVE:

- To explore contemporary knowledge and gain a conceptual understanding of industrial relations.

UNIT I INDUSTRIAL RELATIONS

7

Concepts – Importance – Industrial Relations problems in the Public Sector – Growth of Trade Unions – Codes of conduct.

UNIT II INDUSTRIAL CONFLICTS

12

Disputes – Impact – Causes – Strikes – Prevention – Industrial Peace – Government Machinery – Conciliation – Arbitration – Adjudication.

UNIT III LABOUR WELFARE

8

Concept – Objectives – Scope – Need – Voluntary Welfare Measures – Statutory Welfare Measures – Labour – Welfare Funds – Education and Training Schemes.

UNIT IV INDUSTRIAL SAFETY

9

Causes of Accidents – Prevention – Safety Provisions – Industrial Health and Hygiene – Importance – Problems – Occupational Hazards – Diseases – Psychological problems – Counseling – Statutory Provisions.

UNIT V WELFARE OF SPECIAL CATEGORIES OF LABOUR

9

Child Labour – Female Labour – Contract Labour – Construction Labour – Agricultural Labour – Differently abled Labour –BPO & KPO Labour - Social Assistance – Social Security – Implications.

TOTAL: 45 PERIODS

OUTCOME:

- Students will know how to resolve industrial relations and human relations problems and promote welfare of industrial labour.

REFERENCES:

1. Mamoria C.B., Sathish Mamoria, Gankar, Dynamics of Industrial Relations, Himalaya Publishing House, New Delhi, 2012.
2. Arun Monappa, Ranjeet Nambudiri, Patturaja Selvaraj. Industrial relations & Labour Laws. Tata McGraw Hill. 2012.
3. Ratna Sen, Industrial Relations in India, Shifting Paradigms, Macmillan India Ltd., New Delhi, 2007.
4. C.S.Venkata Ratnam, Globalisation and Labour Management Relations, Response Books, 2007.
5. Srivastava, Industrial Relations and Labour laws, Vikas, 2007.
6. P.N.Singh, Neeraj Kumar. Employee relations Management. Pearson. 2011.
7. P.R.N Sinha, Indu Bala Sinha, Seema Priyadarshini Shekhar. Industrial Relations, Trade Unions and Labour Legislation. Pearson. 2004

OBJECTIVE:

- To have a broad understanding of the legal principles governing the employment relationship at individual and collective level.
- To familiarise the students to the practical problems inherent in the implementation of labour statutes.

Contained in the following acts are to be studied.

	Periods
1. The Factories Act, 1948	3
2. The Trade Unions Act, 1926	4
3. The Payment of Wages Act, 1936	3
4. The Minimum Wages Act, 1948	2
5. The Industrial Disputes Act, 1947	5
6. The Workmen's Compensation Act, 1923	2
7. The Payment of Gratuity Act, 1972	3

UNIT IV ENVIRONMENTAL ISSUES IN MANAGERIAL EFFECTIVENESS 8
Organisational Processes – Organisational Climate – Leader – Group Influences – Job Challenge – Competition – Managerial Styles.

UNIT V DEVELOPING THE WINNING EDGE 10
Organisational and Managerial Efforts – Self Development – Negotiation Skills – Development of the Competitive Spirit – Knowledge Management – Fostering Creativity and innovation.

TOTAL: 45 PERIODS

OUTCOME:

- Students will gain knowledge about appropriate style of managerial behaviour.

REFERENCES:

1. Peter Drucker, Management, Harper Row, 2006.
2. Milkovich and Newman, Compensation, McGraw-Hill International, 2013.
3. Blanchard and Thacker, Effective Training Systems, Strategies and Practices Pearson 2012.
4. Dubrin, Leadership, Research Findings, Practices & Skills, Biztantra, 2015.
5. Joe Tidd , John Bessant, Keith Pavitt , Managing Innovation ,Wiley 3rd edition,2006.
6. T.V.Rao,Appraising and Developing Managerial Performance, Excel Books,2002.
7. R.M.Omkar, Personality Development and Career Management, S.Chand 1stedition,2008.
8. Richard L.Daft, Leadership, Cengage, 1 st Indian Reprint 2008.

OBJECTIVE:

- To learn how an organization can be designed and developed to deal with the challenges from environment, technology, and its own processes.

UNIT I ORGANISATION & ITS ENVIRONMENT 8

Meaning of Organization – Need for existence - Organizational Effectiveness – Creation of Value – Measuring Organizational Effectiveness – External Resources Approach, Internal Systems Approach and Technical approach - HR implications.

UNIT II ORGANIZATIONAL DESIGN 15

Organizational Design – Determinants – Components – Types - Basic Challenges of design – Differentiation, Integration, Centralization, Decentralization, Standardization, Mutual adjustment- Mechanistic and Organic Structures- Technological and Environmental Impacts on Design- Importance of Design – Success and Failures in design - Implications for Managers.

UNIT III ORGANISATIONAL CULTURE

Understanding Culture – Strong and Weak Cultures – Types of Cultures – Importance of Culture - Creating and Sustaining Culture - Culture and Strategy - Implications for practicing Managers.

UNIT IV ORGANISATIONAL CHANGE 6

Meaning – Forces for Change - Resistance to Change – Types and forms of change – Evolutionary and Revolutionary change – Change process -Organisation Development – HR functions and Strategic Change Management - Implications for practicing Managers.

UNIT V ORGANISATION EVOLUTION AND SUSTENANCE 10

Organizational life cycle – Models of transformation – Models of Organizational Decision making – Organizational Learning – Innovation, Intrapreneurship and Creativity-HR implications.

TOTAL: 45 PERIODS**OUTCOME:**

- Students will be able to analyze organizations more accurately and deeply by applying organization theory.

REFERENCES:

- Thomson G. Cummings and Christopher G. Worley, Organizational development and Change, Cengage, 9th edition 2011
- Robbins Organization Theory; Structure Design & Applications, Prentice Hall of India, 2009.
- Bhupen Srivastava, Organisational Design and Development: Concepts application, Biztantra , 2010.
- Robert A Paton, James Mc Calman, Change Management, A guide to effective implementation, Response Books, 2012.
- Adrian Thorn Hill, Phil Lewis, Mike Mill more and Mark Saunders, Managing Change -A Human Resource Strategy Approach, Wiley, 2010.
- Gareth R.Jones, Organisational Theory, Design & Change, Pearson Education, 6th Edition 2011.
- Richard L. Daft, Understanding theory & Design of Organizations, Cengage, Western, 10th Edition 2012.

STRATEGIC HUMAN RESOURCE MANAGEMENT**OBJECTIVE:**

- To help students understand the transformation in the role of HR functions from being a support function to strategic function.

UNIT I HUMAN RESOURCE DEVELOPMENT 10

Meaning – Strategic framework for HRM and HRD – Vision, Mission and Values – Importance – Challenges to Organisations – HRD Functions - Roles of HRD Professionals - HRD Needs Assessment - HRD practices – Measures of HRD performance – Links to HR, Strategy and Business Goals – HRD Program Implementation and Evaluation – Recent trends – Strategic Capability , Bench Marking and HRD Audit.

UNIT II E-HRM 6

e- Employee profile– e- selection and recruitment - Virtual learning and Orientation – e - training and development – e- Performance management and Compensation design – Development and Implementation of HRIS – Designing HR portals – Issues in employee privacy – Employee surveys online.

UNIT III CROSS CULTURAL HRM 7 Domestic Vs International HRM - Cultural Dynamics - Culture Assessment - Cross Cultural Education and Training Programs – Leadership and Strategic HR Issues in International Assignments - Current challenges in Outsourcing, Cross border Mergers and Acquisitions - Repatriation etc - Building Multicultural Organisation - International Compensation.

UNIT IV CAREER & COMPETENCY DEVELOPMENT 10

Career Concepts – Roles – Career stages – Career planning and Process – Career development Models– Career Motivation and Enrichment –Managing Career plateaus- Designing Effective Career Development Systems – Competencies and Career Management – Competency Mapping Models – Equity and Competency based Compensation.

UNIT V EMPLOYEE COACHING & COUNSELING 12
 Need for Coaching – Role of HR in coaching – Coaching and Performance – Skills for Effective Coaching – Coaching Effectiveness– Need for Counseling – Role of HR in Counseling - Components of Counseling Programs – Counseling Effectiveness – Employee Health and Welfare Programs – Work Stress – Sources - Consequences – Stress Management Techniques.- Eastern and Western Practices - Self Management and Emotional Intelligence.

TOTAL: 45 PERIODS

OUTCOME:

- Students will have a better understanding of the tools and techniques used by organizations to meet current challenges.

REFERENCES :

1. Randy L. Desimone, Jon M. Werner – David M. Mathis, Human Resource Development, Cengage Learning, Edition 6, 2012.
2. Paul Boselie. Strategic Human Resource Management. Tata McGraw Hill. 2012.
3. Jeffrey A Mello, Strategic Human Resource Management, Cengage, Southwestern 2007.
4. Robert L. Mathis and John H. Jackson, Human Resource Management, Cengage, 2007.
5. Monir Tayeb. International Human Resource Management. Oxford. 2007
6. Randall S Schuler and Susan E Jackson. Strategic Human Resource Management. Wiley India. 2nd edition
7. McLeod. The Counsellor’s workbook. Tata McGraw Hill. 2011

BA5020 ADVANCED DATABASE MANAGEMENT SYSTEM L T P C
3 0 0 3

OBJECTIVES :

- To understand the various advanced databases used in the organization
- To be aware of recent trends in database management.

UNIT I INTRODUCTION 9
 DBMS Models - Multimedia Databases, Parallel Databases, embedded, web, spatial, temporal databases, Virtualization, Active Databases - Embedded databases - Web databases.

UNIT II DATABASE IMPLEMENTATION 9
 Query Processing basics and optimization – Heuristic Optimization – Transactions Models – Concurrency Control – Recovery – Security and Authorization – Storage – Indexing and Hashing – ISAM – B-Trees – Kd Trees – X Trees – Dynamic Hashing.

UNIT III DISTRIBUTED DATABASES 9
 Distributed Databases – Queries – Optimization Access Strategies – Distributed Transactions Management – Concurrency Control – Reliability

UNIT IV OBJECT ORIENTED DATABASES 9
 Object Oriented Concepts – Data Object Models –Object Oriented Databases – Issues in OODBMS - Object Oriented Relational Databases – Object Definition Languages – Object Query Languages

UNIT V EMERGING TRENDS 9
 Data Mining – Data warehousing – Star, Snowflake, Fact Constellation; open source database systems, Scripting Language, JDBC, ODBC

TOTAL: 45 PERIODS

OUTCOMES :

- Awareness of database models
- Knowledge of database technologies

REFERENCES :

1. Peter Rob, Carlos Coronel, Database System and Design, Implementation and Management, 8th edition, Cengage,
2. Ramez Elmasri and Shamkant B. Navathe, Fundamentals of Database Systems, 7th edition, Pearson Education, 2015.
3. Jeffrey A Hoffer et al, Modern Database Management, 12th Edition, Pearson Education, 2016,
4. Abraham Silberchatz, Henry F. Korth and S.Sudarsan, Database System Concepts, 6th Edition, McGraw-Hill, 2015.
5. Thomas M. Connolly and Carolyn E. Begg, Database Systems – A Practical Approach to Design, Implementation and Management, 6th edition, Pearson Education, 2015.
6. Jeffrey D. Ullman and Jennifer Widom, A First Course in Database Systems, 3rd edition, Pearson Education Asia, 2013.
7. Stefano Ceri and Giuseppe Pelagatti, Distributed Databases Principles and Systems, McGraw-Hill International Editions, 2008.
8. Rajesh Narang, Object Oriented Interfaces and Databases, 1st edition, Prentice Hall of India, 2004.
9. Mark L. Gillenson & el, Introduction to database management, 2nd edition, Wiley India Pvt. Ltd, 2012
10. Charkrabarti, Advanced Database Management Systems, Wiley India Pvt Ltd, 2011

BA5021**DATAMINING FOR BUSINESS INTELLIGENCE****L T P C
3 0 0 3****OBJECTIVES :**

- To know how to derive meaning from huge volume of data and information
- To understand how knowledge discovering process is used in business decision making

UNIT I	INTRODUCTION	9
Data mining, Text mining, Web mining, Spatial mining, Process mining, BI process- Private and Public intelligence, Strategic assessment of implementing BI		
UNIT II	DATA WAREHOUSING	9
Data ware house – characteristics and view - OLTP and OLAP - Design and development of data warehouse, Meta data models, Extract/ Transform / Load (ETL) design		
UNIT III	DATA MINING TOOLS, METHODS AND TECHNIQUES	9
Regression and correlation; Classification- Decision trees; clustering –Neural networks; Market basket analysis- Association rules-Genetic algorithms and link analysis, Support Vector Machine, Ant Colony Optimization		
UNIT IV	MODERN INFORMATION TECHNOLOGY AND ITS BUSINESS OPPORTUNITIES	9
Business intelligence software, BI on web, Ethical and legal limits, Industrial espionage, modern techniques of crypto analysis, managing and organizing for an effective BI Team.		
UNIT V	BI AND DATA MINING APPLICATIONS	9
Applications in various sectors – Retailing, CRM, Banking, Stock Pricing, Production, Crime, Genetics, Medical, Pharmaceutical.		

TOTAL: 45 PERIODS

OUTCOMES :

- Big Data Management
- Appreciate the techniques of knowledge discovery for business applications

REFERENCES :

1. Jaiwei Ham and Micheline Kamber, Data Mining concepts and techniques, Kauffmann Publishers 3 rd edition, 2011
2. Efraim Turban, Ramesh Sharda, Jay E. Aronson and David King, Business Intelligence, 3 rd edition, Prentice Hall, 2014.
3. W.H.Inmon, Building the Data Warehouse, fourth edition Wiley India pvt. Ltd. 2005.
4. Ralph Kimball and Richard Merz, The data warehouse toolkit, John Wiley, 2005.
5. Michel Berry and Gordon Linoff, Mastering Data mining, John Wiley and Sons Inc, 3rd Edition, 2011
6. Michel Berry and Gordon Linoff, Data mining techniques for Marketing, Sales and Customer support, John Wiley, 3 rd edition 2011
7. G. K. Gupta, Introduction to Data mining with Case Studies, Prentice hall of India, 2014.
8. Giudici, Applied Data mining – Statistical Methods for Business and Industry, John Wiley. 2009
9. Elizabeth Vitt, Michael Luckevich Stacia Misner, Business Intelligence, Microsoft, 2011
10. Michalewicz Z., Schmidt M. Michalewicz M and Chiriac C, Adaptive Business Intelligence, Springer – Verlag, edition 2016
11. Galit Shmueli, Nitin R. Patel and Peter C. Bruce, Data Mining for Business Intelligence – Concepts, Techniques and Applications Wiley, India ,3rd edition, 2016

BA5022**ENTERPRISE RESOURCE PLANNING****LT PC
3 0 03****OBJECTIVES :**

- To understand the business process of an enterprise
- To grasp the activities of erp project management cycle
- To understand the emerging trends in erp developments

UNIT I INTRODUCTION**8**

Overview of enterprise systems – Evolution - Risks and benefits - Fundamental technology - Issues to be consider in planning design and implementation of cross functional integrated ERP systems.

UNIT II ERP SOLUTIONS AND FUNCTIONAL MODULES**10**

Overview of ERP software solutions- Small, medium and large enterprise vendor solutions, BPR, and best business practices - Business process Management, Functional modules.

UNIT III ERP IMPLEMENTATION**10**

Planning Evaluation and selection of ERP systems - Implementation life cycle - ERP implementation, Methodology and Frame work- Training – Data Migration. People Organization in implementation-Consultants, Vendors and Employees.

UNIT IV POST IMPLEMENTATION**8**

Maintenance of ERP- Organizational and Industrial impact; Success and Failure factors of ERP Implementation.

UNIT V EMERGING TRENDS ON ERP**9**

Extended ERP systems and ERP add-ons -CRM, SCM, Business analytics- Future trends in ERP systems-web enabled, Wireless technologies, cloud computing.

TOTAL: 45 PERIODS

OUTCOMES

- Knowledge of ERP implementation cycle
- Awareness of core and extended modules of ERP

REFERENCES :

1. Alexis Leon, ERP demystified, second Edition Tata McGraw-Hill, 2008.
2. Sinha P. Magal and Jeffery Word, Essentials of Business Process and Information System, Wiley India, 2012
3. Jagan Nathan Vaman, ERP in Practice, Tata McGraw-Hill, 2008
4. Alexis Leon, Enterprise Resource Planning, third edition, Tata McGraw-Hill, 2014.
5. Mahadeo Jaiswal and Ganesh Vanapalli, first edition,ERP Macmillan India, 2013
6. Vinod Kumar Grag and N.K. Venkitakrishnan, ERP- Concepts and Practice, second edition Prentice Hall of India, 2009.
7. Summer, ERP, Pearson Education, 2016

BA5023

SOFTWARE PROJECT MANAGEMENT AND QUALITY

L T P C
3 0 0 3

OBJECTIVES:

- To understand the various project management phases – Initiation, Planning, Tracking and Closure
- To study various project estimation methodologies, process models and risk management
- To understand quality assurance in software development

UNIT I PROJECT MANAGEMENT OVERVIEW

8

What is Project and Project Management, Various phase of Project Management, Project Stakeholders, Project Management Organisation (PMO); Roles and Responsibilities of Project Manager. Brief introduction to various process models - Waterfall, RAD, V, Spiral, Incremental, Prototyping, Agile– SCRUM, Extreme Programming (XP) and Kanban **Project Initiation** - Project Charter; Statement of Work (SoW)

UNIT II PROJECT PLANNING 10 Project Planning Activities- Project Scope, Work Breakdown Structures (WBS), Software estimation methodologies - COCOMO Model and Function Point

Project Scheduling Techniques – Program Evaluation and Review Technique (PERT), Gantt Chart and Critical Path Method (CPM)

UNIT III PROJECT TRACKING

10

Monitoring and Control, Project Status Reporting; Project Metrics; Earned Value Analysis (EVA); Project Communication Plan & Techniques; Steps for Process Improvement.

Risk Management: Concepts of Risks and Risk Management; Risk Management Activities; Effective Risk Management; Risk Categories; Aids for Risk Identification; Potential Risk Treatments; Risk Components and Drivers; Risk Prioritization.

UNIT IV PROJECT CLOSURE

8

Project Closure Analysis, Lesson Learnt

Software Quality Assurance-Software Quality Assurance Activities; Software Qualities; Software Quality Standards – ISO Standards for Software Organization, Capability Maturity Model (CMM), Comparison between ISO 9001 & SEI CMM, Other Standards.

UNIT V AGILE PROJECT MANAGEMENT WITH SCRUM

9

Agile Manifesto and Agile Principles

Agile Scrum - Purpose, Values, Scrum Framework, Scrum Roles – Product Owner, Scrum Master & Team, Scrum Events – Sprint Planning, Daily Scrum/Stand-up Meeting, Sprint Review, Sprint Retrospective, Scrum Artefacts – Product Backlog, Sprint Backlog, Increment and Definition of Done (DoD), Agile estimation – Story Point

TOTAL:45 PERIODS

OUTCOME:

At the end of this course, student should be able to:

- Manage different phases of Software Project Management
- Identify Risk and create risk mitigation plan
- Apply software quality assurance for better quality software delivery

REFERENCES:

- Bob Hughes and Mike Cotterell, Software Project Management, Tata McGraw Hill, 5th Edition
- Jalote, “Software Project Management in Practice”, Pearson Education
- Ramesh, Gopaldaswamy, "Managing Global Projects", Tata McGraw Hill
- Ken Schwaber, Agile Project Management with Scrum, Microsoft Press
- Mike Cohn, Agile Estimating & Planning, Pearson
- Royce, “Software Project Management”, Pearson Education, 1999.

ONLINE RESOURCES:

- <http://agilemanifesto.org/>
- <https://www.scrum.org/Resources/What-is-Scrum>
- <http://www.scrumguides.org/scrum-guide.html#purpose>

BA5024

E- BUSINESS MANAGEMENT

L T P C
3 0 0 3

OBJECTIVES:

- To understand the practices and technology to start an online business

UNIT I INTRODUCTION TO e-BUSINESS

8

e-business,e-businessvs e-commerce,Economicforces–advantages–myths–e-business models, design, develop and manage-business, Web2.0andSocialNetworking,Mobile Commerce, S-commerce.

UNIT II TECHNOLOGY INFRASTRUCTURE

10

Internet and World Wide Web, internet protocols- FTP, intranet and extranet, Cloud Service Models – SAAS, PAAS, IAAS, Cloud Deployment Models – Public Cloud, Private Cloud, Hybrid Cloud, Auto-Scaling in the Cloud, Internet information publishing technology- basics of web server hardware and software

UNIT III BUSINESS APPLICATIONS

10

Consumer oriented e-business–e-tailing and models-Marketing on web–advertising, e-mail marketing, affiliated programs - e-CRM; online services, Business oriented e-business, e-governance, EDI on the internet, Delivery management system, Web Auctions, Virtual communities and Web portals–social media marketing

UNIT IV e-BUSINESS PAYMENTS AND SECURITY

9

E-payments -Characteristics of payment of systems, protocols, e-cash, e-cheque, e-Wallets and Micro payment systems- internet security–cryptography –security protocols–network security.

UNIT V LEGAL AND PRIVACY ISSUES**8**

Legal, Ethics and privacy issues – Protection needs and methodology – consumer protection, cyber laws, contracts and warranties, Taxation and encryption policies.

TOTAL:45 PERIODS**OUTCOMES:**

At the end of this course, student should be able to know how to build and manage an e-business

REFERENCES

1. Harvey M. Deitel, Paul J.Deitel, Kate Steinbuhler, e-business and e-commerce for managers, Pearson, 2011.
2. EfraimTurban, Jae K.Lee, DavidKing,TingPengLiang,DeborrahTurban,ElectronicCommerce– Amananagerial perspective, Pearson Education Asia,2010.
3. Kelly Goetsch - e Commerce in the Cloud, O Reilly Media,2014.
4. Parag Kulkarni, Sunita Jahirabad kao, Pradeep Chande, ebusiness, Oxford University Press, 2012.
5. Hentry Chan &el, E-Commerce–fundamentals and Applications, Wiley India Pvt Ltd, 2007.
6. GaryP.Schneider,Electroniccommerce,Thomsoncoursetechnology,Fourthannualedition,2007
7. Bharat Bhasker, Electronic Commerce, Framework technologies and Applications, 3rd Edition. Tata McGraw Hill Publications, 2009
8. Kamlesh K. Bajajand DebjaniNag, Ecommerce- the cutting edge of Business, Tata McGraw Hill Publications, 7threprint, 2009.
9. Kalakotaet al, Frontiers ofElectronicCommerce,AddisonWesley,2004
10. Micheal Papaloelon and Peter Robert, e-business, Wiley India, 2006.
11. Michael Miller, Cloud Computing: Web-Based Applications That Change the Way You Work and Collaborate Online, Que Publishing, 2009

BA5025**LOGISTICS MANAGEMENT****L T P C
3 0 0 3****OBJECTIVE :**

- To learn the need and importance of logistics in product flow.

UNIT I INTRODUCTION**9**

Definition and Scope of Logistics – Functions & Objectives – Customer Value Chain – Service Phases and attributes – Value added logistics services – Role of logistics in Competitive strategy – Customer Service

UNIT II DISTRIBUTION CHANNELS AND OUTSOURCING LOGISTICS**9**

Distribution channel structure - channel members, channel strategy, role of logistics and support in distribution channels. Logistics requirements of channel members.
Logistics outsourcing – catalysts, benefits, value proposition. Third and fourth party logistics. Selection of service provider.

UNIT III TRANSPORTATION AND PACKAGING**9**

Transportation System – Evolution, Infrastructure and Networks. Freight Management – Vehicle Routing – Containerization. Modal Characteristics, Inter-modal Operators and Transport Economies. Packaging- Design considerations, Material and Cost. Packaging as Unitisation. Consumer and Industrial Packaging.

UNIT IV PERFORMANCE MEASUREMENT AND COSTS**9**

Performance Measurement – Need, System, Levels and Dimensions. Internal and External Performance Measurement. Logistics Audit. Total Logistics Cost – Concept, Accounting Methods. Cost – Identification, Time Frame and Formatting.

UNIT V CURRENT TRENDS 9

Logistics Information Systems – Need, Characteristics and Design. E-Logistics – Structure and Operation. Logistics Resource Management eLRM. Automatic Identification Technologies. Reverse Logistics – Scope, design and as a competitive tool. Global Logistics – Operational and Strategic Issues, ocean and air transportation. Strategic logistics planning. Green Logistics

TOTAL: 45 PERIODS

OUTCOME :

- To enable an efficient method of moving products with optimization of time and cost.

REFERENCES :

1. Bowersox Donald J, Logistics Management – The Integrated Supply Chain Process, Tata McGraw Hill, 3rd edition 2016
2. Sople Vinod V, Logistics Management – The Supply Chain Imperative, Pearson Education, 3rd Edition, 2012.
3. Coyle et al., The Management of Business Logistics, Cengage Learning, 7th Edition, 2004.
4. Ailawadi C Sathish & Rakesh Singh, Logistics Management, PHI, 2011.
5. Bloomberg David J et al., Logistics, Prentice Hall India, 2005.
6. Ronald H. Ballou, Business Logistics and Supply Chain Management, Pearson Education, 5th Edition, 2007.

**BA5026 MATERIALS MANAGEMENT L T P C
3 0 0 3**

OBJECTIVE :

- Understand how material management should be considered for profitability

UNIT I INTRODUCTION 9

Operating environment-aggregate planning-role, need, strategies, costs techniques, approaches-master scheduling-manufacturing planning and control system-manufacturing resource planning-enterprise resource planning-making the production plan

UNIT II MATERIALS PLANNING 9

Materials requirements planning-bill of materials-resource requirement planning-manufacturing resource planning-capacity management-scheduling orders-production activity control-codification.

UNIT III INVENTORY MANAGEMENT 9

Policy Decisions-objectives-control -Retail Discounting Model, Newsvendor Model; EOQ and EBQ models for uniform and variable demand With and without shortages -Quantity discount models. Probabilistic inventory models.

UNIT IV PURCHASING MANAGEMENT 9

Establishing specifications-selecting suppliers-price determination-forward buying-mixed buying strategy-price forecasting-buying seasonal commodities-purchasing under uncertainty-demand management-price forecasting-purchasing under uncertainty-purchasing of capital equipment-international purchasing

UNIT V WAREHOUSE MANAGEMENT 9

Warehousing functions – types - Stores management-stores systems and procedures-incoming materials control-stores accounting and stock verification-Obsolete, surplus and scrap-value analysis-material handling-transportation and traffic management -operational efficiency-productivity-cost effectiveness-performance measurement

TOTAL: 45 PERIODS

OUTCOME :

- Student gains knowledge on effective utilisation of materials in manufacturing and service organisation

REFERENCES :

1. J.R.Tony Arnold, Stephen N. Chapman, Lloyd M. Clive, Materials Management, Pearson, 2012.
2. P. Gopalakrishnan, Purchasing and Materials Management, Tata McGraw Hill, 2012
3. A.K.Chitale and R.C.Gupta, Materials Management, Text and Cases, PHI Learning, 2nd Edition, 2006
4. A.K.Datla, Materials Management, Procedure, Text and Cases, PHI Learning, 2nd Edition, 2006
5. Ajay K Garg, Production and Operations Management, Tata McGraw Hill , 2012
6. Ronald H. Ballou and Samir K. Srivastava, Business Logistics and Supply Chain Management, Pearson education, Fifth Edition
7. S. N. Chary, Production and Operations Management, Tata McGraw Hill , 2012

BA5027**PRODUCT DESIGN****L T P C
3 0 0 3****OBJECTIVE:**

- Understand the application of structured methods to develop a product.

UNIT I INTRODUCTION**9**

Defining Product, Types of products. Product development – characteristics, duration and cost, challenges. Development Process: Generic Process- Adapting to product types. Evaluation – decay curve – cost expenditure curve.

UNIT II PRODUCT PLANNING**9**

Product Planning Process – Steps. Opportunity identification – breakdown structure- product development charter. Product Life Cycle. Technology Life Cycle - Understanding Customer Needs - Disruptive Technologies- Product Specification - Concept Generation – Activity- Steps-Techniques.

UNIT III PRODUCT CONCEPT**9**

Concept Selection – Importance, Methodology, concept Screening, Concept Scoring. Concept Testing. Product Architecture- Definition, Modularity, implication, Establishment, Delayed Differentiation, Platform Planning.

UNIT IV INDUSTRIAL DESIGN AND DESIGN TOOLS**9**

Industrial Design, Design for Manufacturing-Value Engineering-Ergonomics-Prototyping-Robust Design- Design for X-failure rate curve-product use testing-Collaborative Product development-Product development economics-scoring model- financial analysis.

UNIT V PATENTS**9**

Defining Intellectual Property and Patents, Patent Searches and Application, Patent Ownership and Transfer, Patent Infringement, New Developments and International Patent Law.

TOTAL: 45 PERIODS**OUTCOME**

- Student gains knowledge on how a product is designed based on the needs of a customer.

REFERENCES :

1. Karl T. Ulrich, Steven D. Eppinger, Anita Goyal Product Design and Development, Tata McGraw – Hill, Fourth Edition, reprint 2009.
2. Kenneth B.Kahn, New Product Planning, Sage, 2nd Edition 2011.

3. A.K. Chitale and R.C. Gupta, Product Design and Manufacturing, PHI, 2008.
4. Deborah E. Bouchoux, Intellectual Property Rights, Delmar, Cengage Learning, 2005.
5. Anil Mital, Anoop Desai, Anand Subramanian, Aashi Mital, Product Development, Elsevier, 2009.
6. Michael Grieves, Product Life Cycle Management, Tata McGraw Hill , 2006.
7. Kerber, Ronald L, Laseter, Timothy M., Strategic Product Creation, Tata-McGraw Hill, 2007.

BA5028

PROJECT MANAGEMENT

L T P C
3 0 0 3

OBJECTIVE:

- To learn the concepts of managing projects.

UNIT I INTRODUCTION TO PROJECT MANAGEMENT 9
Project Management – Definition –Goal - Lifecycles. Project Selection Methods. Project Portfolio Process – Project Formulation. Project Manager – Roles- Responsibilities and Selection – Project Teams.

UNIT II PLANNING AND BUDGETING 9
The Planning Process – Work Break down Structure – Role of Multidisciplinary teams. Budget the Project – Methods. Cost Estimating and Improvement. Budget uncertainty and risk management.

UNIT III SCHEDULING & RESOURCE ALLOCATION 9
PERT & CPM Networks - Crashing – Project Uncertainty and Risk Management – Simulation – Gantt Charts – Expediting a project – Resource loading and leveling. Allocating scarce resources – Goldratt’s Critical Chain.

UNIT IV CONTROL AND COMPLETION 9
The Plan-Monitor-Control cycle – Data Collecting and reporting – Project Control – Designing the control system. Project Evaluation, Auditing and Termination.

UNIT V PROJECT ORGANISATION & CONFLICT MANAGEMENT 9
Formal Organisation Structure – Organisation Design – Types of project organizations. Conflict – Origin & Consequences. Managing conflict – Team methods for resolving conflict.

TOTAL: 45 PERIODS

OUTCOME:

- To apply project management principles in business situations to optimize resource utilization and time optimisation.

REFERENCES :

1. Clifford Gray and Erik Larson, Project Management, Tata McGraw Hill Edition, 6e,2014.
2. John M. Nicholas, Project Management for Business and Technology - Principles and Practice, Second Edition, Pearson Education,5th Edition 2016
3. Gido and Clements, Successful Project Management, sixth Edition, Cengage, 2015.
4. Harvey Maylor, Project Management, Fourth Edition, Pearson Education, 2010

OBJECTIVE:

- To help understand how service performance can be improved by studying services operations management

UNIT I INTRODUCTION**9**

Services – Importance, role in economy, service sector – growth; Nature of services -Service classification , Service Package, distinctive characteristics , open-systems view; Service Strategy – Strategic service vision, competitive environment, generic strategies, winning customers; Role of information technology; stages in service firm competitiveness; Internet strategies - Environmental strategies.

UNIT II SERVICE DESIGN**9**

New Service Development – Design elements – Service Blue-printing - process structure – generic approaches –Value to customer; Retail design strategies – store size – Network configuration ; Managing Service Experience –experience economy, key dimensions ; Vehicle Routing and Scheduling

UNIT III SERVICE QUALITY**9**

Service Quality- Dimensions, Service Quality Gap Model; Measuring Service Quality –SERVQUAL - Walk-through Audit; Quality service by design - Service Recovery - Service Guarantees; Service Encounter – triad, creating service orientation, service profit chain; Front-office Back-office Interface – service decoupling.

UNIT IV SERVICE FACILITY**9**

Services capes – behaviour - environmental dimensions – framework; Facility design – nature, objectives, process analysis – process flow diagram, process steps, simulation; Service facility layout; Service Facility Location – considerations, facility location techniques – metropolitan metric, Euclidean, centre of gravity, retail outlet location , location set covering problem

UNIT V MANAGING CAPACITY AND DEMAND**9**

Managing Demand – strategies; Managing capacity – basic strategies, supply management tactics, operations planning and control; Yield management; Inventory Management in Services– Retail Discounting Model, Newsvendor Model; Managing Waiting Lines –Queuing systems, psychology of waiting; Managing for growth- expansion strategies, franchising , globalization.

TOTAL: 45 PERIODS**OUTCOME:**

- To design and operate a service business using the concepts, tools and techniques of service operations management.

REFERENCES :

- James A. Fitzsimmons, Service Management – Operations, Strategy, Information Technology, Tata McGraw-Hill – 7th Edition 2013.
- Richard Metters, Kathryn King-Metters, Madeleine Pullman, Steve Walton Successful Service Operations Management, South-Western, Cengage Learning, 2nd Edition ,2012
- Cengiz Haksever, Barry Render, Roberta S. Russell, Rebert G. Murdick, Service Management and Operations, Pearson Education – Second Edition.
- Robert Johnston, Graham Clark, Service Operations Management, Pearson Education, 2nd Edition, 2005.
- Bill Hollins and Sadie Shinkins, Managing Service Operations, Sage, 2006
- J.Nevan Wright and Peter Race, The management of service operations, Cengage, 2nd Edition, 2004

OBJECTIVE:

- To help understand the importance of and major decisions in supply chain management for gaining competitive advantage.

UNIT I INTRODUCTION 9

Supply Chain – Fundamentals –Evolution- Role in Economy - Importance - Decision Phases - Supplier- Manufacturer-Customer chain. - Enablers/ Drivers of Supply Chain Performance. Supply chain strategy - Supply Chain Performance Measures.

UNIT II STRATEGIC SOURCING 9

Outsourcing – Make Vs buy - Identifying core processes - Market Vs Hierarchy - Make Vs buy continuum -Sourcing strategy - Supplier Selection and Contract Negotiation. Creating a world class supply base- Supplier Development - World Wide Sourcing.

UNIT III SUPPLY CHAIN NETWORK 9

Distribution Network Design – Role - Factors Influencing Options, Value Addition – Distribution Strategies - Models for Facility Location and Capacity allocation. Distribution Center Location Models. Supply Chain Network optimization models. Impact of uncertainty on Network Design - Network Design decisions using Decision trees.

UNIT IV PLANNING DEMAND, INVENTORY AND SUPPLY 9

Managing supply chain cycle inventory. Uncertainty in the supply chain – Analyzing impact of supply chain redesign on the inventory - Risk Pooling - Managing inventory for short life - cycle products - multiple item -multiple location inventory management. Pricing and Revenue Management

UNIT V CURRENT TRENDS 9

Supply Chain Integration - Building partnership and trust in SC Value of Information: Bullwhip Effect - Effective forecasting - Coordinating the supply chain. . SC Restructuring - SC Mapping -SC process restructuring, Postpone the point of differentiation – IT in Supply Chain - Agile Supply Chains - Reverse Supply chain. Agro Supply Chains.

TOTAL: 45 PERIODS**OUTCOME:**

- Ability to build and manage a competitive supply chain using strategies, models, techniques and information technology.

REFERENCES :

- Janat Shah, Supply Chain Management – Text and Cases, Pearson Education, 2009.
- Sunil Chopra and Peter Meindl, Supply Chain Management-Strategy Planning and Operation, PHI Learning / Pearson Education, Sixth edition, 2015.
- Ballou Ronald H, Business Logistics and Supply Chain Management, Pearson Education, 5th Edition, 2007.
- David Simchi-Levi, Philip Kaminsky, Edith Simchi-Levi, Designing and Managing the Supply Chain: Concepts, Strategies, and Cases, Tata McGraw-Hill, 2005.
- Altekar Rahul V, Supply Chain Management-Concept and Cases, PHI, 2005.
- Shapiro Jeremy F, Modeling the Supply Chain, Cengage, Second Reprint , 2002.
- Joel D. Wisner, G. Keong Leong, Keah-Choon Tan, Principles of Supply Chain Management- A Balanced Approach, South-Western, Cengage, 2012.